U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

ORDER 8260.49A

Effective Date:
6/23/06

SUBJ: SIMULTANEOUS OFFSET INSTRUMENT APPROACH (SOIA)

1.0 PURPOSE.

This order provides criteria and guidance for constructing and operating simultaneous offset instrument approaches to parallel runways spaced at least 750 ft apart, and less than 3,000 ft apart at airports identified by the FAA for SOIA. This order establishes criteria for conducting closely spaced parallel operations, and identifies procedural requirements to ensure safety. Implementation of SOIA procedures requires additional analysis and study at most locations. Specific aircraft handling procedures used to implement the operational objectives described in this order are the responsibility of the Air Traffic Organization (ATO) and are contained in various ATO directives.

2.0 DISTRIBUTION.

This order is distributed in Washington Headquarters to the branch level in the Offices of Airport Safety and Standards, and Communications, Navigation, and Surveillance Systems, to Air Traffic, Flight Standards, and Airway Facilities Services; to the National Flight Procedures Group, and the Regulatory Standards Division (AMA-200) at the Mike Monroney Aeronautical Center; to the branch level in the regional Flight Standards, Air Traffic, Airway Facilities, and Airports Divisions; special mailing list ZVS-827; and Special Military and Public Addressees.

3.0 CANCELLATION. Order 8260.49, Simultaneous Offset Instrument Approach (SOIA), dated August 8, 2002.

4.0 EFFECTIVE DATE. This guidance will be effective July 14, 2006.

5.0 SOIA CONCEPT.

Optimum airport efficiency and reduced arrival delays, under conditions of restricted ceiling and visibility, can be achieved when it is possible to conduct simultaneous instrument approaches to the lowest applicable minimums. The types of instrument procedures that can be used simultaneously depend upon airport configuration and Air Traffic Control (ATC) system capabilities. Airports with parallel runway centerlines spaced closer than 3,000 ft are not capable of supporting simultaneous, parallel instrument approaches under other criteria. Increased Air Traffic delays occur when weather conditions will not permit simultaneous visual approaches. SOIA consists of simultaneous approaches to parallel runways utilizing a straight-in ILS approach to one runway, and a

localizer-type directional aid (LDA) with a glide slope instrument approach to the other runway. SOIA approach course separation provides the required close parallel instrument landing system/microwave landing system (ILS/MLS) approach criteria per 8260.3 Volume 3, appendix 3 to the LDA precision runway monitor (PRM) decision altitude (DA). A visual segment for the LDA approach is established between the LDA PRM DA and the runway threshold, permitting aircraft to transition in visual conditions from the LDA course, align with the runway, and be in a stabilized approach configuration by 500 ft above the touchdown zone elevation. Between the LDA PRM DA and the runway threshold, pilots of the LDA aircraft are responsible for visually separating themselves from traffic on the ILS approach. This requires maneuvering the aircraft as necessary to avoid the ILS traffic until landing and applying wake turbulence avoidance procedures and techniques as necessary.

Please note: http://www.faa.gov/education_research/training/prm/. This website provides information relative to conducting closely spaced parallel approaches using the PRM and outlines pilot training requirements for conducting ILS PRM and LDA PRM SOIA approaches. The site includes the FAA training video for PRM and SOIA approaches and a link to the San Francisco (SFO) airport website for their informational video on SOIA.

6.0 EXPLANATION OF CHANGES.

6.0.1 Three paragraphs and appendix 1 have been added – 3.0 Cancellation, 6.0 Explanation of Changes, 7.0 Related Publications, and appendix 1, ATC/Flight Crew Coordination.

6.0.2 **Paragraph 7.0** adds related publications to identify directives that are used as a source of reference in this document.

6.0.3 **Paragraph 8.0** adds definitions for Breakout, Clear-of-Clouds (CC) and Decision Altitude (DA); clarifies information concerning the LDA with glide slope; and provides the most current information on the stabilized approach point (SAP).

6.0.4 **Paragraph 9.0** adds information concerning close parallel instrument landing system/microwave landing system (ILS/MLS) approaches.

