NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

N 8900.216

National Policy

Effective Date:
5/22/13

Cancellation Date:
5/22/14

SUBJ: OpSpec/MSpec A002, Definitions and Abbreviations; and OpSpec/MSpec/LOA C052, Straight-In Non-Precision, APV, and Category I Precision Approach and Landing Minima—All Airports

1. Purpose of this Notice. This notice provides revised guidance for Federal Aviation Administration (FAA) certificate-holding district offices (CHDO) and principal operations inspectors (POI) assigned to operators conducting airplane operations under Title 14 of the Code of Federal Regulations (14 CFR) parts 91 subpart K (part 91K), 121, 125 (including the Letter of Deviation Authority (LODA) 125M operators), 129, and 135. This notice amends operations specifications (OpSpecs) A002 and C052. They are amended as follows:

a. OpSpec A002: Added the following Area Navigation (RNAV) (Global Positioning System (GPS)) precision runway monitor (PRM) definition: RNAV (GPS) PRM: RNAV (GPS) approach that may be substituted for an instrument landing system (ILS) PRM or localizer-type directional aid (LDA) PRM approach and is procedurally equivalent.

b. OpSpec C052: Amended FAA Order 8900.1 guidance to include RNAV (GPS) PRM approaches and added a non-mandatory RNAV (GPS) PRM selectable to the OpSpec.

2. Audience. The primary audience for this notice is FAA CHDOs and POIs assigned to operators conducting airplane operations under parts 91K, 121, 125 (including the LODA 125M operators), 129, and 135. The secondary audience includes Flight Standards divisions including their branches in the FAA regions and at FAA headquarters (HQ).

3. Where You Can Find This Notice. You can find this notice on the MyFAA employee Web site at https://employees.faa.gov/tools_resources/orders_notices/. Inspectors can access this notice through the Flight Standards Information Management System (FSIMS) at http://fsims.avs.faa.gov. Operators may find this information on the FAA's Web site at http://fsims.faa.gov. This notice is available to the public at http://www.faa.gov/regulations_policies/orders_notices.

4. Background. For about three months in mid-year 2013, the FAA will render the LDA for runway 28L and the ILS for runway 28L out of service (OTS) at San Francisco International Airport (SFO) due to runway construction. The loss of these navigation aids will eliminate the ability for SFO to conduct PRM approaches during simultaneous offset instrument approach (SOIA) operations. The FAA plans to publish RNAV (GPS) PRM procedures prior to this

navigation aid shutdown. These procedures will mirror the OTS approach courses so that SOIA can be conducted during the construction period. After the construction is complete, the RNAV (GPS) PRM approaches will be available in the event of either a scheduled or unplanned loss of a ground-based navigation aid. They will also be available as an alternate method for conducting a SOIA approach when requested by the pilot and cleared to do so by air traffic control (ATC). The changes in OpSpecs to include RNAV (GPS) PRM are presently applicable only at SFO, but may in the future apply to any location where closely-spaced approaches are conducted, and where RNAV (GPS) PRM-approaches are published.

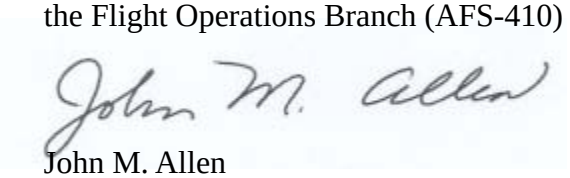
5. Guidance. The Flight Technologies and Procedures Division (AFS-400) developed this notice. This notice contains the following:

- Sample OpSpec A002 template in Appendix A, which applies to all parts.
- Sample OpSpec C052 Table 1 selectable in Appendix B, which applies to all parts.

6. Action. POIs should review the revised guidance for issuance of OpSpec/management specification (MSpec)/ letter of authorization (LOA) C052. POIs should provide this notice to the operators for whom they are responsible, alerting them to updated operating procedures, as well as required pilot knowledge and training. Operators who wish to include RNAV (GPS) PRM (combined) as an additional approach type will find that it is available in Table 1, “Approach Procedures with Vertical Guidance (APV)” column. If RNAV (GPS) PRM is selected in C052, then A002 must also be updated to contain the definition for RNAV (GPS) PRM.

