

APPENDIX C

Glossary of Terms



**DRAFT ENVIRONMENTAL ASSESSMENT
PROPOSED EXTENSION OF RUNWAY 6-24**

**ERIE INTERNATIONAL AIRPORT – TOM RIDGE FIELD
MARCH 2005**

**APPENDIX C
GLOSSARY OF TERMS**

Term

Definition

- A -

Accelerate-Stop Distance—This is the distance to accelerate from brake release to V_1 (takeoff decision speed) and then the decelerate to a stop, plus safety factors.

Accelerate-Stop Distance Available (ASDA): Runway length, plus the Runway Object Free Area (ROFA), plus stopway length declared available and suitable for the acceleration and deceleration of an airplane aborting takeoff.

Adversity: Effects on highly sensitive environmental features, such as historical sites or endangered species.

Affected Environment: The physical features, land, area, or areas to be influenced, affected by or created by an alternative alignment under construction; also includes various social and environmental factors and conditions pertinent to an area.

Agency Coordination Meeting (ACM): A monthly meeting, sponsored by PENNDOT, of state and federal environmental review and regulatory agencies, which oversees highway project development in Pennsylvania.

Air Navigational Aids (NAVAIDS): Any visual, radio, or electronic devices that are furnished to provide guidance to aircraft pilots while navigating their aircraft.

Air Quality: Ambient pollutant concentrations and their temporal and spatial distribution.

Air Quality Model: An algorithmic relationship between pollutant emissions and pollutant concentrations used in the prediction of project's pollutant impact.

Air Quality Monitor: A device for measuring pollutant concentrations.

Air Quality Standard: A legal requirement for air quality, usually expressed in terms of maximum allowable pollutant concentration averaged over a specified time interval.

Air Traffic Control (ATC): The division of the Federal Aviation Administration (FAA) that operates control towers at major airports.

Aircraft Accident: Any occurrence, during the operation of an aircraft, in which any person suffers death or serious injury, or in which the aircraft receives damage.

Aircraft Approach Category C: Aircraft speeds greater than 121, but less than 141 knots.

Aircraft Parking and Storage Area: Open areas of the airport that are set aside for parking and storage of aircraft, or areas of the airport utilized for servicing aircraft with fuel and lubricants, or for making minor or emergency repairs to aircraft.

Aircraft Rescue and Firefighting (ARFF): The provision of aircraft rescue and firefighting services and equipment repairs to aircraft.

Aircraft (A/C or ACFT): Any contrivance, now known or hereafter invented, used or designed to be used for navigation and flight in air.

Airfield: Land used for aircraft takeoffs and landings.

Airplane Design Group III: Wingspans greater than 79, but less than 118 feet.

Airport Control Tower: A unit established to provide traffic control service for the movement of aircraft and other vehicles in the airport operations area.

Airport Elevations: The highest point of an airport's usable landing area, measured in feet above sea level.

Airport Flight Information Service: Air traffic service units that provide airport flight information service, search and rescue service, alerting service to aircraft at noncontrolled airports, and assistance to aircraft in emergency situations.

Airport Ground Control: The control of aircraft and other vehicular traffic operating in the airport operations area by the airport control tower.

Airport Layout Plan (ALP): A scaled drawing of an airport that identified existing and proposed airport property lines and facilities. While ALPs are prepared by the airport sponsor and reflect plans for short-and long-term development, they are submitted to the FAA for review and approval to ensure that FAA design and safety standards have been met.

Airport Operation Area (AOA): The area of an airport where aircraft are expected to operate such as taxiways, runways, and ramps.

Airport: Any landing area, runway or other facility designed, public or private, used or intended to be used either publicly or by any person or persons for the landing and taking off of fixed wing aircraft, including all necessary taxiways, aircraft storage and tie-down areas, hangars and other necessary buildings, including incidental commercial uses, and open spaces.

Airport Reference Code (ARC): The ARC is a coding system used to relate airport design criteria to the operational and physical characteristics of the airplanes intended to operate at the airport.

Alignment: The line that represents the location of a highway being considered as a new alignment alternative.

Alignment Studies: A general term for engineering work involving the vertical and horizontal positioning, adjusting and refining, and comprehensive evaluation of a trial line or lines through a selected study corridor. All relevant features, controls, travel desires, impacts, benefits and costs are taken into account in these studies. Alignment studies are typically performed to assess the relative feasibility of a proposed transportation facility linking two identified points.

Alternative (ALT): One of a number of specific transportation improvement proposals, alignments, options, design choices, etc. in a study. Following detailed analysis, one improvement alternative is chosen for implementation. Sometimes, the term “alternate” is used interchangeably with “alternative.”

Alternatives Analysis: Preliminary engineering and environmental studies of a wide range of alternatives. The objective is to reduce the number of alternatives for more detailed study, and then, after substantial and detailed engineering and environmental studies, to select a preferred alternative.

Ambient Concentrations: Initial concentration sensed/measured at a monitoring/receptor site.

Ambient Monitoring: Systematic measurements of characteristics (e.g. pollutant concentration and wind velocity) of the air at a fixed location.

Annual Average Daily Traffic (AADT): The estimate of typical daily traffic on a road segment for all seven days of the week over the period of one year.

Anti-Icing: A precautionary procedure that provides protection against the formation of frost or ice and the accumulation of snow on treated surfaces of an aircraft for a period of time.

Approach Area: A defined area, the dimensions of which are measured horizontally beyond the threshold over which the landing and takeoff operations are made.

Approach Lights: A system of lights arranged to assist pilots in aligning their aircraft with the runway for landing.

Approach Lighting System (ALS): An airport lighting facility that provides visual guidance to landing aircraft by radiating light beams in a directional pattern by which the pilot aligns the aircraft with the extended centerline of the runway on the final approach and landing.

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 upon the type of approach available or planned for that runway end.

Apron: An area on the airport that is intended to accommodate aircraft for purposes of loading or unloading passengers or cargo, refueling, parking, or maintenance.

Archaeological Investigations: Cultural resource studies conducted in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended. Depending on the extent and significant of archaeological resources in the study area, investigations may proceed through three phases, each with an increasingly complex level of detail. In Phase I Archaeological investigations, a field survey is conducted to provide an inventory of all archaeological resources in a project area that are potentially eligible for the National Register Historic Places. Phase II investigations are designed to sample the archaeological deposits at a site in order to determine its eligibility for listing in the National Register. Phase III involves data recovery excavation to mitigate the adverse effects to an eligible site. Refer to Department Strike-off Letter No. 430-92-29, “Archaeological Procedures for Highway Development,” dated March 18, 1992.

Archaeological Resources Protection Act of 1979: Protects archaeological resources and sites, which are on lands and Indian lands, and fosters increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data obtained before October 31, 1979.

Area of Influence: The area of influence is determined to be that zone within which reasonable and foreseeable direct, indirect and cumulative impacts from the proposed action are likely to occur.