6.0.5 **Paragraph 10.0** changes the “General” paragraph to “General Design Characteristics” and provides a more inclusive history of and rationale for more effective guidance for SOIA.

6.0.6 **Paragraph 11.0** establishes a requirement for AFS-440 to conduct a study for each airport where SOIA is implemented (and where applicable). It also more clearly defines the LDA approach ceiling for SOIA operations; clarifies visibility minimums for SOIA operations; adds information concerning ILS and ILS PRM approaches and provides information for FMS capability on approach design considerations; and describes in more detail staggered threshold approaches.

6.0.7 **Paragraph 13.0** establishes a requirement for AFS-440 to conduct a wake turbulence study for each airport where SOIA implementation is requested (and where applicable), and more clearly defines wake turbulence separation between aircraft pairs.

6.0.8 **Appendix 1, ATC/Flight Crew Coordination.** Provides detailed requirements for ATC/flight crew coordination, procedure design, and SOIA implementation.

7.0 **RELATED PUBLICATIONS** (latest editions).

7.0.1 **FAA Order 8260.3,** United States Standard for Terminal Instrument Procedures (TERPS).

7.0.2 **FAA Order 8260.19,** Flight Procedures and Airspace.

7.0.3 **FAA Order 7110.65**, Air Traffic Control.

7.0.4 **FAA Order 7210.3**, Facility Operation and Administration.

7.0.5 **FAA Order 8400.10**, Air Transportation Operations Inspector's Handbook.

8.0 **DEFINITIONS.**

8.0.1 **BREAKOUT.**

An ATC directed "breakout" is defined as a vector off the ILS or LDA approach course in response to another aircraft penetrating the NTZ. All breakouts will be manually flown unless otherwise approved by AFS-200 (AFS-200 must have AFS-400 concurrence to approve breakout in auto modes per Order 8400.10, Volume 3, chapter 1, section 5).

8.0.2 **CLEAR-OF-CLOUDS (CC).**

Time and position where aircraft first operate in visual meteorological conditions (VMC) below the ceiling (as defined by the Aeronautical Information Manual (AIM) 7-1-17).

8.0.3 **DECISION ALTITUDE (DA).**

A specified altitude in reference to mean sea level in an approach with vertical guidance at which a missed approach must be initiated if the required visual references to continue the approach have not been established (see Order 8260.3B, Volume 3, paragraph 1.2.4).

8.0.4 **LDA OFFSET.**

An angular offset of the LDA from the runway extended centerline in a direction away from the no transgression zone (NTZ) that increases the normal operating zone (NOZ) width.

8.0.5 **LOCALIZER-TYPE DIRECTIONAL AID (LDA) WITH GLIDE SLOPE.**

A navigational aid (NAVAID) used for a SOIA operation with the utility and accuracy of an ILS/MLS but does not meet precision alignment criteria. LDA with glide slope provides lateral guidance along the LDA PRM final approach course up to the LDA PRM DA. Vertical guidance is provided to a point near the runway threshold to Category (CAT) I operational standards. Other guidance systems

providing the same or greater accuracy of an LDA with glide slope may be employed.

8.0.6 NORMAL OPERATING ZONE (NOZ).

The NOZ is the operating area within which aircraft flight remains during normal independent simultaneous parallel ILS approaches.

8.0.7 NO TRANSGRESSION ZONE (NTZ).

A 2,000-ft wide area, located equidistant between parallel runway final approach courses, in which flight is prohibited during simultaneous operations.

8.0.8 PRECISION RUNWAY MONITOR (PRM).

Provides air traffic controllers with high precision secondary surveillance data for aircraft on final approach to parallel runways that have extended centerlines separated by less than 4,300 ft. High-resolution color monitoring displays are required to present surveillance tracking data to controllers along with detailed maps depicting approaches and no transgression zones.

8.0.9 STABILIZED APPROACH POINT (SAP).

The SAP is an unpublished design point on the LDA glide slope at 500 ft above the touchdown zone elevation, along the extended centerline of the intended landing runway.

