



Truckee Tahoe Airport

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APPENDIX A– GLOSSARY

Above Ground Level Altitude, AGL. Altitude expressed in feet measured above ground level. *(FAA Pilot/Controller glossary)*

Advisory Circular, AC. Advisory Circulars (ACs) provide guidance such as methods, procedures, and practices for complying with regulations and grant requirements. ACs may also contain explanations of regulations, other guidance material, best practices, or information useful to the aviation community. They do not create or change a regulatory requirement. *(FAA RGL Library)*

Aircraft Operation. An aircraft arrival or departure from an airport with FAA airport traffic control service. There are two types of operations: local and itinerant. *(FAA)*

Air Traffic. (FAA FAR Sec. 1.1) Aircraft operating in the air or on an airport surface, exclusive of loading ramps and parking areas.

Air Traffic Control, ATC. A service operated by appropriate authority to promote the safe, orderly, and expeditious flow of air traffic. *(FAA FAR Sec. 1.1)*

Airport. Any areas of land or water that is used, or intended for use, for the landing and takeoff of aircraft. Any appurtenant areas that are used, or intended for use, for airport buildings, other airport facilities, or rights-of-way; and all airport buildings and facilities located on the areas specified in this definition. *(FAA FAR Sec. 152.3)*

Airport Operations. The total number of movements in landings (arrivals) plus take-offs (departures) from an airport. *(FAA website)*

Airspace. The space lying above the earth or above a certain area of land or water that is necessary to conduct aviation operations. *(FAA website)*

Approach Surface. A surface longitudinally centered on the extended runway centerline, extending outward and upward from the end of the primary surface and at the same slope as the approach zone height limitation slope set forth in this Ordinance. In plan the perimeter of the approach surface coincides with the perimeter of the approach zone. *(FAA AC 150/5190-4A)*

Area Navigation, RNAV. A method of navigation that permits aircraft operations on any desired flight path within the coverage of ground – or space- based navigation aids or within the limits of the capability of self-contained aids, or a combination of these. Note: Area navigation includes performance-based navigation as well as other operations that do not meet the definition of performance-based navigation. *(FAA Pilot/Controller Glossary)*



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Automated Dependent Surveillance- Broadcast, ADS-B. A surveillance system that continuously broadcasts GPS position information, aircraft identification, altitude, velocity vector, and direction to all other aircraft and air traffic control facilities within a specific area. ADS-B information is displayed in the flight deck via a flight deck display of traffic information unit, providing the pilot with greater situational awareness. *(FAA website)*

Automatic Dependent Surveillance Rebroadcast, ADS-R. This takes position information received on the ground from Universal Access Transceivers (UAT)-equipped aircraft and rebroadcasts it on the 1090 megahertz (MHz) frequency. Likewise, ADS-R rebroadcasts 1090 MHz data to UAT users. In concert with TIS-B, airborne data exchange and ADS-R provide all ADS-B In-equipped aircraft with a comprehensive airspace and airport surface traffic picture. ADS-R delivers traffic data within a 15-nm radius 5,000 feet above or below relative to the receiving aircraft's position. *(FAA website)*

Distance Measuring Equipment, DME. Equipment (airborne and ground) used to measure, in nautical miles, the slant range distance of an aircraft from the DME navigational aid. *(FAA Pilot/Controller Glossary)*

DME/DME/IRU – Refers to navigation using DME ranging from at least two DME facilities to determine position along with the use of an inertial reference unit to provide sufficient position information during limited DME gaps. *(FAA AC 90-100A)*

Federal Aviation Administration, FAA. A federal agency charged with regulating air commerce to promote its safety and development; encourage and develop civil aviation, air traffic control, and air navigation; and promoting the development of a national system of airports. *(FAA website)*

Flight Information Service – Broadcast, FIS-B. A ground broadcast service provided through ADS-B Broadcast Service network over the UTA data link that operates on 978 MHz. The FIS-B system provides pilots and flight crews of properly equipped aircraft with a cockpit display of certain aviation weather and aeronautical information. *(FAA Pilot/Controller Glossary)*