Area of Potential Effects (APE): The geographic area or areas within which an undertaking may directly or indirectly cause changes, whether beneficial or adverse, to the character or use of the area.

Arresting System: A device used to engage an aircraft and absorb forward momentum in case of an aborted takeoff or landing.

Assurance: A provision contained within a federal grant agreement to which the recipient of federal airport development assistance has voluntarily agreed to in consideration for the assistance provided.

At-Grade Intersection: An intersection where all roadways join or cross at the same level.

Average Daily Traffic (ADT): The average 24-hour volume, being the total volume during a stated period divided by the number of days in that period. Unless otherwise stated, the period is a year.

Avigation: The right to flight.

Avigation Easement: A grant of property interest in land over which a right of unobstructed flight in the airspace is established.

Avoidance Alternative: Any alignment proposal that has been developed, modified, shifted or downsized specifically in order to avoid affecting one or more resources regarded as significant.

- B -

Background Concentration: Pollutant concentrations due to (1) natural sources, (2) nearby sources other than the one(s) currently under consideration and (3) unidentified sources.

Based Aircraft: Any aircraft using the Airport whose operator has a lease agreement or other special arrangement with the airport sponsor.

Below Minimum: Weather conditions below the minimum prescribed by regulations for a particular operation, such as takeoff or landing.

Breakaway/Frangible Fences and Gates: Fences and gates designed and constructed to collapse when impacted by large vehicles to allow rapid access to accident sites.

Bridge Management System: A decision support tool to analyze and summarize data, use mathematical models to make predictions and recommendations, and provide the means by which alternative policies and programs may be evaluated. A BMS includes formal procedures for collecting, processing and updating data; predicting deterioration; identifying alternatives; predicting costs; forecasting budgets; and making recommendations.

Building Restriction Line (BRL): A line which identifies suitable building area locations on airports.

Business/Corporate Operator: Any operator using the Airport and its facilities in the conduct of business without expectation of direct financial gain from the operation of the aircraft or vehicle.

- C -

Capacity: The maximum rate of traffic flow which can be expected to pass a certain point; usually expressed in vehicles per hour.

Carbon Monoxide (CO): A colorless, odorless, toxic gas produced by the incomplete combustion of organic materials used as fuels. CO is emitted as a byproduct of essentially all combustion. Idling and low speed mobile source operations, such as aircraft taxiing are the most prevalent CO emission sources commonly found at airports.

CAT I Approach Lighting System (CAT I): Approach lighting system that meets Instrument Landing System Category I (ILS CAT I) requirements.

CAT II Approach Lighting System (CAT II): Approach lighting system that meets Instrument Landing System Category II (ILS CAT II) requirements.

Categorical Exclusion (CE): (1) A classification given to federal aid projects or actions that do not have a significant effect on the environment either individually or cumulatively. Categorical Exclusions do not require extensive levels of environmental documentation. (2) The written documentation to support a Class of Action that satisfies federal criteria describing non-significant impacts.

Categorical Exclusion Evaluation: An environmental document required by NEPA for federal projects that do not have a significant effect on the environment.

Ceiling: The height above the earth's surface of the lowest layer of clouds or obscuring phenomena that is reported as "broken," "overcast," "obstructed," or "partial obstruction."

Census Block Groups: The block groups are subdivisions of census tracts and always nest within a specific census tract.

Census Blocks: Census blocks are the smallest geographic area for which the Bureau of the Census collects and tabulates decennial census data. On average, block groups contain approximately thirty census blocks.

Census Tracts: In the decennial census geographic hierarchy, census tracts are subdivisions of, and next within, counties.

Chapter 102 Erosion and Sedimentary Control: This chapter requires persons proposing or conducting earth disturbance activities to develop, implement, and maintain best management practices (BMPs) to minimize the potential for accelerated erosion and sedimentation. The BMPs shall be undertaken to protect, maintain, reclaim and restore water quality and the existing and designated uses of waters of this Commonwealth.

Chapter 105 Water Quality Permit: Required as per Pennsylvania’s Dam Safety and Encroachments Act (25 PA Administrative Code Chapter 105) for projects involving the construction, modification, or relocation of any dam, water obstruction for encroachment. [The Act defines “encroachment” as any structure or activity that in any manner changes, expands, or diminishes, the course, current, or cross-section of any watercourse, floodway, or body of water (including wetlands).] Any activity that disturbs a wetland, whether or not it is associated with filling or fill materials, requires a permit. PADER automatically forwards Chapter 105 permit applications to the Army Corps. of Engineers to fulfill Section 401 (Federal Clean Water Act) Water Quality Certification application requirements. However, these permits are issued independently.

Citizens Advisory Committee (CAC): A group of residents, community leaders, and public officials representing the population of the study area who assist in formulating transportation planning goals and objectives, evaluating alternative plans, selecting recommended courses of action, and setting priorities. They represent community interests and contribute valuable information to project sponsors about the location, design, and implementation of proposed transportation improvements.

Clean Air Act (CAA): The Federal law regulating air quality. The first Clean Air Act, passed in 1967, required that air quality criteria necessary to protect the public health and welfare be developed.

Clearway/Overrun: An area beyond the end of the runway that has been cleared of nonfrangible obstacles and strengthened to allow overruns without serious damage to the aircraft.

Comment Period: Usually two weeks or longer, during which a document (e.g. the Environmental Assessment) is reviewed by agencies and the public who may submit verbal or written comments. It can be applicable to all types of engineering and environmental documents that are circulated, as well as to formal presentations such as those that may be given by Transportation Department officials at a Public Hearing.

Commenting Agency: Agency responsible for reviewing and commenting on Environmental Impact Statements (EISs). Their comments are considered by the lead agency in the preparation of the Final EIS and Record of Decision.

Comprehensive Plan: The general, inclusive, long-range statement of the future development of a community. The plan is typically a map accompanied by description and supplemented by policy statements that direct future capital improvements in an area.

Conceptual Mitigation: The early, generalized identification of measures that would minimize or avoid anticipated environmental consequences associated with a given alternative. Typically, conceptual mitigation ideas are discussed prior to the concluding stages of an environmental study, well before many of the ideas are further worked upon, refined or committed.

Concurrence Point: Written determination by the agency that the information to date is adequate and the agency agrees that the study process can be advanced to the next stage. Agencies agree not to revisit the previous process steps unless conditions change.

Congestion: The level at which transportation system performance is no longer acceptable to the traveling public due to traffic interference. The level of acceptable system performance may vary by type of transportation facility, geographic location, public tolerance, and/or time of day.

Conical Surface: The conical surface extends outward and upward from the periphery of the horizontal surface at a slope of 20 feet horizontally to 1 foot vertically for a horizontal distance of 4,000 feet.