8.0.10 VISUAL GLIDE SLOPE INDICATOR (VGSI).

The VGSIs are ground devices that use lights to define a vertical approach path during the final approach to a runway. VGSI facilities provide vertical approach guidance to aircraft during approach to landing by radiating a directional pattern of high intensity focused light beams that indicate a pilot's position relative to the glidepath. The visual signal must consist of not less than two and not more than four colors. Allowable colors are red, green, white, or amber. Color sectors must be distinct and identifiable throughout the horizontal beam width at all intensity settings. Only red is used to indicate the lowest below-path sector of the system. The precision approach path indicator (PAPI) is the International Civil Aviation Organization (ICAO) standard VGSI. The PAPI has a single bar of four light boxes to indicate two sectors of glide slope to accommodate large aircraft. Some airports serving large aircraft have three-bar visual approach slope indicators (VASIs) that provide two visual glide slopes to the same runway.

9.0 CLOSE PARALLEL INSTRUMENT LANDING SYSTEM/MICROWAVE LANDING SYSTEM (ILS/MLS) APPROACHES.

Order 8260.3B, Volume 3, appendix 3 addresses independent approaches to parallel runways served by ILS/MLS when parallel runway spacing is less than 4,300 ft. When the approach courses are parallel, the runway spacing between centerlines can be as close as 3,400 ft provided the NTZ is monitored by a high update rate surveillance system capable of a 1.0 second update interval such as

the PRM. The runway centerlines can be as close as 3,000 ft when one of the ILS/MLS courses is offset by 2.5°-3.0° (the offset course is classified as an LDA with glide slope). Procedure charting/naming is in accordance with Order 8260.3, Volume 3, paragraph 3.2 (i.e. "ILS PRM Rwy #" for the procedure aligned with runway centerline and "LDA PRM Rwy #" for the offset LDA with glide slope procedure). Also see Order 8260.19, chapter 8, for other mandatory charting requirements.

10.0 GENERAL DESIGN CHARACTERISTICS.

At FAA identified airports, SOIA operations are applicable where parallel runway centerlines are at least 750 ft apart and less than 3,000 ft apart. Runways spaced less than 750 ft apart require additional analysis and approval of Flight Standards Service. SOIA incorporates a conventional NTZ design that terminates at the location of the LDA PRM DA to protect both final approach courses prior to the extended visual segment. SOIA requires ATC to use PRM or other high update rate surveillance systems capable of 1.0-second update interval to monitor both aircraft.

10.0.1 **The lowest possible SOIA ceiling and visibility minimums** are achieved when the LDA PRM DA and ILS PRM course are spaced 3,000 ft apart. SOIA operations consist of two approaches – the ILS PRM and the LDA PRM and have the following characteristics:

10.0.1 **a. The ILS approach is designed to close parallel approach criteria.** The ILS course cannot be offset.

10.0.1 **b. The LDA PRM (with glide slope) approach** utilizes approved close parallel ILS/MLS criteria of Order 8260.3 except as indicated below**:**

10.0.1 **b**. **(1) Mark the location of the DA** with a distance measuring equipment (DME) fix based on AFS-440 automated analysis (see paragraph 11). Calculate the published DA as follows:

STEP ONE. Determine the DA based on the distance provided by AFS-440 analysis.

D x tan(θ) + (TCH+Threshold elevation)

Where D = distance (in feet) to DA from FTP provided by AFS-440 SOIA automation

Example:

TCH = 57
GPA = 3°
Threshold elevation = 13′
D = 3.4 NM (20658.79′)

20658.79 x tan(3) + (57 + 13) = 1152.68 rounds to 1153

STEP TWO. Determine the DA based on TERPS final and missed segment evaluation per Order 8260.3 Volume 3, appendix 3.

STEP THREE. Published DA must be the higher of the two values derived in the preceding steps.

