

APPENDIX A: ACRONYMS AND GLOSSARY

*ACRONYMS, INITIALISMS AND ABBREVIATIONS*

<b>AAC</b>	aircraft approach category	<b>DW</b>	dual wheels
<b>AC</b>	advisory circular	<b>EA</b>	environmental assessment
<b>AD</b>	airworthiness directive	<b>EDDA</b>	environmental due diligence audit
<b>ADG</b>	airplane design group	<b>EIS</b>	environmental impact statement
<b>ADO</b>	Airports District Office	<b>FAA</b>	Federal Aviation Administration
<b>ADS-B</b>	automatic dependent surveillance– broadcast	<b>FARs</b>	Federal Aviation Regulations
<b>AGL</b>	above ground level	<b>FBO</b>	fixed-base operator
<b>AIM</b>	Aeronautical Information Manual	<b>FLT/PLN</b>	flight plan
<b>AIP</b>	Airport Improvement Program	<b>FOD</b>	foreign object damage (debris)
<b>ALP</b>	airport layout plan	<b>FONSI</b>	finding of no significant impact
<b>ALS</b>	approach lighting system	<b>FSDO</b>	Flight Standards District Office
<b>AMP</b>	airport master plan	<b>FSS</b>	flight service station
<b>AP</b>	airport	<b>GA</b>	general aviation
<b>APCH</b>	approach	<b>GIS</b>	geographic information system
<b>APRC</b>	approach reference code	<b>GND</b>	ground level
<b>APRT</b>	airport	<b>GP</b>	glide path
<b>APT</b>	airport(s)	<b>GPS</b>	global positioning system
<b>APV</b>	approach procedure with vertical guidance (for GPS approaches)	<b>GQS</b>	glideslope qualification surface
<b>ARP</b>	airport reference point	<b>GS</b>	glide slope indicator
<b>ASDA</b>	accelerate-stop distance available	<b>HIRL</b>	high intensity runway lights
<b>ASOS</b>	automated surface observing system	<b>IAP</b>	instrument approach procedure
<b>ATC</b>	air traffic control	<b>ICAO</b>	International Civil Aviation Organization
<b>ATCT</b>	airport traffic control tower	<b>IFR</b>	instrument flight rules
<b>ATO</b>	Air Traffic Organization	<b>ILS</b>	instrument landing system
<b>AVGAS</b>	aviation gasoline	<b>INOP</b>	inoperative
<b>AWOS</b>	automated weather observing system	<b>LDA</b>	landing distance available
<b>BCN</b>	beacon	<b>LED</b>	light-emitting diode
<b>BRL</b>	building restriction line	<b>LNAV</b>	lateral navigation (for GPS approaches)
<b>CatEx</b>	categorical exclusion	<b>LOC</b>	localizer (part of an ILS system)
<b>CFJ (KCFJ)</b>	Crawfordsville Regional Airport	<b>LPV</b>	localizer performance with vertical guidance (for GPS approaches)
<b>CFR</b>	Code of Federal Regulations	<b>MALS</b>	medium intensity approach lighting system
<b>CMG</b>	cockpit to main gear	<b>MALSF</b>	medium intensity approach lighting system with sequenced flashers
<b>CSPP</b>	construction safety and phasing plan	<b>MALSR</b>	medium intensity approach lighting system with runway alignment indicator lights
<b>CTAF</b>	common traffic advisory frequency	<b>MDA</b>	minimum descent altitude
<b>DA</b>	decision altitude	<b>METAR</b>	meteorological aviation routine weather report/actual report
<b>dB</b>	decibel	<b>MGW</b>	main gear width
<b>DEP</b>	depart, departure	<b>MHz</b>	megahertz
<b>DME</b>	distance measuring equipment		
<b>DNL</b>	day-night average sound level		

<b>MIL</b>	military	<b>ROD</b>	record of decision
<b>MIN</b>	minimum	<b>RPZ</b>	runway protection zone
<b>MIRL</b>	medium intensity runway light	<b>RSA</b>	runway safety area
<b>MOS</b>	modification to standards	<b>RVR</b>	runway visual range
<b>MSL</b>	mean sea level	<b>RW</b>	runway
<b>MTOW</b>	maximum takeoff weight	<b>RWY</b>	runway
<b>MVAR/MAGVAR</b>	magnetic variation	<b>SAWS</b>	stand-alone weather sensors
<b>NAAQS</b>	National Ambient Air Quality Standards	<b>SIGWX</b>	significant weather
<b>NAS</b>	National Airspace System	<b>SMS</b>	safety management system
<b>navaid</b>	navigational aid	<b>SOP</b>	standard operating procedures
<b>NDB</b>	nondirectional beacon	<b>SRE</b>	snow removal equipment
<b>NEPA</b>	National Environmental Policy Act	<b>STOL</b>	short takeoff and landing
<b>NM</b>	nautical mile = 1.1508 statute miles	<b>SUA</b>	special use airspace
<b>NOTAM</b>	notice to airmen	<b>sUAS</b>	small unmanned aircraft system
<b>NPE</b>	nonprimary entitlement	<b>SVFR</b>	special VFR
<b>NPIAS</b>	National Plan of Integrated Airport Systems	<b>SWPPP</b>	stormwater pollution prevention plan
<b>NTSB</b>	National Transportation Safety Board (U.S.)	<b>T/O</b>	takeoff
<b>NWS</b>	National Weather Service	<b>TALPA</b>	takeoff and landing performance assessment
<b>OBST</b>	obstacle, obstruction	<b>TCH</b>	threshold crossing height
<b>OCS</b>	obstacle clearance surface	<b>TDG</b>	taxiway design group
<b>OE/AAA</b>	Obstruction Evaluation/Airport Airspace Analysis	<b>TDZ</b>	touchdown zone
<b>OFA</b>	object free area	<b>TEMP</b>	temperature
<b>OFZ</b>	obstacle free zone	<b>TERPS</b>	terminal instrument procedures
<b>OPS</b>	operations	<b>TFMSC</b>	traffic flow management system counts
<b>OTS</b>	out of service	<b>TFR</b>	temporary flight restriction
<b>PA</b>	precision approach	<b>TLOF</b>	touchdown and liftoff area
<b>PAPI</b>	precision approach path indicator	<b>TO</b>	takeoff
<b>PAX</b>	passengers	<b>TODA</b>	takeoff distance available
<b>PBN</b>	performance-based navigation	<b>TORA</b>	takeoff run available
<b>PCI</b>	pavement condition index	<b>TSA</b>	taxiway safety area
<b>PCL</b>	pilot-controlled lighting	<b>TSA</b>	Transportation Security Administration
<b>PMP</b>	pavement management program	<b>TW</b>	taxiway
<b>RAIL</b>	runway alignment indicator lights	<b>TWY</b>	taxiway
<b>RDC</b>	runway design code	<b>UAS</b>	unmanned aircraft system
<b>REILs</b>	runway end identifier lights	<b>UAV</b>	unmanned aerial vehicle
<b>RMK</b>	remark(s)	<b>UTC</b>	Coordinated Universal Time or Universal Time Coordinates
<b>RNAV</b>	area navigation (generic acronym for any device capable of aircraft guidance between pilot-defined waypoints)	<b>VASI</b>	visual approach slope indicator
<b>RNP</b>	required navigation performance	<b>VFR</b>	visual flight rules
		<b>VHF</b>	very high frequency
		<b>VIS</b>	visibility
		<b>VLJs</b>	very light jets