> **Note:** This authorization presently only applies to PRM approaches conducted at San Francisco International Airport (KSFO), but may be extended to other locations in the future. The portion of C052 that requires vertical guidance flown to lateral navigation/vertical navigation (LNAV/VNAV) minima is waived at KSFO for RNAV (GPS) PRM operations between the time period June 27, 2013 and August 22, 2013. During this period, a LNAV line of minima will be published on the RNAV (GPS) PRM 28L and RNAV (GPS) PRM X 28R instrument approach procedures (IAPs) and may be used by operators who are authorized to conduct non-precision RNAV (GPS) approaches to LNAV minima and PRM approaches. No action is required to comply with this waiver.

7. Disposition. We will incorporate the information in this notice into FAA Order 8900.1 before this notice expires. Please forward questions concerning the information in this notice directly to the Flight Operations Branch (AFS-410) at 202-385-4625.



John M. Allen
Director, Flight Standards Service

Appendix A. Sample OpSpec A002, Definitions and Abbreviations: 14 CFR Parts 91K, 121, 125 (including the LODA 125M operators), 129, and 135

Unless otherwise defined in these operations specifications, all words, phrases, definitions, and abbreviations have identical meanings to those used in Title 14 of the Code of Federal Regulations (14 CFR) and Title 49 of the United States Code (49 U.S.C) as cited in Public Law 103-272, as amended. Additionally, the definitions listed below are applicable to operations conducted in accordance with these operations specifications.

Term(s)	Definitions
Air Ambulance Aircraft	An aircraft used in air ambulance operations. The aircraft must be equipped with at least medical oxygen, suction, and a stretcher, isolette, or other approved patient restraint/containment device. The aircraft need not be used exclusively as an air ambulance aircraft and the equipment need not be permanently installed.
Air Ambulance Operations	(a) Air transportation of a person with a health condition that requires medical personnel as determined by a health care provider, or (b) Holding out to the public as willing to provide air transportation to a person with a health condition that requires medical personnel as determined by a health care provider including, but not limited to, advertisement, solicitation, association with a hospital or medical care provider; and (c) Uses an air ambulance aircraft, either fixed wing or helicopter.
Airways Navigation Facilities	Airways navigation facilities are those International Civil Aviation Organization (ICAO) Standard Navigation Aids (very high frequency (VHF) omnidirectional range station (VOR), VOR/distance measuring equipment (DME), and/or Non-Directional Beacon (NDB)) which are used to establish the en route airway structure within the sovereign airspace of ICAO member states. These facilities are also used to establish the degree of navigation accuracy required for air traffic control (ATC) and Class I navigation within that airspace.
Auto Flight Guidance System (AFGS)	Aircraft systems, such as an autopilot, auto throttles, displays, and controls that are interconnected in such a manner so as to allow the crew to automatically control the aircraft's lateral and vertical flightpath and speed. A flight management system (FMS) is sometimes associated with an AFGS.
Automatic Dependent Surveillance (ADS)	A function for use by air traffic services in which the ADS equipment in the aircraft automatically transmits data derived from on-board navigation systems via a data link. As a minimum, the data include aircraft identification and three-dimensional position. ADS is sometimes referred to as ADS-A or ADS-Contract (e.g., a communications contract between the aircraft communications/surveillance system and an air traffic facility or service provider only).
Automatic Dependent Surveillance-Broadcast (ADS-B)	ADS-B is a function on an aircraft or surface vehicle operating within the surface movement area that periodically broadcasts via data link its state vector (horizontal and vertical position, horizontal and vertical velocity) and other information. ADS-B is Automatic in that it requires no external stimulus to elicit a transmission. ADS-B is Dependent because it relies on onboard navigation sources. ADS-B Surveillance information is provided, via data link, to any users (either aircraft or ground-based) within range of