10.0.1 b. (2) Offset LDA PRM approach course a minimum of 2.5° and maximum of 3.0° from the adjacent ILS course if the LDA PRM DA is less than 3,400 ft from the parallel ILS course. The provisions of Order 8260.3, Change 19, chapter 9, Localizer and Localizer-Type Directional Aids (LDA), paragraph 902, Alignment, does not apply to the design of the SOIA LDA PRM approach. The LDA PRM final approach course is exempt from the requirement to intercept the runway extended centerline 1,100 – 1,200 ft from DA per Order 8260.3, Volume 3, paragraph 3.1.

10.0.1 b. (3) The approach design includes a SAP (see paragraph 8.0.9).

10.0.1 b. (4) LDA PRM includes a visual segment to allow maneuvering from the LDA PRM DA to intercept the extended centerline of the runway served by the LDA with glide slope.

10.0.1 b. (5) Identify the LDA PRM DA by a DME fix.

10.0.1 b. (6) The LDA PRM DA must be within the operational coverage of the VGSI.

11.0 PROCEDURE CONSTRUCTION.

Use the FAA - Flight Operations Simulation and Analysis Branch (AFS- 440) SOIA Design Program to design the LDA PRM approach (see appendix 1). Component of SOIA operations: The SOIA Design Program determines the approach geometry based on a nominal bank angle of 15°, roll-in/roll-out rates of nominally 3° per second, and airspeeds defined by Title 14 Code of Federal Regulations (14 CFR) Part 97 aircraft approach category, converted to True Airspeed. The angle of intercept of the LDA PRM runway extended centerline is determined by the top-of-category approach speed for the highest category of aircraft certified to fly the approach and the distance between the parallel runways. The angle of intercept will be limited so that in case an aircraft does not begin its intercept turn until crossing the extended centerline, it must not fly closer than 400 ft to the ILS PRM final approach course. Roll-in rates of up to 5° per second and bank angles of 25° may be used to determine the realignment flight track. The SOIA Design Program will provide the location of the LDA PRM DA.

11.1 LDA APPROACH CEILING FOR SOIA OPERATIONS.

The LDA PRM approach will require a specified ceiling for SOIA operations that will be published on the **Attention All Users Page (AAUP),** see appendix 2. The minimum ceiling is determined based upon the results of the program or ATC requirements. Note that the ceiling required for simultaneous operations is determined independent of the landing minimums associated with the TERPS evaluation, but may never be lower than the calculated TERPS minimum ceiling.

11.2 VISIBILITY MINIMUMS FOR SOIA OPERATIONS.

Establish visibility minimums based upon FAA Order 8260.3, Volume 1, chapter 3. This value will be published on the AAUP.

NOTE: The visibility required for simultaneous operations is determined independent of the landing minimums associated with the TERPS evaluation, but may never be lower than the calculated TERPS minimum visibility.

11.3 APPROACH DESIGN CONSIDERATIONS.

If an operational advantage can be achieved, it may be desirable to publish an LDA approach that is identical to the LDA PRM approach except that the notes required for simultaneous close parallel operations would be removed. If an LDA approach is also published, it should be titled, "LDA/DME." This approach can be utilized when simultaneous operations are not being conducted.

ILS PRM approaches typically are designed to a runway that already has a published ILS approach. ILS PRM and ILS approach minimums and missed approach procedures must be coincident. For FMS compatibility, both approaches must contain three fixes that are identical, one of which may be the runway threshold.

11.4 STAGGERED THRESHOLD APPROACH DESIGN.

In the cases where a stagger between the arrival thresholds on runways separated by less than 2,500 ft exist, construct the LDA PRM approach to the runway with higher glidepath altitude at the end of the NTZ.

11.5 VISUAL SEGMENT.

Evaluate the visual segment under Order 8260.3, Volume 1, paragraph 251, except extend the visual portion to the LDA PRM DA using offset criteria.

12.0 MISSED APPROACH.

The LDA PRM missed approach section 2 course must diverge by a minimum of 45° from the adjacent ILS final inbound course extended**.**

13.0 WAKE TURBULENCE REQUIREMENTS.

A specific wake turbulence study performed by AFS-440 will be conducted for each airport where SOIA implementation is requested. Additionally, if future runway construction changes the relationship of the runways previously approved for SOIA operations, AFS-440 will be required to conduct a supplemental wake analysis.