<b>VNAV</b>	vertical navigation (for GPS approaches)	<b>WAAS</b>	wide-area augmentation system
<b>VOR</b>	VHF omnidirectional range	<b>WHA</b>	wildlife hazard assessment
<b>VOR-DME</b>	VHF omnidirectional range/distance measurement equipment	<b>WHMP</b>	wildlife hazard management plan
<b>VORTAC, VOR/TAC or VOR-TACAN</b>	combined VOR and TACAN	<b>WX</b>	weather
<b>VSB</b>	visibility	<b>X-Wind</b>	crosswind

## GLOSSARY

## A

**above ground level (AGL):** Altitude expressed as feet above terrain or airport elevation (see mean sea level).

**accelerate-stop distance available (ASDA):** The runway plus stopway length declared available and suitable for the acceleration and deceleration of an aircraft aborting a takeoff.

**acceptable minimum level of service:** The minimum acceptable pavement condition index rating for a category of pavement, such as a general aviation runway.

**advisory circular (AC):** A series of external, informational Federal Aviation Administration publications consisting of nonregulatory material about a policy and providing guidance for compliance.

**aeronautical activity:** Any activity that involves, makes possible or is required for the operation of aircraft or that contributes to or is required for the safety of such operations.

**Aeronautical Information Manual (AIM):** A primary Federal Aviation Administration publication with the purpose of instructing airmen about operating in the National Airspace System of the United States. It provides basic flight information, air traffic control procedures, and general instructional information concerning health, medical facts, factors affecting flight safety, accident and hazard reporting, and types of aeronautical charts and their use.

**aircraft approach category (AAC):** A lettering system used by the Federal Aviation Administration to group aircraft based on approach speed.

**airfield capacity:** The maximum number of aircraft operations (landings or takeoffs) that can take place on an airfield in one hour under specific conditions.

**airplane design group (ADG):** A classification of aircraft by the Federal Aviation Administration based on wingspan and tail height.

**airport:** An area of land or water that is used or intended to be used for the landing and taking off of aircraft, including its buildings and facilities, if any.

**airport director or airport manager:** The person responsible for the day-to-day operation of an airport, including the business, administration, operational and communication aspects, and the implementation of policy guidance and longer-term plans for the airport.

**airport economic impact:** The contribution of an airport to the regional economy, quantified in terms of employment, payroll, and output.

**airport elevation:** The highest point of an airport's usable runways, measured in feet above mean sea level.

**airport hazard:** Any structure or natural object on or in the vicinity of a public airport, or any use of land near such an airport, that obstructs the airspace required for the flight of aircraft landing, taking off, or taxiing at the airport.

**Airport Improvement Program (AIP):** A program that provides financial grants to primarily public agencies for the planning and development of public-use airports that are included in the National Plan of Integrated Airport Systems.

**airport layout plan (ALP):** A set of drawings that provide a graphic representation of the sponsor's long-term development plan for an airport, including property boundaries, existing and proposed airport facilities and structures, and the location of existing and proposed nonaeronautical areas.

**airport master plan (AMP):** An assembly of appropriate documents and drawings covering the development of a specific airport from a physical, economic, social, and political jurisdictional perspective by assessing current and projected demands. The master plan typically has a time frame of 20 years, with short-term, intermediate-, and long-term goals within that time frame. The airport layout plan is a part of this plan.

**airport operator:** The public or private operator or sponsor of a public-use airport.

**airport property:** Any property, when described as part of an airport in an agreement with the United States or defined by an airport layout plan or listed in an Exhibit "A" property map, that is considered to be obligated property for airport purposes.

**airport reference point (ARP):** The approximate geometric center of all usable runways at the airport.

**Airports Geographic Information System (Airports GIS):** The Federal Aviation Administration's system of collecting and compiling airport and aeronautical data.

**airport sponsor:** Typically, a public agency or tax-supported organization that is authorized to own and operate an airport, obtain funds and property interests, and be legally, financially, and otherwise able to meet all applicable requirements of laws and regulations. Occasionally, it is a private entity.

**airport traffic control tower (ATCT):** A raised facility on the airfield from which controllers visually, and by radar where available, monitor air traffic and use two-way radios on a designated frequency to direct traffic.

**approach lights:** A lighting system located off the end of the runway to aid the pilot in identifying the runway environment.