	the Broadcast signal.
Available Landing Distance (ALD)	ALD is that portion of a runway available for landing and roll-out for aircraft cleared for land-and-hold-short operations (LAHSO). This distance is measured from the landing threshold to the hold-short point.
Category I Instrument Approach	A Category I instrument approach is any authorized precision or nonprecision instrument approach which is conducted with a minimum height for instrument flight rules (IFR) flights not less than 200 feet (60 meters) above the touchdown zone (TDZ) and a minimum visibility/Runway Visibility Value (RVV) not less than 1/2 statute mile or RVR 1800 (for helicopters, 1/4 statute mile or RVR 1600).
Certificate Holder	In these operations specifications, the term "certificate holder" shall mean the holder of the certificate described in paragraph A001 and any of its officers, employees, or agents used in the conduct of operations under these operations specifications.
Class I Navigation	Class I navigation is any en route flight operation or portion of an operation that is conducted entirely within the designated Operational Service Volumes (or International Civil Aviation Organization (ICAO) equivalents) of ICAO standard airway navigation facilities (VOR, VOR/DME, NDB). Class I navigation also includes en route flight operations over routes designated with a "minimum en route altitude (MEA) GAP" (or ICAO equivalent). En route flight operations conducted within these areas are defined as "Class I navigation" operations irrespective of the navigation means used. Class I navigation includes operations within these areas using pilotage or any other means of navigation which does not rely on the use of VOR, VOR/DME, or NDB.
Class II Navigation	Class II navigation is any en route flight operation which is not defined as Class I navigation. Class II navigation is any en route flight operation or portion of an en route operation (irrespective of the means of navigation) which takes place outside (beyond) the designated Operational Service Volume (or ICAO equivalents) of ICAO standard airway navigation facilities (VOR, VOR/DME, NDB). However, Class II navigation does not include en route flight operations over routes designated with an "MEA GAP" (or ICAO equivalent).
Cockpit Display of Traffic Information (CDTI)	A CDTI is a generic display that provides a flightcrew with surveillance information about other aircraft including their position. Traffic information for a CDTI may be obtained from one or multiple sources (including ADS-B, Traffic Alert and Collision Avoidance System (TCAS), and Traffic Information Services (TIS)) to provide improved awareness of proximate aircraft and as an aid to visual acquisition as part of the normal see and avoid operations both in the air and on the ground.
Decision Altitude (Height) (DA(H))	DA(H) is a specified minimum altitude in an instrument approach procedure (IAP) by which a missed approach must be initiated if the required visual reference to continue the approach has not been established. The 'altitude' value is typically measured by a barometric altimeter; the 'height' value (H) is typically a radio altitude equivalent height above touchdown (HAT) used only for advisory reference and does not necessarily reflect actual height above underlying terrain. [This definition is consistent with both current U.S. operator usage and ICAO international agreements.]
Dual-Certificated	For purposes of noise compliance rules, dual-certificated airplanes are

Noise Compliance	those that are certificated to operate in either a Stage 2 or Stage 3 configuration. The only airplanes dual certificated by the FAA were certain Boeing 747s, -300 series or earlier. For noise compliance purposes, these airplanes are considered Stage 2 unless the operator gets a Supplemental Type Certificate (STC) to make the airplane Stage 3 only, or unless the operator voluntarily limits the operation to Stage 3 only.
Fault Detection and Exclusion (FDE)	FDE technology allows onboard Global Positioning System (GPS) equipment to automatically detect a satellite failure that effects navigation and to exclude that satellite from the navigation solution.
Flight Management Systems (FMS)	An integrated system used by flightcrews for flight planning, navigation, performance management, aircraft guidance, and flight progress monitoring.
Free Flight	A safe and efficient flight operating capability under instrument flight rules (IFR) in which the operators have the freedom to select a path and speed in real time. Air traffic restrictions are imposed only to ensure separation, to preclude exceeding airport capacity, to prevent unauthorized flight through special use airspace, and to ensure safety of flight. Restrictions are limited in extent and duration to correct the identified problem. Any activity that removes restrictions represents a move toward Free Flight.
Global Positioning System (GPS) Landing System (GLS)	GLS is a differential GPS-based landing system providing both vertical and lateral position fixing capability. The term GLS may also be applied to any Global Navigation Satellite System (GNSS)-based differentially corrected landing system.
Helicopter Emergency Medical Service (HEMS)	HEMS is: (a) Air transportation by helicopter of a person with a health condition that requires medical personnel as determined by a health care provider; or (b) Holding out to the public as willing to provide air transportation by helicopter to a person with a health condition that requires medical personnel as determined by a health care provider including, but not limited to: advertisement, solicitation, and association with a hospital or medical care provider. (c) Helicopter emergency medical evacuation service (HEMES).
Instrument Landing System (ILS) Precision Runway Monitor (PRM)	Simultaneous close parallel ILS approaches are enabled through the implementation of special PRM equipment operated by ATC at certain airfields for specific runways, titled in 14 CFR part 97 as “ILS PRM.” ILS PRM approaches are conducted between 4,299 and 3,000 feet parallel runway spacing. Runways 3,400 feet or greater apart utilize two parallel ILS courses, aligned with the runway centerlines (RCLs). For runways spaced less than 3,400 feet, one ILS is offset 2.5° to 3.0°.
Imported Airplane Noise Compliance	For purposes of the noise compliance rules, an imported airplane is a Stage 2 airplane of 75,000 pounds or more that was purchased by a U.S. person from a non-U.S. owner on or after November 5, 1990. [Under the non-addition rule (refer to 14 CFR part 91, § 91.855), an imported airplane may not be operated to or from any airport in the contiguous United States. Such airplanes may be owned and registered by U.S. persons but are limited to operation outside the contiguous United States.]
Joint Aviation Authorities (JAA) Joint Aviation	The European JAA adopted common operational guidance for all Member States in order to harmonize the rules within those States. The