General Aviation, GA. Refers to all civil aircraft and operations that are not classified as air carrier, commuter or regional. The types of aircraft used in general aviation activities cover a wide spectrum from corporate multi-engine jet aircraft piloted by professional crews to amateur-built single engine piston acrobatic planes, balloons and dirigibles. *(FAA website)*

General Aviation Airport. Any airport that is not an air carrier airport, or a military facility. *(FAA)*

Global Navigation Satellite System, GNSS. GNSS refers collectively to the worldwide positioning, navigation, and timing determination capability available from one or more satellite constellation in conjunction with a network of ground stations. *(FAA Pilot/Controller Glossary)*



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Global Positioning System, GPS. GPS refers to the worldwide positioning, navigation and timing determination capability available from the U.S. satellite constellation. *(FAA Pilot/Controller Glossary)*

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

Instrument Flight Rules, IFR. Rules governing the procedure for conducting instrument flight. In addition, it is a term used by pilots and controllers to indicate a type of flight plan. *(FAA Pilot/Controller Glossary)*

Instrument Landing System, ILS. A precision instrument approach system which normally consists of the following electronic components and visual aids: localizer, glideslope, outer marker, middle marker, and approach lights. *(FAA Pilot/Controller Glossary)*

ILS Category (CAT I, II, III). There are three categories of ILS equipment which support similarly named categories of approach/landing operation. CAT I has the highest minimums (the pilot must be able to see the runway at a point 200 feet above the runway), while Cat III has the lowest minimums, meaning aircraft can land in near zero visibility conditions and doesn't require visual identification of the runway prior to landing. Special categories of ILS approach are defined which allow qualified pilots flying equipped aircraft to equipped runways using appropriately qualified ILS systems to continue an ILS approach without acquiring visual reference to a lower decision height than the Category I standard of 200 feet above runway threshold elevation. *(Adapted from skybrary.com and Wikipedia.org)*

Internal Reference Unit, IRU. An IRU is an internal navigation system used on large aircraft. It is a type of inertial sensor which uses gyroscopes and accelerometers to determine a moving aircraft's or spacecraft's change in rotational attitude (angular orientation relative to some reference frame) and translational position (typically latitude, longitude and altitude) over a period of time. *(adapted from PSRC Working Paper Chapter 1 and Wikipedia.org)*

Itinerant Operation. Takeoff or landing operations of airplanes going from one airport to another airport that involves a trip of at least 20 miles. Local operations are excluded. *(FAA AC 150/5325-4B)*

Land Use Compatibility. The coexistence of land uses surrounding the airport with airport-related activities. *(FAA website)*

Lateral Navigation, LNAV. A function of RNAV equipment which calculates, displays, and provides lateral guidance to a profile or path. *(FAA Pilot/Controller Glossary)*



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Local Operation. Any operation performed by an aircraft that (a) operates in the local traffic pattern or within sight of the tower or airport, or (b) is known to be departing for, or arriving from, flight in local practice areas located within a 20-mile radius of the control tower or airport, or (c) executes a simulated instrument approach or low pass at the airport. *(FAA website)*

Localizer Performance, LP. LP is an arrival that requires a WAAS-approved GPS to fly the localizer-based procedure; it does not provide vertical guidance. LPs are published at locations where the terrain or obstructions do not allow publication of LPV procedures. *(airfactsjournal.com and FAA website)*

Localizer Performance with Vertical Guidance, LPV. LPV is one of the four lines of approach minimums found on an RNAV (GPS) approach chart. Lateral guidance accuracy is equivalent to a localizer. The height above touchdown is published as a decision altitude since it uses an electronic glide path that is not dependent on any ground equipment or barometric aiding and may be as low as 200 feet and ½ statute mile visibility depending on the airport terrain and infrastructure. WAAS avionics approved for LPV is required. *(FAA website)*

Mean Sea Level Altitude, MSL. Altitude expressed in feet measured from seal level. *(FAA Pilot/Controller glossary)*