Consensus: The point at which agencies and the public agree with recommendations or findings. Although unanimous consensus is seldom achieved, continuous coordination throughout the study process is expected to garner support from most agencies and much of the public.

Constructive Use: Constructive use is defined by the courts as that which substantially impairs the use of the facility. Substantial impairment occurs only when the activities, features, or attributes of the resource that contribute to its significance or enjoyment are substantially diminished.

Context: Setting.

Controlled Airport: An airport having a control tower in operation. Tower usually, but not always, staffed by FAA personal.

Controversiality: The degree to which the effects are highly uncertain or involve unique or unknown risks. Construction of new airports typically results in higher levels of controversy and unknown risks than any runway extension.

Cost: Total construction cost.

Council on Environmental Quality (CEQ): The Council on Environmental Quality is a branch of the Executive Office of the President that coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives that are used to implement the National Environmental Policy Act of 1969.

Criteria of Effect: The Advisory Council on Historic Preservation's definition of change to historic properties caused by federal action. The criterion [36 CFR 800.9 (a)] states, "An undertaking has an effect on a historic property when the undertaking may alter characteristics of the property that may qualify the property for inclusion in the National Register of Historic Places. For the purpose of determining effect, alteration to features of a property's location, setting or use may be relevant depending on a property's significant characteristics and should be considered."

Criteria Pollutants: The six pollutants listed in the CAA that are regulated by the EPA through the NAAQS because of their health and/or environmental effects. They are: nitrogen dioxide (NO₂), sulfur dioxide (SO₂), carbon monoxide (CO), ozone (O₃), particulate matter (PM-10) and lead (Pb).

Cultural Resource: See Historic Resource.

- D -

Day-Night Sound Level (DNL): DNL (Day-Night Sound Level) is based on sound levels measured in relative intensity of sound, or decibels (dB). The higher the number, the louder the sound. DNL represents noise exposure events over a 24-hour period. To account for human sensitivity to noise between the hours of 10:00 pm and 7:00 am, noise events occurring during these hours receive a "penalty" when the DNL is calculated. Each event is measured as if ten events occurred.

Declared Distances: The distances the airport owner declares available for the airplane's takeoff run, takeoff distance, accelerate-stop distance, and landing distance requirements.

De-Icing: A procedure by which frost, ice, or snow is removed from the critical surfaces of an aircraft in order to render them free of contamination.

Design Day Operations: This level of operations is defined as the average day within the peak month.

Design Year: The year for which a roadway facility is designed, normally 20 years in the future, taking in consideration projected volumes of traffic.

Detailed Alternatives Analysis: Intensive engineering and environmental studies of a small range of alternatives that are modified to avoid or minimize disruptions to environmental resources. The object is to select a preferred alternative and document it in the Environmental Assessment.

Determination of Effect: A finding made by the Department, in consultation with the State Historic Preservation Officer, which determine whether a proposed project affects a property included on or eligible for the National Register of Historic Places.

Determination of Eligibility: The process of assembling documentation to render professional evaluation of the significance of an historic property. The Department, in consultation with the State Historic Preservation Officer, applies National Register of Historic Places criteria when deciding matters of historical significance.

Direct Emissions: Direct emissions are those caused by or initiated by the implementation and/or operation of an action, and that occur at the same time and place as the action.

Design Criteria: Established state and national standards and procedures that guide the establishment of roadway layouts, alignments, geometry, and dimensions for specified types of highways in certain defined conditions. The principal design criteria for highways are traffic volume, design speed, the physical characteristics of vehicles, and the classification of vehicles and the percentage of various vehicle classification types that use the highway.

Dispersion: The process by which atmospheric pollutants disseminate due to wind and vertical stability.

Displaced Runway Threshold: The temporary relocation of a runway threshold (beginning or end) due to maintenance or other activity on the runway.

Displaced Threshold: A threshold that is located at a point on the runway other than the beginning. The portion of pavement that is present behind the displaced threshold may be available for takeoffs in either direction and landings from the opposite direction.

Duration: The period of time the impact is expected to last (years, months, days).

- E -

Emission Factor: The rate at which pollutants are emitted into the atmosphere by one source or a combination of sources.

Emission Inventory: A complete list of sources and rates of pollutant emissions within a specific area and time interval.

Emissions and Dispersion Modeling System (EDMS): Air quality analysis model developed by the FAA and United States Air Force for use by civilian airports and military bases.

Engineered Materials Arresting Systems (EMAS): An engineered pavement surface that is designed give-way under design aircraft during aircraft overruns, providing a level of safety generally equivalent to a standard runway safety area (RSA), for consideration in applications where the standard RSA is impractical.

Environmental: (1) In a scientific context, a combination of external or extrinsic conditions present in nature. (2) In a planning context, a category of analytical studies of aesthetic values, ecological resources, cultural (historical resources), sociological and economic conditions, etc.

Environmental Assessment (EA): The initial determination of potential for significant environmental effects.

Environmental Justice (EJ): (Executive Order 12988, Feb. 11, 1994) Environmental Justice is a movement promoting the fair treatment of people of all races, income, and culture with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment implies that no person or group of people should shoulder a disproportionate share of

the negative environmental impacts resulting from the execution of this country's domestic and foreign policy programs.

Environmental Protection Agency (EPA):

The government agency responsible for enforcing environmental regulations such as RCRA, CERCLA, Clean Air Act, Clean Water Act.

Erosion and Sedimentation Control Plan:

A detailed series of plans developed to minimize accelerated erosion and prevent sedimentation damage. In accordance with Design Manual, Part 2, Chapter 13, and PADER's Erosion and Sediment Pollution Control Program Manual, these plans are prepared in conjunction with construction staging plans, detailing what erosion control measures must be in place at all times during various construction stages and phases.

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FAR Part 139: “Certification and Operations – Land Airports Serving Certain Air Carriers” is a regulation established by the FAA that applies to airports that regularly accommodate passenger aircraft having a seating capacity of more than 30 passengers. The regulations provided guidelines for standards, facilities, and procedures required for the operation of such airports.

Federal Airport Obligations: All references to federal grant programs, federal airport development assistance, or federal aid intended to address contractual commitments arising from the conveyance of land or from grant agreements.

Federal Aviation Administration (FAA): This agency oversees the process of planning, designating and constructing federally funded aviation projects. FAA approves the selected alternative and prepares the Record of Decision.

Federal Aviation Regulations (FAR): Title 14 of the Code of Federal Regulations.

Federal Highway Administration (FHWA): This agency oversees the process of planning, designing and constructing federally funded highway projects. FHWA approves the selected alternative and prepares the Record of Decision.

Field View: A site visit conducted by the Department to gather or verify data, define scopes of work, perform analyses, and make decisions for specific projects. Several field views are identified as important steps in the Transportation Project Development process.

Final Approach: That portion of the landing pattern in which the aircraft is lined up with the runway and is heading straight in to land.