Requirements (JAR)-operational agreements (OPS)-1	JAR-OPS-1, is part 1 of the operational agreement and comprises the operational requirements applicable to commercial air transportation fixed-wing aircraft.
Localizer-Type Directional Aid (LDA) PRM	See definition of SOIA.
Life Vest (Non-Quick-Donning)	A non-quick-donning life vest is one which must be removed from its container, placed over the wearer's head, and/or requires additional steps beyond inflation to make it ready to use for its intended purpose.
Life Vest (Quick-Donning)	A quick-donning life vest is fastened around a person in a manner which requires the wearer only to pull on a single tab and lift the life vest over his/her head. At this point the life vest needs only to be inflated to be ready to use for its intended purpose.
Local Flying Area	An area designated by the operator in which air ambulance services will be conducted. Each local flying area should be defined in a manner acceptable to the operator, the local Flight Standards District Office (FSDO), and the principal operations inspector (POI), taking into account the operating environment, the geographic terrain features, and the capabilities of the aircraft.
Major Contract Training	Any flight training, flight testing, or flight checking leading to and maintaining certification and qualification of air carrier flightcrew members in accordance with the requirements (maneuvers and procedures) explicitly stated in 14 CFR part 61, 121, or 135; or in Special Federal Aviation Regulations (SFAR) 58 Advanced Qualification Program (AQP), as applicable.
Medical Crewmember	A person with medical training who is assigned to provide medical care and other crewmember duties related to the aviation operation during flight.
Minimum Descent Altitude (Height)	MDA(H) is the lowest altitude in an instrument approach procedure to which a descent is authorized on final approach or during circle-to-land maneuvering. The 'altitude' value is typically measured by a barometric altimeter; the 'height' value (H) is typically a radio altitude equivalent height above the touchdown zone (TDZ) (HAT) or height above airport (HAA) published elevation. The (H) is used only for advisory reference and does not necessarily reflect actual height above underlying terrain. [This definition is consistent with both current U.S. operator usage and ICAO international agreements.]
Operational Service Volume	The Operational Service Volume is that volume of airspace surrounding a Navigational Aid (NAVAID) which is available for operational use and within which a signal of usable strength exists and where that signal is not operationally limited by co-channel interference. Operational Service Volume includes all of the following: (a) The officially designated Standard Service Volume excluding any portion of the Standard Service Volume which has been restricted. (b) The Expanded Service Volume. (c) Within the United States, any published instrument flight procedure (victor or jet airway, Standard Instrument Departure (SID), Standard Terminal Arrival Route (STAR), Standard Instrument Approach Procedure (SIAP), or instrument departure). (d) Outside the United States, any designated signal coverage or published instrument flight procedure equivalent to U.S. standards.