National Airspace System, NAS. The common network of U.S. airspace; air navigation facilities, equipment and services, airports or landing areas; aeronautical charts, information and services; rules, regulations and procedures, technical information, and manpower and material. Included are system components shared jointly with the military. *(FAA Pilot/Controller glossary)*

National Plan of Integrated Airport Systems, NPIAS. The Secretary of Transportation transmitted the 2007-2011 National Plan of Integrated Airport Systems (NPIAS) to Congress on September 29, 2006. The AIP-eligible development needs identified in this report were compiled as of December 2005 with selected updates through July 2006. *(FAA NPIAS Report)*

Nautical Mile. A measure of distance equal to one minute of arc on the earth's surface, which is approximately 6,076 feet. *(FAA website)*

Navigation Aids, NAVAID. Any facility used by an aircraft for guiding or controlling flight in the air or the landing or take-off of an aircraft. *(FAA website)*

Next Generation Air Transportation System, NextGen. Ongoing, wide-ranging transformation of the National Airspace System (NAS). NextGen represents an evolution from a ground-based system of air traffic control to a satellite-based system of air traffic management. *(FAA website)*

Non-Directional Beacon, NDB. An L/MF or UHF radio beacon transmitting nondirectional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine his/her bearing to or from the radio beacon and “home” on or track to or from the station.



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When the radio beacon is installed in conjunction with Instrument Landing System marker, it is normally called a Compass Locator. *(FAA Pilot/Controller glossary)*

Non-Precision Instrument Runway. A runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight-in nonprecision instrument approach procedure has been approved or planned. *(FAA AC 150/5190-4A)*

Notices to Airmen, NOTAM. A notice containing information (not known sufficiently in advance to publicize by other means) concerning the establishment, condition, or change in 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. *(FAA Pilot/Controller Glossary)*

Object. Includes, but is not limited to above ground structures, NAVAIDSs, people, equipment, vehicles, natural growth, terrain, and parked aircraft. *(FAA AC 150/5300-13)*

Obstruction. Any structure, growth, or other object, including a mobile object, which exceeds a limiting height, specific to its geographic location relative to the runway/airport. *(FAA AC 150/5190-4A)*

One Engine Inoperative Surface, OEI Surface. OEI surface is based on TERPS IFR departure procedure climb requirements for an aircraft climbing with one engine inoperative. *(Consultant Team)*

Performance Based Navigation, PBN. Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace. *(FAA Pilot/Controller Glossary)*

Note: Performance requirements are expressed in navigation specifications (RNAV specification, RNP specification) in terms of accuracy, integrity, continuity, availability, and functionality needed for the proposed operation in the context of a particular airspace concept.

Q-Route – A jet route for aircraft navigating under IFR conditions above 18,000 feet mean sea level and require RNAV capability. *(FAA Instrument Procedures Handbook, Chapter 2)*

Required Navigation Performance, RNP. RNP is a statement of navigation performance necessary for operation within a defined airspace. On-board monitoring and alerting is required. RNP operations are RNAV procedures with a specified level of performance and capabilities. *(FAA website)*

Required Navigation Performance-Authorization Required, RNP-AR. RNP-AR approaches include unique capabilities that required special aircraft and aircrew authorization similar to CAT



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II/III instrument landing system operations. All RNP-AR approaches have reduced lateral obstacle evaluation areas and vertical obstacle clearance surfaces predicated on the aircraft and aircrew performance requirements of Advisory Circular 90-101A. *(FAA AC 90-101A)*

RNAV – see Area Navigation.

RNAV SID – A standard instrument departure that uses area navigation for guidance.