Wake turbulence mitigation techniques employed will be based on each airport's specific runway geometry and meteorological conditions. Established pilot wake turbulence avoidance procedures will also be considered.

When SOIA runway centerlines are at least 2,500 ft apart, there are no wake turbulence requirements between aircraft on adjacent final approach courses. For runways where centerlines are less than 2,500 ft apart, whenever the ceiling is less than 500 ft above the minimum vectoring altitude (MVA), wake vortex spacing as described in Order 7110.65, paragraph 5-5-4, MINIMA, must be applied within the pairs. ATC must issue all wake turbulence advisories when applicable. This procedure is applicable unless acceptable mitigating techniques and operational procedures can be documented or developed and verified by a safety management process that involves a safety risk assessment, stakeholder participation, and monitoring the implemented procedures to ensure the mitigations are effective. The wake turbulence mitigation procedures employed will be based on each airport's specific runway geometry and meteorological conditions. Separation between the pairs (normally applied between the trailing LDA aircraft in the preceding pair and the leading ILS aircraft in the succeeding pair) must meet the requirements for standard radar separation unless other approved methods of separation can be applied. Additionally, separation minima in paragraph 5-5-4 of FAA Order 7110.65 regarding wake turbulence must be applied as follows: (1) between the ILS aircraft in the preceding pair and either the ILS or LDA aircraft in the succeeding pair as required by paragraph 5-5-4 and, (2) between the LDA aircraft in the preceding pair and either the ILS or LDA aircraft in the succeeding pair, as required by paragraph 5-5-4.

14.0 INFORMATION UPDATE.

For your convenience, FAA Form 1320-19, Directive Feedback Information, is included at the end of this order to note any deficiencies found, clarifications needed, or suggested improvements regarding the contents of this order. When forwarding your comments to the originating office for consideration, please provide a complete explanation of why the suggested change is necessary.

Original Signed By
John Allen

James J. Ballough
Director, Flight Standards Service

APPENDIX 1

OPERATIONAL AND DESIGN CONSIDERATIONS

ATC/FLIGHT CREW COORDINATION.

1. When an aircraft is conducting an offset LDA PRM approach simultaneously with the adjacent ILS PRM approach, the LDA PRM flight crews must be advised when traffic on the adjacent approach course will be a factor. Prior to reaching the LDA PRM DA, the flight crew must: Visually acquire the leading ILS PRM aircraft, broadcast this acquisition to ATC, and establish and maintain visual contact with the landing runway environment. If visual contact of the ILS PRM aircraft or runway environment is lost, a missed approach must be executed no later than the LDA DA. Broadcasting by the LDA PRM aircraft that the ILS PRM traffic is in sight indicates that the LDA PRM flight crew has visually acquired the traffic and accepts responsibility for separation and wake turbulence avoidance as applicable. ATC may not respond to this transmission.

2. Pilots accepting a clearance for an LDA PRM approach will remain on the LDA course until passing the LDA PRM DA.

3. The LDA PRM aircraft must be positioned by ATC so as to facilitate the LDA flight crew's ability to visually acquire and keep the ILS PRM traffic in sight from the clear-of-clouds (CC) point until landing.

4. During SOIA operations, the LDA PRM aircraft should be the trailing aircraft prior to exiting the overcast, and must be in the trailing position prior to reaching the LDA PRM DA. Aircraft may pass each other as necessary prior to this point as instructed by ATC to achieve the required spacing**.**

5. Pilot responsibilities must be specified in procedural notes on the SOIA LDA PRM and ILS PRM approach Chart, Attention All Users Page, or by other means approved by Flight Standards Service.

NOTE: For additional information regarding SOIA operations, refer to the Aeronautical Information manual (AIM), page 5-4-16, Simultaneous Close Parallel ILS PRM Approaches (Independent) and Simultaneous Offset Instrument Approaches (SOIA).

PROCEDURE DESIGN.