**approach procedure with vertical guidance (APV):** An instrument approach procedure providing vertical and lateral electronic guidance.

**approach reference code (APRC):** A code signifying the current operational capabilities of a runway and associated parallel taxiway with regard to landing operations.

**approach surface:** A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of each runway based on the type of approach available or planned for that runway end.

**apron/ramp:** A defined area on an airport or heliport intended to accommodate aircraft for the purposes of loading passengers or cargo, refueling, parking, or maintenance.

**area navigation (RNAV):** A method of navigation that allows an aircraft to choose any course within a network of navigation beacons, rather than navigating directly to and from the beacons. It includes lateral navigation providing horizontal alignment guidance to the pilot and can include lateral navigation or vertical navigation providing horizontal and vertical guidance to a pilot.

**automated weather observing system (AWOS)/automated surface observing system (ASOS):** A system of weather sensors that collects and disseminates weather data to pilots and flight dispatchers so they may prepare for and monitor weather forecasts. The ASOS program is entirely federally funded, whereas AWOS systems are generally operationally funded by the operator or airport sponsor.

**automatic dependent surveillance – broadcast (ADS-B):** A technological application for pilots and air traffic controllers that uses global positioning system satellites to determine aircraft location, ground speed, and other data, and provides traffic and weather information directly to the cockpits of properly equipped aircraft. ADS-B out equipment allows the aircraft to transmit its position. ADS-B in and out allows the aircraft to transmit its position and receive weather data and flight information services.

**avgas:** Aviation gasoline used by piston-powered aircraft.

**avigation easement:** A type of acquisition of an interest in land or property that involves a less-than-fee simple purchase. One form of avigation easement grants an airport the right to perform aircraft operations over the designated property, including operations that might cause noise, vibration, and other effects. A stronger form of easement is a deed restriction that may include the right to perform aircraft operations on the property or the public acquisition of a landowner's rights, restricting the future development of the property for any use more intensive than that existing at the time of the transaction. This easement may also include prohibitions on the uses for which the property may be developed. The maximum heights of structures and other objects may also be specified.

**B**

**based aircraft:** Aircraft stationed at an airport on a long-term or permanent basis, usually by some form of agreement between the aircraft owner and airport management.

**benefit-cost analysis:** A systematic approach to estimating the strengths and weaknesses of alternatives by determining options that provide the best approach to achieve benefits while preserving savings.

**blast pad:** A surface adjacent to the ends of runways provided to reduce the erosive effect of jet blast and propeller wash.

**building restriction line (BRL):** A line established with respect to the runway centerline to assure that structures will not project above the imaginary surfaces required by Federal Aviation Regulations, Part 77, and obstruction clearance criteria.

**C**

**categorical exclusion (CatEx):** A category of actions that do not individually or cumulatively have a significant effect on the human environment and for which neither an environmental assessment nor an environmental impact statement is required. (Documentation in the form of a CatEx checklist still must be prepared by the airport or its sponsor.)

**circling approach:** A maneuver initiated by the pilot to align the aircraft with a runway for landing when a straight-in landing from an instrument approach is not possible or not desirable.

**Class A airspace:** Airspace between 18,000 and 60,000 feet mean sea level over the conterminous United States. Instrument flight rule clearances are required for all aircraft operating in Class A airspace. Formerly called the “positive control area.”

**Class B airspace:** Airspace around the busiest U.S. hub airports, typically to a radius of 20 nautical miles and up to 10,000 feet above ground level. Operations within Class B airspace require an air traffic control clearance and at least a private pilot certificate (local waivers available), radio communication and an altitude-reporting (Mode C) transponder. Formerly called “terminal control area.”

**Class C airspace:** Airspace around busy U.S. airports (other than Class B). Radio contact with approach control is mandatory for all traffic. This includes an area from the surface to 1,200 feet above ground level out to 5 miles and from 1,200 to 4,000 feet AGL to 10 miles from the airport. Formerly called “airport radar service area.”

**Class D airspace:** Airspace around an airport with an operating control tower, typically to a radius of 5 miles from the surface to 2,500 feet above ground level. Radio contact with the control tower required prior to entry. Formerly called “airport traffic area.”

**Class E airspace:** General controlled airspace comprising control areas, transition areas, Victor airways, the continental control area, etc.

**Class F airspace:** An international airspace designation not used in the United States.

**Class G airspace:** Uncontrolled airspace; generally, the airspace from the surface up to 700 or 1,200 feet above ground level in most of the United States, but up to as high as 14,500 feet in some remote western and sparsely populated areas.

**cockpit to main gear distance (CMG):** The distance in feet, from the cockpit to the main gear; used to determine the taxiway design group.

**common traffic advisory frequency (CTAF):** The radio frequency, sometimes called the UNICOM (universal communications) frequency, used by all traffic at an airport without an operating control tower to coordinate approaches, landings, takeoffs, and departures. Pilots announce their positions, intentions, and actions in the traffic pattern for the benefit of other traffic.

**concurrent use:** The use of aeronautical land for a compatible, nonaeronautical revenue-producing purpose.

**conical surface:** A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.

**construction safety and phasing plan (CSPP):** A document that outlines procedures to maintain operational safety on an airport during construction



projects. This plan identifies how to minimize construction impacts on operations.

**critical aircraft:** The most demanding aircraft type or grouping of aircraft with similar characteristics that make regular use of the airport. “Regular use” is 500 annual operations, excluding touch-and-go operations. An operation is a takeoff or landing.

## D

**day-night average sound level (DNL):** The 24-hour average sound level, in decibels, for the period from midnight to midnight, obtained after the addition of 10 decibels to sound levels for the periods between 10 p.m. and 7 a.m.

**decision altitude (DA):** A specified lowest height or altitude in the approach of an aircraft to a runway; if the required visual reference to continue the approach (such as the runway markings or runway environment) is not visible to the pilot, then the pilot must initiate a missed approach.