Final Design: Final design begins after the environmental document is approved and includes the preparation of detailed engineering plans, specifications and estimates for approved transportation projects in addition to right-of-way acquisition, utility relocation and construction advertisement and award.

Finding of No Significant Impact (FONSI): An administrative determination by the Federal Highway Administration based upon studies providing data to support a Finding of No Significant Impact.

Fixed Base Operator (FBO): An entity that is authorized and required by agreement with the airport to provide, at a minimum, the following aeronautical activities at the airport: sale of aviation fuel and oil, tie-downs, hangaring, parking, aircraft maintenance, aircraft washings, ancillary aircraft ground services, and flight instruction.

Flaps: Adjustable airfoils attached to the leading or trailing edges of aircraft wings to improve aerodynamic performance during takeoff and landing. They are normally extended during takeoff, landing, and slow flight.

Flight Service Station: A facility from which aeronautical information and related aviation support services are provided to aircraft. This also includes airport and vehicle advisory services for designated uncontrolled airports.

Flood Detention Basin: An engineered structure with berms and spillway, located in low lying areas, and designed to provide flood water storage during flooding events.

Floodplain: Any flat, or nearly flat, lowland that borders a stream and is covered by its waters at flood stage.

Floodplain Management: Executive order 11988 regulates long and short-term adverse impacts associated with the modification of floodplains and to restore and preserve the natural and beneficial values served by floodplains.

Franchise: A right granted by a public entity to a person to do certain things that the person could not otherwise do. A franchise is distinguishable from a leasehold interest even when its exercise and value is inherently dependent upon the use and possession of publicly owned property.

Functional Classification: The grouping of streets and highways to classes, or systems according to the character of service that they provide. Facilities are divided according to the degree to which they provide access to places. The recognition that individual roads do not serve travel independently, and that most travel involves movement through a network of roads is basic to functional classification. Three general classifications are Arterial, Collector, and Local.

- G -

Gaussian Model: A pollutant dispersion model based on the Gaussian dispersion equation, which assumes a constant fractional decrease in concentration per unit distance in the crosswind and vertical direction from a stationary or moving center of dispersion.

General Aviation (GA): All civil aviation operations other than scheduled air services and nonscheduled operations for remuneration or hire. The following aviation activities: use of aircraft for private, business, recreational, or agricultural purposes, but not including the activities of aeronautical activity providers, air carriers, or military activity.

Geographic Information System (GIS): A computerized system of compiling, presenting and analyzing geographic based data. Map images of the road network can be overlaid with land use zoning information, environmental concerns, census data, and other useful information.

Geometric Design: Design that deals with the dimensions of a facility and the relationships of its features such as alignment, profile, grades, widths, sight distances, clearances and slopes as distinguished from structural design, which is concerned with thickness, composition of materials and load-carrying capacity.

Glide Slope Critical Area (GSCA): An area in front of the glide slope antenna (part of an instrument landing system) that is smoothly graded to remove surface irregularities.

Grade Separation: A crossing of two highways or other transportation facilities, at different levels.

Grant Agreement: Any agreement made between an airport sponsor and the FAA, acting on behalf of the United States, for the grant of federal funding or a conveyance of land, either on which the airport sponsor agrees to use for airport purposes.

Groundwater: Naturally occurring water that moves through the earth's crust, usually at a depth of several feet to several hundred feet below the earth's surface.

- H -

Habitat: The place where an organism lives, composed of both physical and biological elements.

Hangar: Structure or building for purposes of storing aircraft.

Hazardous Waste: Waste identified by characteristics, source or specific substance as found in 25 PA Code Chapter 75, Subchapter D and Code of Federal Regulations Title 40, Chapter 261. A hazardous waste may: (1) cause or substantially contribute to an increase in mortality or morbidity in either an individual or the total population; and (2) pose a substantial or potential hazard to human health or the environment when improperly treated, stored, transported, disposed, or otherwise managed.

Hazard to Air Navigation: An obstruction determined to have a substantial adverse effect on the safe and efficient utilization of the navigable airspace.

Heavy Aircraft: Aircraft capable of takeoff weight of 300,000 pounds or more whether or not the aircraft is operating at this weight during a particular phase of flight.

Highway, Street, or Road: A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

Historic Context: An organizing structure for interpreting history that groups information about historic properties that share a common theme, common geographic area, and a common time period.

Historic Integrity: The unimpaired ability of a property to convey its historical significance.

Historic Property: See Historic Resource.

Historic Resource: Building, site, district, object, or structure evaluated as historically significant.

Horizontal Surface: A horizontal surface is a horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging in arcs of 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.

Hydric Soil: Soil that is saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part.

Hydrocarbons (HC): Total hydrocarbons excluding methane and ethane. These gases represent unburned and wasted fuel. They come from incomplete combustion of gasoline and from evaporation of petroleum fuels.

- I -

Identification of Alternatives: The Department's Phase I engineering and environmental evaluations, in which the Originating Office identified and chooses an initial set of study alternatives that address the stated program objectives and the project need, and which are sensitive to the resources and land uses of a study area. The process commences with brainstorming or listing a wide variety of possible options, assessing the overall merits and drawbacks comparing them, and finally choosing those that should be carried forward. Alternatives to be studied normally include the No-Build Alternative, an upgrading of the existing roadway alternative, new transportation routes and locations, transportation system management strategies, multi-modal alternatives, if warranted, and any combination of the above.

ILS Category II: Supports landing minima as low as 100 HAT (height above touchdown) and 1200 RVR (runway visual range).

Impacts: Positive or negative effects upon the natural or human environment resulting from transportation projects.

Improvements: All buildings, structures, and facilities. Improvements may include pavement, fencing, signs, and landscaping that is constructed; installed; or placed on, under, or above any leased area.

Indirection Emissions: Indirect emissions are those caused by the implementation and/or operation of an action, are reasonable foreseeable, but which occur later in time and/or are farther removed in distance from the action itself. Limited to those indirect emissions that the responsible Federal agency can "practicably control and will maintain control over due to a continuing program responsibility of the Federal agency."

Instrument Flight Rules (IFR): Regulations governing the operation of an aircraft in weather conditions with visibility below the minimum required for flight under visual flight rules.

Instrument Landing: Landing an aircraft by relying only upon instrument data.

Instrument Landing System (ILS): An electronic system that provides, in the aircraft, the lateral, longitudinal, and vertical guidance necessary for a landing.

Intensity: Severity of the impact.

Interdisciplinary Review: Review and critique of a technical file, study, or report by a group of experts in relevant fields. Typically, such a process is used to provide more wide-ranging final quality assurance review within a District Office to provide first-level review for a completed study, in the Central Offices of the Department, or in the FHWA.

Intermodal Facility: A transportation element or facility that connects different modes for transportation. Intermodal transportation facilities serve intrastate, interstate and international movement of goods and people. The Harrisburg Transportation Center is a good example of an intermodal facility.