1. The AFS-440 SOIA Design Program develops the approach so that there is sufficient time for visual acquisition of the ILS PRM aircraft by the LDA PRM flight crew after their aircraft exits the overcast prior to reaching the LDA PRM DA**.** Nominally a 30 seconds "clear-of-clouds" time at the highest anticipated approach speed is desirable. Example, if heavy aircraft in Category (CAT) D are authorized for the LDA PRM approach, a ceiling of approximately 450 ft above the LDA PRM DA altitude is considered adequate. Based on 165 knots IAS, the top of CAT D, 450 ft will provide nominally 30 seconds "clear-of-clouds" time. For operations restricted to the use of CAT C aircraft and below (and CAT D regional jets with approach speeds of 145 knots or less), a ceiling of approximately 375 ft above the LDA PRM DA is considered adequate. The aircraft in the highest approach category authorized to conduct the approach will determine the approach geometry. The ceiling required will be determined based on the FAA SOIA design program's determination of the DA (see paragraph 11.0). Clear-of-clouds time values may be refined with operational experience and scientific analysis.

2. The approach design must include a minimum straight flight segment of 1,000 ft between the turn at the LDA PRM DA and the turn to intercept the extended runway centerline at the SAP. The FAA computer program will determine the location of the LDA PRM DA.

3. Relative to Flyability. The limiting steady state, direct crosswind component of the reported airport surface wind is 10 knots for runways spaced 750 ft apart, increasing by one knot for each additional 75 ft of centerline separation to a maximum of 15 knots (when centerline spacing is at least 1,125 ft). These requirements may be refined based on operational experience and scientific analysis. In addition, these values and their application may be further modified by the FAA wake turbulence study required for each SOIA.

SOIA IMPLEMENTATION.

The implementation process must include:

1. A national effort by Flight Standards to monitor the operational integrity of SOIA procedures at each site, evaluate PRM-SOIA requirements to ensure consistency with existing standards, and oversight and review of issues raised by local implementation teams. Flight standards will ensure SOIA operations meet validation testing compliance standards per FAA Order 8400.10, Volume 3, chapter 9.

2. Establishment of a simultaneous instrument approach data collection effort in concert with Air Traffic, as provided by Order 7110.112, Simultaneous ILS/MLS Blunder Data Collection.

3. Establishment of local implementation teams at each SOIA site to assist throughout the SOIA development process, evaluate and provide support to Flight Standards, Air Traffic and Air Operator Training issues, monitor local operational integrity issues, and to report/refer issues for national consideration as appropriate. Consult Order 8260.43A, Flight Procedures Management Program, paragraph 7 for core membership and other aviation participants who should be included in this process.

APPENDIX 2

SAMPLES

OF

PILOT BRIEFING PAGES

AND A

DEPICTION OF SOIA GEOMETRY

LDA PRM RWY XXX

ATTENTION ALL USERS OF LDA PRECISION RUNWAY MONITOR (PRM)

Special PRM pilot training required. Pilots who are unable to participate must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Nonparticipating pilots en route to (airport name) as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots must notify the (name) ARTCC as soon as practical, but at least 100 miles from (Airport Name).

Condensed Briefing Points:

- When instructed, immediately switch to tower frequency and select the monitor frequency audio.
- Report the ILS traffic in sight as soon as practical and prior to (name of LDA PRM DA). DO NOT PASS.
- Remain on the LDA until reaching the LDA PRM DA so as not to penetrate the NTZ.

1. ATIS. The ATIS will broadcast that simultaneous ILS PRM and LDA PRM approaches are in progress. (See Note #1 below for revised wording if an LDA approach is also published.) Simultaneous parallel approaches will only be offered/conducted when the weather is at least x, xxx feet (ceiling), and x miles (visibility**).**

2. Dual VHF Communication Required. To avoid blocked transmissions, each runway will have two frequencies: a primary and a monitor frequency. The tower controller will transmit on both frequencies. The monitor controller's transmissions, if needed, will override both frequencies. Pilots will ONLY transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by approach to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. All "Breakouts" are to be hand flown to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

a. ATC Directed " Breakouts:" ATC directed breakouts would consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 ft obstruction clearance. The MVA in the final approach segment is x, xxx ft at (Airport Name).

b. **Phraseology - "TRAFFIC ALERT**:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:

"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. (Airport Name) Visual Segment. If ATC advises that there is traffic on the (runway number) ILS, pilots are authorized to continue past the LDA PRM (runway number) DA to align with runway (runway (number) centerline when:

a. The ILS traffic is in sight and is expected to remain in sight,

b. Pilots broadcast that "traffic is in sight." (ATC may not acknowledge this transmission)

c. The runway environment is in sight.