Outsourced Training	Any training, testing, or checking activity which an air carrier certificate holder provides by way of a contract arrangement with another party.
Parabolic Flight Operations	Parabolic flight operations are aerobatic maneuvers in which the aircraft is intentionally pitched in excess of 30° above and 30° below the horizon in a repeated fashion for the specific purpose of exposing the participants to reduced or zero gravity conditions.
Planned Redispatch or ReRelease EnRoute	The term "planned redispatch or rerelease en route" means any flag operation (or any supplemental operation that includes a departure or arrival point outside the 48 contiguous United States and the District of Columbia) that is planned before takeoff to be redispatched or rereleased, in accordance with 14 CFR part 121, § 121.631(f), at a predetermined point along the route of flight to an airport other than that specified in the original dispatch or flight release.
Polar Area Operations (North)	The north polar area operations is that area that lies north of latitude N7°/800'.
Qualified Local Observer	A person who provides weather, landing area, and other information as required by the operator, and has been trained by the operator under a training program approved by the POI.
Raw Terrain	Raw terrain is devoid of any person, structure, vehicle or vessel.
Area Navigation (RNAV) (GPS) PRM	RNAV (GPS) PRM approach that may be substituted for an ILS PRM or LDA PRM approach and is procedurally equivalent.
Receiver Autonomous Integrity Monitoring (RAIM)	RAIM is a function that considers the availability of satisfactory signal integrity broadcasted from the particular GPS satellites used during a given flight. Onboard GPS navigators accomplish this automatically as the aircraft proceeds along its route. When insufficient signal integrity is detected, an alarm is provided to the flightcrew. Using the predictive RAIM software, flightcrews and dispatchers know in advance whether or not suitable GPS navigation will be available throughout the flight. This predictive information may also be determined during flight planning by contacting an FAA Flight Service Station (FSS).
Reliable Fix	A "reliable fix" means station passage of a VOR, Very High Frequency Omni-directional Range Tactical Air Navigation (VORTAC), or NDB. A reliable fix also includes a VOR/DME fix, an NDB/DME fix, a VOR intersection, an NDB intersection, and a VOR/NDB intersection provided course guidance is available from one of the facilities, and the fix lies within the designated operational service volumes of both facilities which define the fix.
Required Navigation Performance (RNP)	A statement of navigation performance necessary for operations within a defined airspace.
Required Navigation Performance (RNP) Time Limit	Applies to aircraft equipped with inertial navigation systems (INS) or Inertial Reference Units (IRU) systems where those systems provide the means of navigation to navigate to the degree of accuracy required by ATC. The FAA-approved time in hours, after the system is placed in navigation mode or is updated en route, that the specific INS or IRU make/model can meet a specific RNP type on a 95% probability basis. It is used to establish the area of operations or routes on which the aircraft/navigation system is qualified to operate.
Required Navigation Performance (RNP) Type	A value typically expressed as a distance in nautical miles from the intended position within which an aircraft would be for at least 95% of the total flying time. For example, RNP-4 represents a lateral and longitudinal

	navigation accuracy of 4 nautical miles (NM) on a 95% basis. Note: Applications of RNP to terminal area and other operations may also include a vertical component.
Runway	In these operations specifications the term “runway” in the case of land airports, water airports and heliports, and helipads shall mean that portion of the surface intended for the takeoff and landing of land airplanes, seaplanes, or rotorcraft, as appropriate.
Simultaneous Offset Instrument Approach (SOIA)	This operation comprises one ILS and one LDA with glideslope. The ILS is aligned with its runway, but the LDA serving the second runway is offset (between 2.5° and 3°) from a parallel track. This offset permits simultaneous instrument approach operations to parallel runways spaced less than 3,000 feet apart, but no less than 750 feet. Because of the offset, this operation is also known as a SOIA.
Visual Flight Rules (VFR) Station-Referenced Class I Navigation	VFR station-referenced Class I navigation is any operation conducted within the operational service volumes of ICAO standard navigation aids under VFR which uses nonvisual navigation aids (stations), such as VOR, VOR/DME, or NDB as the primary navigation reference. VFR station-referenced Class I navigation includes Class I navigation conducted on-airways and off-airway routings predicated on airways navigation facilities. These operations also include Class I navigation using an area navigation system which is certificated for IFR flights over the routes being flown.
Wide Area Augmentation System (WAAS)	WAAS has been developed to improve the accuracy, integrity, availability, and reliability of GPS signals. WAAS utilizes a fixed localized ground station to calculate GPS integrity and correction data, then broadcasts this information through the GPS satellites to GPS/WAAS users along with ranging signals. It is a safety-critical system consisting of a ground network of reference and integrity monitor data processing sites which assess current GPS performance, as well as a space segment that broadcasts that assessment to GNSS users to support IFR navigation.

Appendix B. Sample OpSpec C052, Basic Instrument Approach Procedure Authorizations – All Airports: 14 CFR Parts 91K, 121, 125 (including the LODA 125M operators), 129, and 135

Table 1—Authorized Instrument Approach Procedures

Nonprecision Approaches without Vertical Guidance	Approach with Vertical Guidance (APV)	Precision Approach Procedures (ILS, MLS, & GLS)
ASR/SRA/SRE	LDA w/glideslope	ILS
AZI	RNAV (GPS)	ILS/PRM
AZI/DME	RNAV (GNSS)	MLS
AZI/DME Back Course	LDA PRM	PAR
GPS	LDA PRM DME	ILS/DME
LDA	SDF w/glideslope	*RNAV/ILS
LDA/DME	LOC BC w/glideslope	GLS
LOC	RNAV (GPS) PRM	
LOC BC		
LOC/DME		
NDB		
NDB/DME		
RNAV (GPS)		
VOR/DME RNAV		
SDF		
TACAN		
VOR		
VOR/DME		
LOC/BC/DME		