Intermodal Relationships: Coordination of different modes of transportation, such as rail, air, busways and bicycle paths during the planning and development of a particular project.

Internal Review: The means by which documents and data are reviewed, transmitted, furnished for approval, and certified as complete through a series of offices including those of Consultants, the Originating Office, the Central Office, and the various offices of the FHWA. Certain review and transmittal requirements are identified as necessary to carry out each of these individual.

Itinerant Aircraft: Any aircraft using the Airport whose operator does not have a lease agreement or other special agreement with the airport sponsor.

- J -

Joint Permit: The permit required for the obstruction and encroachment of Pennsylvania waters or wetlands. The joint permit eliminates the need for separate permit applications at the state and federal levels. One joint permit is submitted for the Pennsylvania's water obstruction and encroachment permit and a federal (U.S. COE) section 9, section 10 or section 404 permit. The permit is also considered by the state as a request for water quality certification under section 401 of the Federal Clean Water Act.

Jurisdictional Determination (JD): A site survey performed by the U.S. Army Corps of Engineers to officially determine whether or not a given parcel of land is subject to wetlands regulations, and if so, the extend of the area.

- K -

- L -

Land and Water Conservation Fund Act (LCWFA): Public park using funds from this federal program are protected by Section 6(f) codified as (16 U.S.C. 460 L-8F).

Landing Distance Available (LDA): The runway length declared available and suitable for a landing airplane. Applies to runways with an approach lighting system.

Large Aircraft: Aircraft of more than 12,500 pounds maximum takeoff weight, up to 300,000 pounds.

Lead (Pb): A heavy metal that when ingested or inhaled, affects the blood forming organs, kidneys and the nervous system. The chief source of this pollutant at airports is the combustion of leaded aviation gasoline in piston-engine aircraft.

Lease: A contract between the airport owner/operator and an entity granting a concession that transfers rights or interests in property, or otherwise authorizes the conduct of certain activities. The lease must be in writing, executed by both parties, and enforceable by law.

Level of Service (LOS): A qualitative rating of the effectiveness of a highway in serving, measured in terms of operating conditions. Note: The Highway Capacity Manual identifies operating conditions ranging from "A" for the best operation (low volume, high speed) to "F" for poor operation where volumes are below capacity.

Long Range Transportation Plan (LRTP): A 20-year forecast plan, required at both the metropolitan and state levels, which must consider a wide range of social, environmental, energy and economic factors in determining overall regional goals and how transportation can best meet these goals.

Low-Income Community: Defined by EJWG as any census tract with 20% or more of its population at or below the poverty level, as defined by the U.S. Census Bureau.

- M -

Magnitude: The quantitative or qualitative estimate of a size and extent of impact.

Maximum Design Takeoff Weight (MTOW): This is the maximum weight for takeoff as limited by aircraft strength and airworthiness requirements (the maximum weight at start of the takeoff run).

Maximum Design Zero Fuel Weight (MZFW): This is the maximum weight allowed before loading usable fuel, as limited by aircraft strength and airworthiness.

Maximum Payload (MZFW-OEW): Maximum zero fuel weight minus operational empty weight.

Memorandum of Agreement (MOA): The document that records the terms and conditions, which have been agreed upon to resolve adverse effects of an undertaking upon historic resources. The MOA is part of the requirements outlined in Section 106 of the National Historic Preservation Act of 1966. It must be signed by agencies such as the State Historic Preservation Officer, the FHWA, the Advisory Council on Historic Preservation and the Department.

Metropolitan Planning Organization (MPO): The agency designated by the Governor (or Governors in multi-state areas) to administer the federally required transportation planning process in a metropolitan area. An MPO must be in place in an urbanized area with a population over 50,000. The MPO is responsible for the 20-year long-range plan and the transportation improvement program.

Minimum Standards: The criteria established by an airport owner as the minimum requirements that must be met by business in order to engage in providing on-airport aeronautical activities or services.

Minority Community: Defined by EJWG as any U.S. census tract with 30% or greater minority population.

Mitigation: The replacement of natural features which have been lost or reduced in value.

Mitigation Measures: Measures taken to eliminate or reduce the negative impacts of a project.

Mitigation Report: A summary document prepared by the originating office for every Final EIS to inform design consultants, value engineering teams, project engineers and construction contractors of committed project design, operational construction measures to minimize or avoid anticipated environmental consequences. This report is an internal informational document subject to modification as the project proceeds through final design.

Model: A quantitative or mathematical representation or simulation, which attempts to describe the characteristics or relationships of physical events.

Movement Area: The runways, taxiways, and other areas of an airport that are used for taxing or hover taxing, air taxiing, and takeoff and landing of aircraft exclusive of loading ramps and aircraft parking areas.

Multimodal Facility: A transportation facility built to accommodate two or more types of transportation modes (e.g. bus/rail terminal).

Mutual Aid: Reciprocal aid given one agency by another in times of emergency.

- N -

National Ambient Air Quality Standards (NAAQS): Air quality standards established by the EPA to protect human health (primary standards) and to protect property and aesthetics (secondary standards).

National Environmental Policy Act (NEPA): Federal legislation requiring states to document the any environmental impacts of a transportation project. PENNDOT's Ten-Step Transportation Project Development Process has been developed to comply with NEPA which addresses all potential environmental, social, cultural, and economic impacts of a proposed transportation project before decisions are reached on design.

National Register Criteria: The criteria established by the Secretary of the Interior for use in evaluating the eligibility of properties for the National Register (36 CFR Part 60).

National Register of Historic Places: A list maintained by the U.S. Department of the Interior of historic and prehistoric sites that have local, state, or national significance.

Natural Resources: Land, fish, wildlife, drinking water supplies and other assets belonging to, maintained by, or otherwise controlled by the federal, state, or local government.

Navigation Easement: A grant of property interest in land over which a right of unobstructed flight in the airspace is established.

Needs Study: The purpose of this study is to identify such items as roadway deficiencies, safety problems, capacity issues and social demands, which support the consideration of transportation improvement. State and federal environmental agencies are asked to agree that there is a need for improvements before a project moves into the next study phase.

NEPA/404: An improvement to the efficiency of how the FHWA NEPA process works, using early and active interagency coordination to focus efforts on reaching an environmentally sound project. For projects involving fill in waters of the United States, the US Army Corps of Engineers is responsible for issuing permit that assesses whether the action is appropriate. The requirements for that permitting process are under Section 404 of the Clean Water Act. The NEPA/404 merger process was initiated to streamline project decision-making on Federal-aid Highway Projects.

Network Upgrade Alternative: An alternative that considers improvements to the existing roadway network such as the addition of lanes and minor lane shifts to correct deficiencies.

New Alignment Alternative: An alternative consisting of a limited access highway on a new location.