**declared distances:** The distances the airport owner declares available for aircrafts’ takeoff run, takeoff distance, accelerate-stop distance, and landing distance requirements.

**deed restrictions:** A legal mechanism to restrict the use of a property to define certain conditions in perpetuity.

**departure obstacle clearance surface:** A 40:1 surface originating at the location and elevation of the departure end of the runway, which is used to evaluate required climb performance from a particular departure runway end to the nearest (shortest distance) obstacle in the segment.

**design aircraft:** An aircraft with characteristics that determine the application of airport design standards for a specific runway, taxiway, taxilane, apron, or other facility. This aircraft can be a specific aircraft model or a composite of several aircraft that are using, expected to use, or intended to use the airport or part of the airport. (Also called “critical aircraft” or “critical design aircraft.”)

**discretionary funds:** Airport Improvement Program grant funds remaining within the obligation limitation, after entitlement calculation, subject to restrictions in legislation and available for distribution

at the Federal Aviation Administration discretion, per the FAA’s priority system.

**displaced threshold:** A runway landing threshold located at a point other than the designated beginning of the runway (where departures would begin).

**distance measuring equipment (DME):** Aircraft equipment that provides pilots with a readout of the distance between the DME facility (airport) and the aircraft.

## E

**entitlement funds:** A set minimum level of Airport Improvement Program funding for an airport, based on the Federal Aviation Administration’s criteria. The minimum differs for primary and nonprimary airports, based on enplanement levels for primary air carrier airports and standard allocation for each nonprimary airport.

**environmental assessment (EA):** An assessment of the environmental effects of a proposed action for which federal financial assistance is being requested or for which federal authorization is required. The EA serves as the basis for the Federal Aviation Administration’s environmental impact statement or finding of no significant impact.

**environmental due diligence audit (EDDA):** An audit performed to identify and minimize potential environmental liabilities prior to the purchase of a property.

**environmental impact statement (EIS):** A document prepared under the requirements of the National Environmental Policy Act of 1969, Section 102(2)(c) representing a federal agency’s evaluation of the effect of a proposed action on the environment. (The Federal Aviation Administration will serve as the sponsor.)

**Exhibit “A” property map:** A drawing of the dedicated airport property, including detailed information about how the property was acquired, the funding source for the land, and if the land was conveyed as federal surplus land or government property.

## F



**FAR Part 77: Objects Affecting Navigable**

**Airspace:** Part 77 establishes standards for determining obstructions in navigable airspace, outlines the requirements for notifying the Federal Aviation Administration of certain proposed constructions or alterations, and provides for aeronautical studies of obstructions to air navigation to determine their effect on the safe and efficient use of airspace. Section 77.25 establishes imaginary surfaces around airport runways, approach zones, and navigable airspace in the vicinity of the airport.

**FAR Part 91: General Operating and Flight**

**Rules:** Part 91 prescribes the rules governing the operation of aircraft within the United States, including the waters within 3 nautical miles of the United States coast. It also establishes operators' requirements to support the continued airworthiness of each aircraft.

**FAR Part 107: Small Unmanned Aircraft**

**Systems:** Part 107 establishes the registration of airmen and the certification and operation of small (weighing less than 55 pounds) unmanned aircraft systems within the United States.

**FAR Part 137: Agricultural Aircraft Operations:**

Part 137 prescribes the rules governing agricultural aircraft operations within the United States and the issuance of commercial and private agricultural aircraft operator certificates for those operations.

**Federal Aviation Administration (FAA):** The United States Department of Transportation's agency for aviation. In addition to regulating airports, aircraft manufacturing and parts certification, aircraft operation and pilot certification ("licensing"), the FAA operates air traffic control, purchases and maintains navigation equipment, certifies airports, and aids airport development, among other activities.

**Federal Aviation Regulations (FAR):**

Regulations established by the Federal Aviation Administration located in Title 14 of U.S. Code of Federal Regulations. These regulations are the rules that govern the operation of aircraft, airways, airports, and airmen.

**federal grant assurance:** A provision of a federal grant agreement to which the recipient of federal airport development assistance has agreed to comply.

**federally obligated airport:** An airport that has accepted federal grant funds and the associated requirements known as grant assurances.

**fee simple ownership:** This is considered to be the full property ownership in land wherein the owner has the exclusive right to use it, exclusively possess it, commit waste upon it, dispose of it by deed or will, and take its fruits.

**finding of no significant impact (FONSI):** An administrative determination by the Federal Aviation Administration that a proposed action by the airport sponsor will have no significant impact on the environment.

**fixed-base operator (FBO):** A commercial business granted the right by the airport sponsor to operate at an airport and provide aeronautical services, such as fueling, hangaring, tie-down and parking, aircraft rental, aircraft maintenance, flight instrument, etc.

**flight plan:** Filed by radio, telephone, computer, or in person with flight service stations, a record of aircraft number, type, and equipment; estimated time of departure and time en route; route and altitude to be flown; amount of fuel and number of persons aboard; home base and contact phone number; and other information.

- *visual flight rules flight plan:* A voluntary filing for cross-country flights under visual flight rules. This is for search and rescue use only, with no role for air traffic control.
- *Instrument flight rules flight plan:* A mandatory filing (at least one-half hour) before a flight under instrument flight rules. Based on flight plan information, air traffic control can issue (immediately before departure) an instrument flight rules clearance to enter clouds or low-visibility conditions for instrument rather than visual flight.

**foreign object damage and foreign object debris (FOD):** Foreign object debris is a substance, debris or article alien to an aircraft or aircraft system that could potentially damage the aircraft. Foreign object damage is any damage attributed to a foreign object that can be expressed in physical or economic terms and may or may not degrade the

aircraft's required safety or performance characteristics.

**frangible:** An object that retains its structural integrity and stiffness up to a designated maximum load but on impact from a greater load, it breaks, distorts, or yields in such a manner as to cause minimum damage to an aircraft.