Safety Risk Management Panel, SRM Panel. A formalized, proactive approach to system safety. SRM is a methodology applied to all NAS changes that ensures that hazards are identified and unacceptable risk is mitigated before a change is made. It provides a framework to ensure that once a change is made, it continues to be tracked throughout its lifecycle. An SRM Panel is a panel comprised of subject matter experts that make be required to conduct a Safety Assessment. *(FAA website)*

Standard Terminal Arrival, STAR. Provides a common method for departing the en route structure and navigating to your destination. A STAR is a preplanned instrument flight rule ATC arrival procedure published for pilot use in graphic and textual form to simplify clearance delivery procedures. STARs provide you with a transition from the en route structure to an outer fix or an instrument approach fix or arrival waypoint in the terminal area, and they usually terminate with an instrument or visual approach procedure. *(FAA website)*

Standard Instrument Departure, SID. An ATC requested and developed departure route designed to increase capacity of terminal airspace, effectively control the flow of traffic with minimal communication, and reduce environmental impact through noise abatement procedures. *(FAA website)*

Statute Mile, SM. A measure of distance equal to 5,280 feet. *(FAA website)*

Terminal Area. A general term used to describe airspace in which airport traffic control or approach control service is provided. *(FAA website)*

Terminal Area Route Generation, Evaluation and Traffic Simulation, TARGETS. TARGETS incorporates data visualization capabilities with readily accessible design elements to enable procedure designers to rapidly and easily develop [flight] procedures. The integrated capabilities of TARGETS enable quick assessment of alternative design concepts, leading to robust solutions that satisfy operation needs and co mply with design constrains. *(FAA Brochure)*

Terminal En Route Procedures, TERPS. TERPs prescribes standardized methods for use in designing instrument flight procedures. *(FAA Instrument Flying Handbook, Chapter 8)*

Traffic Information Service-Broadcast, TIS-B. An air traffic surveillance system that combines all available traffic information on a single display. *(PSRC Chapter 1)*



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T-Route - A “T-Route” is a low altitude RNAV only route, identified by the “T” prefix, followed by a three digit number. T-routes are for aircraft operating below 18,000 feet mean sea level. (*FAA Instrument Procedures Handbook, Chapter 2*)

Wide Area Augmentation System, WAAS. The WAAS is a satellite navigation system consisting of the equipment and software which augments the GPS Standard Positioning Service (SPS). The WAAS provides enhanced integrity, accuracy, availability, and continuity over and above GPS SPS. The differential correction function provides improved accuracy required for precision approach. (*FAA Pilot/Controller Glossary*)

Vertical Navigation, VNAV. A function of RNAV equipment which calculates, displays, and provides vertical guidance to a profile or path. (*FAA Pilot/Controller Glossary*)

Very High Frequency Omnidirectional Range, VOR. A ground-based electronic navigation aid transmitting very high frequency navigation signals, 360 degrees in azimuth, oriented from magnetic north. Used as the basis for navigation in the National Airspace System. (*FAA Pilot/Controller Glossary*)

Visual Approach. An approach to an airport conducted with visual reference to the terrain. (*FAA website*)

Visual Climb Over Airport. A departure option for an IFR aircraft, operating in visual meteorological conditions equal to or greater than the specified visibility and ceiling, to visually conduct climbing turns over the airport to the published “climb-to” altitude from which to proceed with the instrument portion of the departure. VCOA procedures are developed to avoid obstacles greater than 3 statute miles from the departure end of the runway as an alternative to complying with climb gradients greater than 200 feet per nautical mile. These procedures are published in the ‘Take-Off Minimums and (Obstacle) Departure Procedures’ section of the Terminal Procedures Publication. (*FAA Pilot/Controller Glossary*)

Visual Runway. A runway without an existing or planned straight-in instrument approach procedure. (*FAA AC 150/5300-13*)

Visual Flight Rules, VFR. Rules that govern the procedures for conducting flight under visual conditions. The term “VFR” is also used in the United States to indicate weather conditions that are equal to or greater than minimum VFR requirements. In addition, “VFR” is used by pilots and controllers to indicate the type of flight plan. (*FAA FAR Sec. 170.3*)

V-Route – A system of established routes that run along specified VOR radials from one VOR station to another. (*FAA Instrument Procedures Handbook, Chapter 2*)