Nitrogen Oxides (NO_x): A poisonous and highly reactive gas produced when fuel is burned at high temperatures causing some of the abundant nitrogen in the air to burn also. At airports this pollutant is emitted by automobiles, aircraft engines, electric power plants and other combustion equipment. Takeoff and climb out are the significant NO_x producing modes of aircraft operation.

No Action Alternative: An alternative used as a comparison for other alternatives considered. This alternative does not provide for any major improvements to the existing facility. This alternative would only include routine maintenance improvements such as resurfacing, pavement marking and minor airport improvements.

Nonattainment Area: Any geographic area of the United States that is in violation of any NAAQS and therefore has been designated as nonattainment under the CAA.

- O -

Object Free Area (OFA): An area on the ground centered on a runway, taxiway, or taxilane centerline provided to enhance the safety of aircraft operations by having the area free of objects, except for objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes.

Obstacle Free Zone (OFZ): The OFZ is the airspace below 150 feet above the established airport elevation and along the runway and extended runway centerline that is required to be clear of all objects, except for frangible visual NAVAIDS that need to be located in the OFZ because of their function, in order to provide clearance protection for aircraft landing or taking off from the runway, and for missed approaches.

Obstruction: Any structure, growth or other object, including a mobile object, which exceeds a limiting height set forth in Federal Aviation Regulations Part 77 (49 CFR Part 77, Objects Affecting Navigable Space).

Operating Empty Weight (OEW): This is the weight of the aircraft structure, power plant, and other items and equipment considered an integral part of the particular airplane configuration. OEW also includes crew and supplies necessary for full operations, excluding usable fuel and payload.

Operator: As used in these minimum standards, the term operator refers to both commercial operators and non-commercial operators.

Originating Office: The “lead” District, Bureau, Office, or Agency responsible for administering, developing and implementing a given project.

Ozone (O₃): A colorless, toxic gas formed by the photochemical reactions in the atmosphere of VOCs with the oxides of nitrogen. Ozone is commonly referred to as “Smog.” Ozone is not emitted directly by any Airport.

- P -

Palustrine Wetlands (PEM, PFO, POW, PSS): Non-tidal and freshwater tidal wetlands dominated by vegetation.

Passenger Capacity: The maximum number of passengers specifically certified or anticipated for certification for a particular aircraft.

Peak Hour: The one-hour period of a typical day during which traffic volumes are the greatest.

Peak Month Operations: This level of activity is defined as the calendar month when peak aircraft operations occur.

PENNDOT 10-Step Process: The preliminary design phase of PENNDOT's Transportation Project Development Process. The 10-Step Process is the framework for the involvement of resource agencies and the public in the environmental and alternative evaluations of project studies (refer to PENNDOT's Environmental Impact Statement Handbook, Pub. No. 278, August 1993).

Pennsylvania Department of Agriculture: Ensures that farmlands are preserved in order to maintain predominately rural areas and to maintain the economic vitality of communities that depend on agriculture.

Pennsylvania Department of Community and Economic Development (DCED): Works in partnership with local officials and community organizations to attain the highest quality of life for all Pennsylvanians. It assists municipalities, regional agencies and counties in preparing and updating comprehensive community development plans, which sometimes include transportation components.

Pennsylvania Department of Environmental Protection (PADEP): State regulatory agency responsible for enforcing environmental regulations.

Pennsylvania Department of Transportation (PENNDOT): The agency of the Pennsylvania State Government responsible for the design, construction and maintenance of state highways and bridges in Pennsylvania, not including toll highways that are under the jurisdiction of the Pennsylvania Turnpike Commission. PENNDOT is funded by state and federal tax dollars.

Pennsylvania Historical & Museum Commission (PHMC): PHMC is responsible for identifying, evaluating and protecting historic resources in Pennsylvania.

Pennsylvania Turnpike Commission (PTC): The Pennsylvania Turnpike Commission was created in 1937 by Act 211. The Turnpike Commission has the authority to construct, finance, operate and maintain toll highways. Presently, the Turnpike Commission has over 500 miles of limited access highway. The operation of the Pennsylvania Turnpike Commission is supported by tolls and bond revenue, not tax dollars.

Permit: Written permission from a governmental agency to take certain action during the Transportation Project Development Process (relating to, for example, solid waste management underground storage tanks, coastal areas, etc.)

- The U.S. Army Corps of Engineers issues permits for: construction, excavation, depositing of materials, etc. in navigable waters; and discharge of dredged or fill materials into U.S. waters.
- The U.S. Coast Guard issues permits for: constructing bridges, causeways and drawbridges in navigable waters.
- The Federal Aviation Administration issues clearances/certifications for proposed transportation improvements in the vicinity of public/military airports.
- The PA Department of Environmental Protection issues water quality certifications for actions that result in discharge into regulated waters.

Phase I Alternatives Analysis: During the Preliminary Design Phase, a wide range of preliminary study alternatives are developed and evaluated. Following engineering feasibility and environmental assessments, the long initial list of alternatives is narrowed down and the least desirable alternatives are dismissed from further study. A narrower range is carried forward to Phase II.

Phase I Archaeological Survey: The Phase I survey is intended to provide an inventory of all archaeological resources within the project area that are potentially eligible for the national Register of Historic Places, as per Federal Reg. 51 (169) of 9/2/86 and CFR 800.4 as revised 10/1/86.

Phase II Alternatives Analysis: A smaller range of alternatives is studied in greater detail, with the ultimate goal of selecting an alternative that satisfies project needs while balancing transportation, community and environmental objectives. These alternatives are presented in the EIS, and in many cases, one alternative is recommended as preferred.

Phase II Archaeological Survey: The Phase II investigation is designed to sample the archaeological deposits at sites identified during the Phase I survey and allow a decision to be made as to their significant, defined as eligibility of the site for listing in the National Register of Historic Places.

Phase III Archaeological Survey: The Phase III study involves a comprehensive excavation to recover the artifacts or data. This is done to mitigate the adverse effects to a site eligible for the National Register of Historic Places.

Plans Display: Public exhibit of graphics, artwork, or drawings that explain important features of a proposed project to interested parties.

PM-10: Fine particles less than 10 micrometers in diameter. PM-10 includes solid and liquid material suspended in the atmosphere formed as a result of incomplete combustion. Aircraft are the primary source of PM-10 emissions at airports.

Poverty Guidelines: Poverty guidelines are a simplification of the poverty thresholds and are used in determining financial eligibility for federal programs. The poverty guidelines (unlike the poverty thresholds) are designed by the year in which they are issued by the HHS.

Poverty Thresholds: Poverty thresholds are the statistical version of the poverty measure. Poverty thresholds are used for calculating the number of persons in poverty in the United States or in states and regions.

Preliminary Design: The engineering and environmental studies associated with the development and comparison of alternate locations, alternate alignments, detailed analysis, on-going public and agency interaction, project review, and final selection of a project alternative.