**fuel farm:** A consolidated location for bulk fuel storage and equipment, on or off an airport.

**fuel flowage fee:** A fixed fee added to each gallon of fuel pumped or a percentage added to the fuel purchased at the airport to support airport operations, which is generally collected from a private entity that provides the fueling services and is remitted to the airport owner.

## G

**general aviation (GA):** All civil aviation (excluding military), except those classified as air carrier or air taxi. The types of aircraft typically used in general aviation activities vary from multiengine jet aircraft to single-engine piston aircraft for purposes such as personal, business, and instructional flying.

**general aviation airport:** An airport not classified as commercial service or military.

**general aviation operations:** Operations that are performed by all civil aircraft not classified as air carrier, military, or air taxi aircraft.

**geographic information system (GIS):** A system designed to capture, store, manipulate, analyze, manage, and present spatial or geographic data.

**glide path qualification surface (GQS):** An imaginary 30:1 trapezoidal surface applicable to approaches with vertical guidance, extending from the runway threshold along the runway centerline to 10,000 feet from the runway end. Also referred to as vertical qualification surface.

**glideslope:** An angle approach to a runway using the glideslope antenna of an instrument landing system.

**global positioning system (GPS):** A satellite-based navigation system operated by the Department of Defense, providing accurate latitude

and longitude positions, times, and speeds to civilian and military users.

**grant assurances:** Obligations undertaken by the airport sponsor when it accepts funds from the Federal Aviation Administration-administered airport financial assistance program.

## H

**hangar:** A large building at an airport in which planes can be stored and maintained.

**hazardous wildlife:** Any species of wildlife, both feral animals and domesticated animals not under control, that are associated with aircraft strike problems, are capable of causing structural damage to airport facilities, or act as attractants to other wildlife that pose a strike hazard.

**hazard to air navigation:** An existing or proposed object that will have a substantial adverse effect on the safe and efficient use of navigable airspace by aircraft.

**horizontal surface:** A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of a specified radii from the center of each end of the primary surface of each runway of each airport and connecting the adjacent arcs by lines tangent to those arcs. The radii of the arcs are 5,000 or 10,000 feet, depending on the runway category or approach type.

## I

**instrument approach procedure (IAP):** A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the approach to a landing or to a point from which a landing may be completed with visual references. (See instrument flight rules).

**instrument flight rules (IFR):** A set of regulations and procedures permitting qualified and current IFR pilots to penetrate clouds and low-visibility conditions. Aircraft must be equipped with radio and navigation instruments and operate under air traffic control flight plans and clearances. Flights are monitored, and traffic is separated by air traffic control. (See also visual flight rules).

**instrument landing system (ILS):** A precision instrument approach system using radio transmitters at the runway ends that provides precise descent and course guidance to the runway, permitting aircraft to land during periods of low ceilings or poor visibility.

- **Category I (CAT I):** An instrument approach or approach and landing with a height above threshold (HAT<sub>h</sub>) or minimum descent altitude not lower than 200 feet and with either a visibility not less than ½ statute mile or a runway visual range not less than 1,800 feet.

**itinerant operation:** An arrival or departure performed by an aircraft from or to a point beyond the local airport area. Also defined as all aircraft arrivals and departures other than local operations.

## J

**Jet A:** A type of aviation fuel used in aircraft powered by gas-turbine engines.

## K

**knot (nautical mile per hour):** The most common measure of aircraft speed; 100 knots equals 115 statute miles per hour. (For mph, multiply knots by 1.15.)

## L

**landing distance available (LDA):** The runway length declared available and suitable for landing an aircraft.

**landing fee:** A charge paid by an aircraft owner to an airport for landing at a particular airport.

**land lease:** A long-term land lease, generally for the purpose of erecting a building or buildings or for constructing improvements to the land to be used by the lessee. The land lease should reference the airport's rules, regulations, and minimum standards. The land lease price per square foot could vary by location, possibly by the length of the term, and may be connected to a business permit or a fixed-base operator lease.

**land release:** The release of airport property not needed for present or future aeronautical purposes but subject to federal obligations from the terms of the agreement with the United States government. It

is defined as the formal, written authorization discharging and relinquishing the Federal Aviation Administration's right to enforce an airport's contractual obligations.

**large aircraft:** An aircraft with a maximum certificated takeoff weight of more than 12,500 pounds.

**localizer (LOC):** Part of an instrument landing system that provides lateral deviations from a preset course.

**local operation or traffic:** Aircraft operating in the traffic pattern or within sight of the tower, aircraft known to be departing or arriving from flight in local practice areas, or aircraft executing practice instrument approaches at the airport. Touch-and-go operations are local operations.

## M

**magnetic variation (MVAR, MAGVAR):** The difference between true north and magnetic north, varying with position. The magnetic variation drifts with time.

**main gear width (MGW):** The distance from the outer edge to the outer edge of the widest set of main gear tires.

**mean sea level (MSL):** Altitude expressed as feet above sea level, rather than above local terrain (i.e., AGL). To ignore varying terrain elevations, all navigational altitudes and barometric altimeters are based on height above MSL. Only radar altimeters, which measure the distance between the aircraft and the ground at low altitudes, indicate actual height above the ground.

**minimums:** Weather condition requirements established for a particular operation or type of operation — e.g., instrument flight rules takeoff or landing, alternate airport for instrument flight rules flight plans, etc.

**minimum standards:** Sponsor-established minimum service levels and development space requirements for commercial aeronautical activities at the airport.

**missed approach:** A maneuver conducted by a pilot when an instrument approach cannot be

completed for a landing. The route of flight and altitude are shown on instrument approach procedure charts. A pilot executing a missed approach prior to the missed approach point (MAP) must continue along the final approach to the MAP. The pilot may immediately climb to the altitude specified in the missed approach procedure.