Otherwise, a missed approach must be executed no later than the LDA PRM DA. Between the LDA PRM DA and the runway threshold, pilots are responsible for separating themselves visually from the traffic on the ILS approach, which means maneuvering the aircraft as necessary to avoid the ILS traffic until landing (do not pass), and providing wake turbulence avoidance, if applicable. If visual contact with the ILS traffic is lost, advise ATC as soon as practical, and execute a missed approach unless otherwise instructed by ATC.

ILS PRM RWY XXX

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Special PRM pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Untrained pilots en route to (airport name) as an alternate, and trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots must notify the (name) ARTCC as soon as practical, but at least 100 miles from (Airport Name)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.

1. ATIS. When the ATIS broadcast advises that simultaneous ILS PRM and LDA PRM approaches are in progress, pilots should brief to fly the ILS/PRM. If later advised to expect an ILS approach, the ILS PRM chart may be used after completing the following briefing items:

a. Minimums and missed approach procedures are unchanged.

b. Monitor frequency no longer required.

c. A lower glide slope intercept altitude may be assigned when advised to expect the ILS (Rwy number) approach.

Simultaneous parallel approaches will only be offered/conducted when the weather is at least x,xxx ft (ceiling), and x miles (visibility).

2. Dual VHF Communication required. To avoid blocked transmissions, each runway will have two frequencies: a primary and a monitor frequency. The tower controller will transmit on both frequencies. The monitor controller's transmissions, if needed, will override both frequencies. Pilots will ONLY transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by approach to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. All "Breakouts" are to be hand flown to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

a. ATC Directed "Breakouts:" ATC directed breakouts would consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 ft required obstruction clearance. The MVA in the final approach segment is x,xxx feet at (Airport Name).

b. Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:

"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)."

4. LDA Traffic: While conducting the ILS PRM approach to runway xxx, other aircraft may be conducting the Offset LDA PRM approach to runway xxx. These aircraft will approach from the (insert left or right)-rear and will re-align with (LDA runway number) after making visual contact with the ILS traffic.

NOTE #1

When an LDA/DME approach is also published, the same precision minimums and missed approach procedures as contained in the LDA PRM approach must apply. The ATIS portion of the AAUP must be modified as follows:

1. ATIS. When the ATIS broadcast advises that simultaneous ILS PRM and LDA PRM approaches are in progress, pilots should brief to fly the LDA PRM approach. If later advised to expect an LDA approach, the LDA PRM chart may be used after completing the following briefing items:

a. Minimums and missed approach procedures are unchanged.