Preliminary Engineering (P.E.): The phase of a project's implementation that occurs after programming, but before final design and right-of-way construction. It includes environmental analysis and preliminary design.

Primary Area of Influence: This zone would be the most likely to experience direct impacts from the proposed action.

Primary Runway: An existing or planned paved runway, as shown in the official airport layout plan (ALP) of the airport, of at least 3,200 feet on which a majority of the approaches to and departures from the airport occur.

Primary Surface: A surface longitudinally centered on a runway is termed a primary surface. When a runway is paved, the primary surface extends 200 feet beyond each runway end.

Principal Arterial: Signalized streets which primarily provide through-traffic access between cities. These roads also provide access to adjacent properties as a secondary function.

Public Area: Any area, including the various concessions, restrooms, Airport Passenger Terminal lobby sections, ticketing sections, and concourse, used for public thoroughfares, gathering, waiting and viewing; streets and roads, sidewalks and all other areas normally used by the general public. All other areas are considered operational, restricted, or leased areas and access is permitted upon expressed consent of the airport sponsor its lessees.

Public Hearing: Formal meeting required to complete the NEPA public involvement requirements. Testimony at the hearing is made part of the official record and is reviewed by state and federal agencies before preparation of an FEIS. (23 U.S.C. 128 resulted in regulations to ensure adequate opportunity for public hearing(s) on the effects of alternative project locations and major design features, as well as consistency of the project with local planning goals and objectives.

Public Involvement: Coordination events and informational materials geared at encouraging the public to participate in project development. A successful Public Involvement Program facilitates the exchange of information among project sponsors and outside groups and the general public, and includes meetings, surveys, committees, presentations, etc.

Public Meetings: Sessions, in which residents who live in the project corridor and other interested parties have the opportunity to meet with transportation and environmental professionals to ask questions, express their concerns and assist in the information gathering process.

Purpose and Need: The project purpose is a broad statement of the overall intended objective to be achieved by a proposed transportation facility, normally defined in a few sentences. The need is a more detailed explanation of the specific transportation problem(s) or deficiencies which have generated the search for improvements.

- Q -

Qualitative Analysis: A general concept which categorizes a process used in certain types of environmental or route location studies where multiple factors are compared in a systematic and comprehensive manner on the basis of sound judgment. Factors analyzed by using a qualitative analysis are such that they cannot be measured in monetary terms, have no apparent common denominators, and are not readily quantifiable.

Quantitative Analysis: The process used in economic, cost-benefit, engineering, or traffic studies where multiple factors, elements, and/or outcomes are evaluated and compared by the use of measurable data. Certain mathematical models, formulas, numerical indices, rankings, and value matrices may be used to assist with such a process.

- R -

Ramp: (1) An area on airports intended to accommodate aircraft for purposes of loading or unloading of passengers or cargo, refueling, parking or maintenance. (2) A movable stairway or enclosure for loading or unloading passengers.

Range: The range of an aircraft is the distance it can travel without refueling. Range varies with weight of the aircraft, payload and fuel available.

Receptor: A location at which ambient air quality is measured or estimated.

Regulatory Agency: An agency empowered to issue permits or recommend approval or denial of a permit.

Relevance to Legal Mandate: Refers to the existence of local or national laws that specifically disallow this type of impact.

Required Right-of-Way: A property that must be acquired for the construction of a project.

Resource Agencies: Federal and state agencies that review regulated projects for consistency and sensitivity to conservational and environmental laws and policies. Several resource agencies also possess regulatory power. These agencies include, but are not limited to:

- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- Pennsylvania Department of Agriculture
- Pennsylvania Department of Environmental Protection
- Pennsylvania Fish and Boat Commission
- Pennsylvania Game Commission
- Pennsylvania Historical and Museum Commission

- Resource Conservation and Recovery Act (RCRA):** The RCRA program identifies and tracks hazardous wastes from the point of generation to the point of disposal. The RCRA facilities database is a compilation by EPA of reporting facilities that generate, store, transport, treat or dispose of hazardous waste.
- Restricted Area:** Any area designated by the airport sponsor in writing, by means of maps, barriers, or fencing to which the general public is denied access. Those areas established by the Airport Manager for safety and security reasons.
- Reversibility:** Refers to whether the impact can be reversed through human action or naturally. Impacts triggered by the construction of a new airport are less likely to be reversible due to their magnitude.
- Right-of-Way (ROW):** Land acquired by purchase, gift, or eminent domain in order to build and maintain a public road.
- Riverine Wetland:** All freshwater, non-vegetated wetlands and deepwater habitats contained within a channel.
- Roadway Deficiencies:** Problems with the existing roadway system or lack of a roadway system that cause safety concerns, motorist inconvenience or traffic congestion.
- Runway (RW):** A defined rectangular surface on an airport prepared or suitable for the landing or takeoff of airplanes.
- Runway Centerline Lighting System:** The runway centerline lighting system consists of single lights installed at uniform intervals along the runway centerline so as to provide a continuous lighting reference from threshold to threshold.
- Runway Object Free Area (ROFA):** Defined rectangular surface areas that surround runways. The ROFA must be clear of objects except those whose location is fixed by function. The purpose of the ROFA is to provide safe and efficient operation at the airport.
- Runway Protection Zone (RPZ):** A trapezoidal area off of the runway end and centered about the extended runway centerline, that must be kept free of intrusions. The function of the RPZ is to enhance the protection of people and property on the ground by in the event an aircraft lands or crashes beyond the runway end.

Runway Safety Area (RSA): A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway. The RSA typically consists of a cleared, drained, graded and usually turfed areas abutting the edges of the usable runway and symmetrically located about the runway. Extends 200 feet beyond each runway end. The width varies according to the type of runway. (Formerly called “landing strip”)

Runway Threshold: The beginning or end of a runway that is usable for landing or takeoff.

- S -

Secondary Area of Influence: The secondary area of influence is where direct, indirect and cumulative effects are likely to occur.

Section 404 Alternatives Analysis: Examines practical alternatives to the possible discharge of dredged or fill material into certain aquatic ecosystems, such as wetlands, mudflats, vegetated shallows or other special aquatic systems. “Practical” means “available and capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purposes.” Criteria guiding such an analysis are performed during the environmental studies of the Transportation Project Development Process and is required before the issuance of a permit by the Corps of Engineers for the discharge of dredged or fill materials.

Section 401 Water Quality Certification: Required as per Section 401 of the Federal Clean Water Act for projects involving the discharge of materials into surface waters, including wetlands. The applicant must demonstrate that activities will comply with Pennsylvania water quality standards and other provisions of federal and state law and regulations regarding conventional and nonconventional pollutants, new source performance standards, and toxic pollutants.