**modification to standards (MOS):** Any approved nonconformance to Federal Aviation Administration standards to airport design, construction, or equipment procurement. These modifications are issued by the FAA on a case-by-case basis while maintaining an acceptable level of safety.

**movement area:** The runways, taxiways, and other areas of an airport that are used for taxiing or hover taxiing, air taxiing, takeoff, and landing of aircraft, including helicopters and tilt-rotors.

## N

**National Airspace System (NAS):** The airspace, navigation facilities, and airports of the United States, along with their associated information, services, rules, regulations, policies, procedures, personnel, and equipment.

**National Environmental Policy Act (NEPA):** A United States environmental law that established a U.S. national policy promoting the enhancement of the environment. NEPA requires each federal agency to disclose to the public a clear, accurate description of the potential environmental impacts that the proposed federal action and reasonable alternative to those actions would cause.

**National Plan of Integrated Airport Systems (NPIAS):** Public-use airports that are considered necessary to provide a safe, efficient, and integrated system of airports to meet the needs of United States civil aviation, national defense, and the U.S. Postal Service.

**National Transportation Safety Board (NTSB):** The independent federal agency charged with investigating and finding “probable cause” of transportation accidents.

**nautical mile:** The most common distance measurement in aviation, equivalent to 1.15 statute (standard U.S.) miles.

**navigational aid (navaid):** Any form of aid to navigation designed to assist the pilot with position and height information and wind conditions. Examples: instrument landing systems, VASIs, PAPIs, wind cones, and very high frequency omnidirectional ranges.

**Next Generation Air Transportation System:** A federal program to transform the National Airspace System from a ground-based system to a satellite-based system.

**N-numbers:** Federal government aircraft registration numbers. U.S.-registered aircraft numbers begin with N, Canadian numbers with C or CF, German numbers with D, United Kingdom numbers with G, French numbers with F, Japanese numbers with JA, etc.

**noise contours:** The lines on a map that connect the points of equal noise exposure values. They are usually drawn in 5 dB intervals, such as DNL 75 dB values, DNL 70 dB values, DNL 65 dB values, and so forth.

**nondirectional beacon (NDB):** An older radio navigation system in which an automatic direction finder points to the beacon, thus providing a relative bearing.

**nonprecision approach procedure:** A standard instrument approach procedure with minimums not lower than  $\frac{3}{4}$  mile and/or a 250-foot ceiling, for which at least horizontal guidance is provided with a ground-based navigational aid or global positioning system (GPS). A nonprecision approach using GPS may also provide vertical guidance, depending on the approach and equipment of the aircraft.

**nonprimary airport:** A National Plan of Integrated Airport Systems airport with 10,000 or fewer annual passenger boardings (enplanements).

**nontowered airport:** An airport without a control tower. The majority of America’s 13,000 airports are nontowered (only 680 airports have control towers). Nontowered airports are far from being “uncontrolled.” Pilots follow traffic pattern procedures and self-announce positions and intentions using the common traffic advisory frequency, usually called the UNICOM frequency.



**notice to airmen (NOTAM):** A notice containing information concerning the establishment of, condition of, change to any component (facility, service, or procedure) of, or hazard in the National Airspace System, the timely knowledge of which is essential to personnel concerned with flight operations.

## O

**object free area (OFA):** The area of the airport centered on the runway, taxiway, or taxilane centerline that is provided to enhance the safety of aircraft operations by having the area free of objects, except for those that are necessary for air navigation or aircraft ground maneuvering, which are required to be mounted on frangible couplings.

**obstacle:** An existing object, object of natural growth, or terrain at a fixed geographical location or that may be expected at a fixed location within a prescribed area, with reference to which vertical clearance is or must be provided during flight operation.

**obstacle clearance surface (OCS):** A surface that defines the minimum required obstruction clearance for approach or departure procedures.

**obstacle free zone (OFZ):** A volume of space above and adjacent to a runway and its approach lighting system, if one exists, free of all fixed objects, except Federal Aviation Administration-approved frangible aeronautical equipment, and clear of vehicles and aircraft in the proximity of an airplane conducting an approach, missed approach, landing, takeoff, or departure.

**obstruction:** An object that exceeds a limiting height or penetrates an imaginary surface described by current Federal Aviation Regulations (Part 77).

**Obstruction Evaluation/Airport Airspace Analysis (OE/AAA):** A public website provided by the Federal Aviation Administration to enable individuals and organizations engaged in sponsoring the construction or alteration of potential obstructions on and off airport property to easily notify the FAA of their intents and activities. This allows the FAA to evaluate the impacts of these activities on the airspace system.

**operation:** A takeoff or a landing.

## P

**parallel taxiway:** A taxiway parallel to a runway.

**pavement condition index (PCI):** A numerical rating of the pavement condition based on a visual observation of distresses.

**pavement management program (PMP):** Also referred to as pavement maintenance management program or pavement management system. Procedures for collecting, analyzing, maintaining, and reporting pavement data to assist an airport in finding optimum strategies for maintaining pavements in a safe, serviceable condition over a given period for the least cost.

**performance-based navigation (PBN):** The broad range of technologies that rely on the performance and capabilities of equipment on board the aircraft.

**precision approach path indicator (PAPI):** A visual aid that provides guidance information to help a pilot acquire and maintain the correct approach, relative to aircraft altitude, to a runway.

**precision instrument procedure:** A standard instrument procedure for an aircraft to approach an airport in which a vertical and horizontal guidance is provided to the pilot using an instrument landing system, military precision approach radar, or global positioning system, with visibility of  $\frac{3}{4}$  mile or less and/or a ceiling less than 250 feet.

**primary surface:** A surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway; but when the runway has no specially prepared hard surface, the primary surface ends at each end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The surface width varies from 250 feet to 1,000 feet, based on the runway category and approach type.

## R

**record of decision (ROD):** A written decision of the Federal Aviation Administration's approval or disapproval of an action proposed in an environmental impact statement. The ROD explains



what the airport sponsor proposes to do and why, identifies actions the FAA and other federal agencies must take, explains the alternatives analyzed and which one is environmentally preferred, and identifies the required mitigation measures.