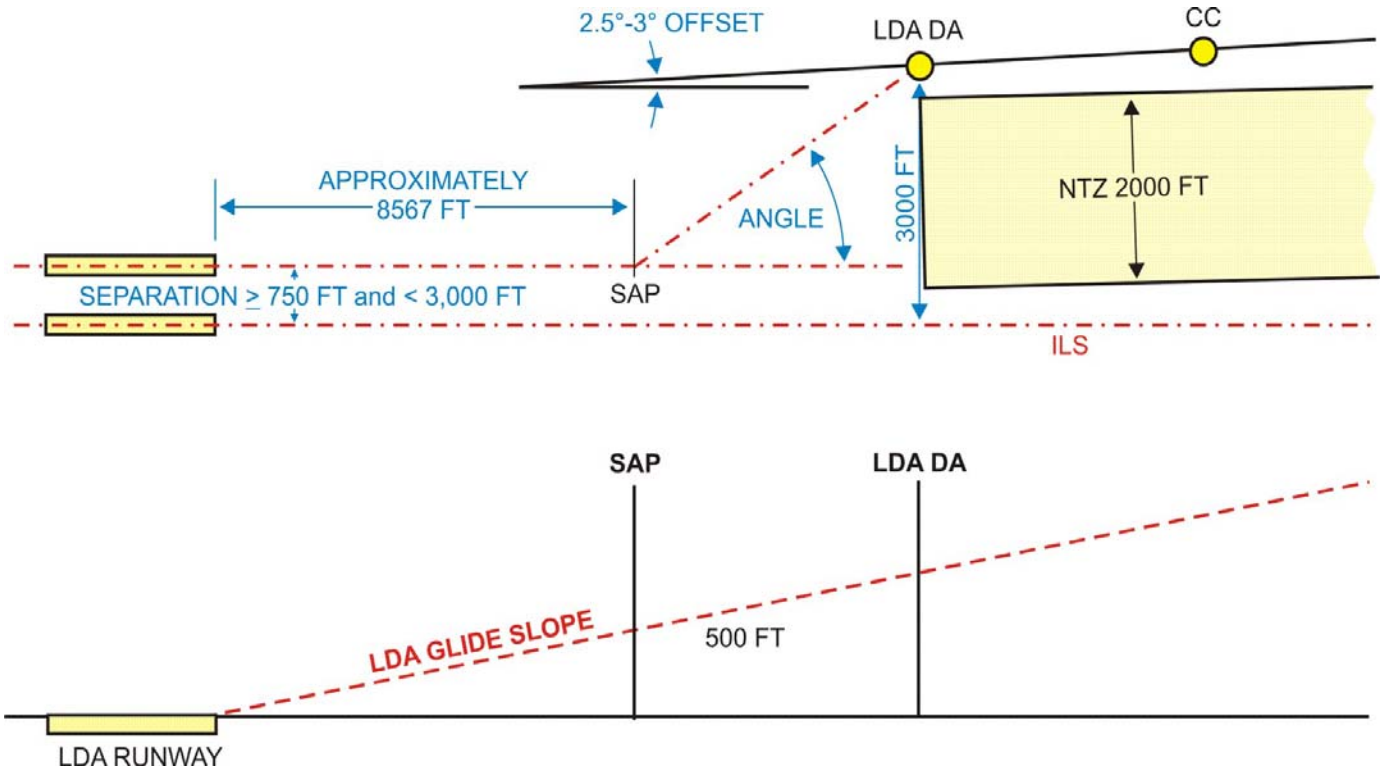
b. Monitor frequency no longer required.

c. A lower glide slope intercept altitude may be assigned when advised to expect the LDA (Rwy number) approach.

NOTE #2

Changes to the AAUP that address site-specific issues must be approved by Flight Standards.

SOIA GEOMETRY



SAP. The SAP is a design point along the extended centerline of the intended landing runway on the glide slope at 500 ft above the touchdown zone elevation. It is used to verify a sufficient distance is provided for the visual maneuver after the LDA PRM DA to permit the pilots to conform to approved, stabilized approach criteria.

LDA PRM DA. The point along the LDA where the course separation with the adjacent ILS reaches 3,000 ft. The altitude of the glide slope at that point determines the approach decision altitude and is where the NTZ terminates. Maneuvering inside the LDA PRM DA is done in visual conditions.

Angle. Angle formed at the intersection of the extended LDA runway centerline and a line drawn between the LDA PRM DA and the SAP. The size of the angle is determined by the SOIA Design Program, and is dependent on the aircraft approach category and on whether heavy aircraft use the LDA and the spacing between the runways.

Visibility. Distance from LDA PRM DA to runway threshold in statute miles.

Procedure. LDA aircraft must see the runway-landing environment and, if ATC has advised that traffic on the ILS approach is a factor, the LDA aircraft must visually acquire the ILS aircraft and report it in sight to ATC prior to reaching the LDA PRM DA.

CC. Clear of Clouds point.