**required navigation performance (RNP):** A type of performance-based navigation that allows an aircraft to fly a specific path between two 3D defined points in space.

**rotating beacon:** A rotating light providing visual guidance for the airport between sunset and sunrise and when the reported ceiling or visibility is below basic visual flight rule minimums.

**runway (RWY):** A defined rectangular area on a land-based airport that is prepared for the landing and takeoff run of aircraft along its length. Runways are normally numbered in relation to their magnetic direction, rounded off to the nearest 10 degrees, e.g., Runway 1, Runway 25.

**runway design code (RDC):** A code signifying the design standards for building a runway.

**runway edge lights:** Lights that are used to define the lateral limits of a runway.

**runway end identifier lights (REILs):** Two synchronized flashing lights, one on each side of the runway threshold, that provide a pilot with a rapid and positive visual identification of the approach end of a particular runway.

**runway heading:** The magnetic direction indicated by the runway number. When cleared to “fly/maintain runway heading,” pilots are expected to comply with the air traffic control clearance by flying the heading indicated by the runway number without applying any drift correction, e.g., Runway 4, 040 magnetic heading; Runway 20, 200 magnetic heading.

**runway holding position (hold line):** The purpose of holding-position markings is to prevent aircraft and vehicles from entering critical areas associated with a runway or navigational aids or to control traffic at the intersection of taxiways.

**runway incursion:** A top Federal Aviation Administration safety concern, runway incursions are

defined by the FAA as “any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and takeoff of aircraft.” Runway incursions can be caused by pilot deviations, air traffic controller operational incidents and ground vehicle deviations.

**runway protection zone (RPZ):** A trapezoidal area at ground level off the runway end to enhance the protection of people and property on the ground, which is achieved through airport owner control. Such control includes clearing RPZ areas (and keeping them clear) of incompatible objects and activities. Control is preferably exercised through the acquisition of sufficient property interest in the RPZ.

**runway safety area (RSA):** A cleared, drained, graded, and preferably turfed area symmetrically located about the runway which, under normal conditions, is capable of supporting snow removal, firefighting, and rescue equipment and accommodating the occasional passage of aircraft without causing major damage to the aircraft.

**runway threshold:** The beginning of that portion of a runway usable for landing or takeoff.

**runway visual range (RVR):** Visibility along a runway. At major airports, it is measured automatically by transmissometer.

## S

**safety management system (SMS):** A top-down, organization-wide approach to managing safety risk and assuring the effectiveness of safety-risk controls. It includes systematic procedures, practices, and policies for managing safety risk.

**self-fueling:** The fueling or servicing of an aircraft by the owner of the aircraft.

**self-inspection program:** A program to find potential hazards and address them to keep the airport in good operating condition. The program includes four types of inspections generally used by airports as part of a self-inspection program: routine or scheduled, continuous surveillance, periodic condition, and special inspections.

**shoulder:** An area adjacent to the defined edge of paved runways, taxiways, or aprons, providing a

transition between the pavement and the adjacent surface.

**small aircraft:** An aircraft with a maximum certificated takeoff weight of 12,500 pounds or less.

**small unmanned aircraft system (sUAS):** An unmanned aircraft and its associated elements, including communication links and the components that control the small unmanned aircraft, that are required for the safe and efficient operation of the small unmanned aircraft in the National Airspace System.

**state apportionment:** State apportionment is available for all airports within a state except primary airports, with the available funds apportioned for airports within that state based on the state's proportional population to the total population of the eligible states and the state's proportional area to the total area of the eligible states. Only in block grant states are the state apportionment funds apportioned to the state. In non-block grant states, the Federal Aviation Administration's Airports organization programs and disburses the funds, but the state may provide input into programming, along with using the FAA priority system.

**State Block Grant Program:** A Federal Aviation Administration program in which 10 states participate that provides Airport Improvement Program funds to the state to allow the states to program, prioritize, select, and fund AIP projects at small airports.

**state system plan:** A planning tool to identify the development needed to establish a viable system of airports within the state.

**stopway:** An area beyond the takeoff runway, no less wide than the runway and centered on the extended centerline of the runway, able to support the aircraft during an aborted takeoff, without causing structural damage to the aircraft, and designated by the airport authorities for use in decelerating the aircraft during an aborted takeoff.

**stormwater pollution prevention plan (SWPPP):** A stormwater management plan addressing stormwater discharge from the airport that incorporates best management practices.

**straight-in instrument approach:** An instrument approach wherein the final approach is begun without first having executed a procedure turn, and not necessarily completed with a straight-in landing or made to use a straight-in landing weather minimum.

## T

**takeoff distance available (TODA):** The takeoff run available (TORA) plus the length of any remaining runway or clearway beyond the far end of the TORA; the full length of the TODA may need to be reduced because of obstacles in the departure area.

**takeoff run available (TORA):** The runway length declared available and suitable for the ground run of an aircraft taking off.

**taxi:** The movement of an airplane under its own power on the surface of an airport; also, the surface movement of helicopters equipped with wheels.

**taxilane:** The portion of the aircraft parking area used for access between taxiways, aircraft parking positions, hangars, storage facilities, etc.

**taxiway (TWY):** A defined path, from one part of an airport to another, selected or prepared for the taxiing of aircraft.

**taxiway design group (TDG):** A classification of airplanes based on the width of the outer to outer main gear and the distance of the cockpit to the main gear.

**taxiway/taxilane safety area (TSA):** A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft deviating from the taxiway.

**tenant:** Any person, other than an aircraft operator or foreign air carrier, who has an agreement with the airport operator to conduct business on airport property.

**terminal instrument procedures (TERPS):** Procedures for the instrument approach and departure of aircraft to and from civil and military airports.

**T-hangar:** A hangar building, typically containing multiple units. This type of hangar derives its name



from the shape of the interior of the units (in the form of a T), which increases the efficiency of the design to accommodate the wingspan and the tail section of an aircraft.

**threshold:** The beginning of that portion of the runway usable for landing.

**through-the-fence:** Access to the airfield granted by the sponsor or a public airport to a person or business that owns property adjacent to the airport for the person's or business' aircraft or an authorized aircraft to taxi onto and use the airport.

**touch-and-go operation:** A practice maneuver consisting of a landing and a takeoff performed in one continuous movement: the aircraft lands and begins a takeoff roll without stopping. A touch-and-go is considered two operations.

**traffic pattern:** A standard rectangular flight pattern around the landing runway at an airport. It includes 45-degree or crosswind entry to the rectangle, with downwind, base, and final legs as sides of the rectangle. Also standard are 90-degree left turns around the rectangle (a nonstandard right-hand traffic pattern is noted in airport facility directories) with downwind flown at a specified altitude, usually 1,000 or 1,500 feet above the airport elevation. At airports with a control tower, the pattern may be modified or cut short, according to air traffic control instructions.

**transient aircraft:** Aircraft not based at the airport.

**transitional surface:** Surfaces that extend outward and upward at right angles to the runway centerline, and the runway centerline is extended at a slope of 7 to 1 from the sides of the primary surface and from the sides of the approach surfaces. Transitional surfaces for those portions of the precision approach surface, which project through and beyond the limits of the conical surface, extend 5,000 feet, measured horizontally from the edge of the approach surface and at right angles to the runway centerline.

**turbojet aircraft:** An aircraft having a jet engine in which the energy of the jet operates a turbine that, in turn, operates the air compressor.

**turboprop aircraft:** An aircraft having a jet engine in which the energy of the jet operates a turbine that drives the propeller.

## U

**ultralight vehicle:** An aeronautical vehicle operated for sport or recreational purposes that does not require Federal Aviation Administration registration, an airworthiness certificate, or pilot certification. Primarily a single-occupant vehicle, although some two-place vehicles are authorized for training purposes. Its operation in certain airspace requires authorization from air traffic control.

**UNICOM:** A common, multipurpose radio frequency used at most nontowered airports as the common traffic advisory frequency. The Aircraft Owners and Pilots Association coined the term from "universal communications" in the 1950s. UNICOM is also used by a fixed-base operator for general administrative uses, including fuel orders, parking instructions, etc. Originally 122.8 MHz universally, it now includes 122.7, 123.0, and other frequencies.

**unmanned aerial vehicle (UAV):** Also known as a drone or unmanned aircraft system; an aircraft without a human pilot aboard. The flight of UAVs may operate either under remote control by a human operator or fully or intermittently autonomously by onboard computers.

**utility airport:** An airport designed, constructed, and maintained to serve airplanes having approach speeds less than 121 knots.

## V

**very high frequency (VHF) omnidirectional range (VOR):** A type of radio beacon on which a tried-and-tested radio navigation system is largely based. It broadcasts 360 radial signals like spokes in a wheel; the equipment on the aircraft determines which radial the aircraft is on to provide direction to and from an airport or given location.

**very light jets (VLJs):** Jet aircraft with a maximum takeoff weight of 10,000 pounds, certified for single-pilot operations, equipped with advanced avionic systems, and priced below other business jets.

**visibility:** The ability, as determined by atmospheric conditions and expressed in units of distance, to see and identify prominent unlighted objects by day and prominent lighted objects by night. Visibility is reported as statute miles, hundreds of feet, or meters.

**visual approach:** An approach to an airport wherein an aircraft on an instrument flight rules flight plan, operating in visual flight rules conditions under the control of a radar facility and having an air traffic control authorization, may deviate from the prescribed instrument approach procedure and proceed to the airport of destination, served by an operational control tower, by visual reference to the surface.

**visual approach slope indicator (VASI):** A system of lights arranged to provide visual descent guidance information during the approach to a runway (see also precision approach path indicator).

**visual area surface:** The 20:1 visual area surface is defined in Section 3.3.2.c of *Federal Aviation Administration Order 8260.3B: United States Standard for Terminal Instrument Procedures*. The surface has a vertical slope of 20:1, extending from the runway's threshold elevation to the decision altitude of the specific approach. It begins 200 feet prior to the runway threshold and is intended to protect aircraft during the last stages of an approach, which follows the transition from instruments to visual guidance.

**visual flight rules (VFR):** A defined set of Federal Aviation Administration regulations covering the operation of aircraft, primarily by visual reference to the horizon (for aircraft control) and see-and-avoid procedures (for traffic separation). VFR weather minimums for controlled airspace require at least a 1,000-foot ceiling and 3 miles of visibility, except for "special VFR" clearances to operate "clear of clouds."

- *marginal VFR:* Weather of less than the 3,000-foot ceiling and 5 miles of visibility, but above the required "1,000 and three" (see instrument flight rules).

**visual runway:** A runway intended solely for the operation of aircraft using visual approach procedures, with no straight-in instrument approach

procedure and no instrument designation indicated on a Federal Aviation Administration-approved airport layout plan.

## W

**wide-area augmentation system (WAAS):** An enhancement to the global positioning system (GPS) that provides greater navigation accuracy and system integrity and permitting GPS to be used for precision instrument approaches to most airports.

**wildlife attractants:** Any human-made structure, land use practice or human-made or natural geographic feature that can attract or sustain hazardous wildlife within the landing or departure airspace, apron areas, or aircraft parking areas of an airport.

**wildlife hazard assessment (WHA):** An evaluation of wildlife-related attractants and potential hazards to aircraft operations, often mandated by the Federal Aviation Administration following a hazardous event or new potential threat.

**wildlife hazard management plan (WHMP):** A document that identifies measures to alleviate or eliminate wildlife hazards, as identified in a wildlife hazard assessment.

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