Section 106: Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Council for Historic Preservation a reasonable opportunity to comment on such undertakings. The section 106 process seeks to accommodate historic preservation concerns with the needs of Federal undertakings through consultation among the agency official and other parties with an interest in the effects of the undertaking on historic properties, commencing at the early stages of project planning.

Section 4(f): Enacted as a portion of the Department of Transportation Act of 1996, Section 4(f) declares, “that special effort should be made to preserve the natural beauty of the country side and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. Section 4(f) applies to all historic sites, but only to publicly owned parks, recreation areas, and wildlife and waterfowl refuges.

Section 4(f) of the DOT Act places restrictions on the use of any significant publicly owned recreational land, public park, recreation area, wildlife and waterfowl refuge or historic site of national, state, or local significance.

Section 4(f) Evaluation: Statement of the Federal Department of Transportation Act of 1966, as amended, which documents that with regard to any transportation program or project which requires the “use” of publicly owned land from a park, recreation area, waterfowl or wildlife refuge, or historic site, of national, state or local significance as determined by the Federal, State, or local officials having jurisdiction thereof, that (1) there is no feasible and prudent alternative to the use of such land; and (2) such program or project includes all possible planning to minimize harm to such land resulting from such use.

Section 404: Section 404 of the Clean Water Act requires approval by the United States Army Corps of Engineers (COE) prior to the placement of any fill materials into waters of the United States, including wetlands.

Small Aircraft: Aircraft of 12,500 pounds or less maximum certified takeoff weight.

Social Distribution of Risks and Benefits: Refers to whether this impact contributes to or constraints the environmental sharing of risks and benefits.

Sponsor: A local municipal or state government body, or a private entity obligated to the federal government to comply with the assurances contained in grant agreements or property conveyance instruments. A sponsor may be an entity that exists only to operate the airport, such as an airport authority established by state or local law. For the purposes of this document, the terms airports sponsor and airport owner are used interchangeably.

Staging Area: A prearranged, strategically located area where personnel, apparatus, and other equipment can be held in readiness for use during an emergency.

Statewide Transportation Improvement Program (STIP): The statewide plan required by the U.S. Department of Transportation, which includes all highway and transit projects to be implemented over a four-year period. The STIP, in turn, represents the first component of the Twelve Year Transportation Program.

Stopway/Overrun Area: An area beyond the runway end capable of supporting aircraft that overshoot the runway on aborted takeoff or landing without causing structural damage to the airplane.

Stormwater Management Basin: An engineered structure consisting of berms and constricted outlet, designed to detain stormwater for short durations (usually less than 24-hours), for the purpose of not increasing off-site stormwater runoff levels above pre-construction levels, a condition of site development.

Study Limits: The physical end points of a proposed project or study usually designated at geographic or municipal boundaries, at intersections, at roadway segments where cross sections change, or at the beginning or end of numbered state traffic routes.

Sufficiency Rating: A numerical rating of a section of roadway. This rating is obtained by comparing that section with an ideal section, looking at such factors as structure, safety and service. This rating is one of the tools used in developing construction priorities.

Sulfur Dioxide (SO₂): A corrosive and poisonous gas produced mainly from the burning of sulfur containing fuel. Very little SO₂ emitted from aviation sources.

Superfund Site: Superfund is the Federal government's program to clean up the nation's uncontrolled hazardous waste sites.

Surface: Standards for determining obstructions to imaginary surfaces are outlined in FAR Part 77 – Objects Affecting Navigable Air Space. According to standards, obstructions within these imaginary surfaces must be removed for safety. The size of each such imaginary surface is based on the category of each runway according to the type of approach available or planned for that runway. The slope and dimensions of the approach surface applied to each end of a runway are determined by the most precise approach existing or planned for that runway end.

- T -

Takeoff Distance Available (TODA): The TORA plus the length of any remaining runway or clearance (CWY) beyond the far end of the TORA. NOTE: The full length of TODA may not be used for all takeoffs because of obstacles in the departure area. The useable TODA length is aircraft performance dependent and, as such, must be determined by the aircraft operator before each takeoff and requires knowledge of the location of each controlling obstacle in the departure area.

Takeoff Run Available (TORA): The runway length declared available and suitable for the ground run of an airplane taking off.

Taxiway: A defined path established for the taxiing of aircraft from one part of the airport to another.

Technical File: A compilation of raw data from all of the technical studies (e.g. noise and air quality analyses) conducted for a transportation improvement project.

Tenant: A person having a written hangar lease, hangar rental agreement or other aircraft storage agreement with the airport sponsor, which grants that entity certain rights and privileges on the airport property.

Threshold (TH): The designated beginning of the runway that is available and suitable for the landing of airplanes. In some instances the landing threshold may be displaced.

Touchdown Zone: The area of the runway near the approach where end where airplanes normally alight.

Touchdown Zone Lighting System: This system in the runway touchdown area presents, in plain view, two rows of traverse light bars located symmetrically about the runway centerline. This basic system extends 3,000 feet along the runway.

Traffic Pattern: The traffic flow that is prescribed for aircraft landing or taking off from an airport

Transitional Surface: These surfaces extend outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of 7 to 1 from the sides of the primary surface and form the sides of the approach surfaces.

Transportation Improvement Programs (TIP): Four-year outlooks, jointly developed by local, regional, and state transportation officials, which identify specific projects and the resources to implement them. The TIPs, in turn, are incorporated into the STIP.

Transportation Project Development Process: PENNDOT's procedures for advancing a transportation improvement project from concept to construction divided into five phases, from planning to construction. The goal is to select, design and construct the most reasonable, practical, cost-effective, technically sound and environmentally sensitive improvement option or package of improvements.

Turbojet: A jet engine employing a turbine-driven compressor to compress the intake air, or an aircraft with this type of engine. Also known as a gas turbine.

Turboprop: (1) A turbojet engine with a turbine-driven propeller that provides a large part of the thrust, adding this to the thrust of the jet exhaust; turboprop engine. (2) An aircraft that has one or more of these engines.

Twelve-Year Program: The official prioritized listing, as adopted by the PA Department of Transportation and the State Transportation Commission, of those transportation improvements identified for development and implementation in Pennsylvania during the upcoming 12 years. The plan, together with any additions or changes, is subject to review and re-adoption biannually.

- U -

Uncontrolled Airport: An airport that has no operating control tower.

Uniform Relocation Assistance and Real Property Acquisitions Act of 1970: Requires assessment and mitigation of impacts associated with displacement of residents and businesses.

United States Department of Transportation (USDOT): The department of the federal government that includes the Federal Highway Administration (FHWA), Federal Aviation Administration (FAA) and the Federal Transit Administration (FTA). USDOT is headed by the Secretary of Transportation, a cabinet-level post.

Upgrade Alternative: A study alternative or a proposed action in which all proposed improvement efforts are focused within the corridor or land area of a facility that is already built. This alternative is examined and studied first, often in conjunction with a TSM Alternative, before other alignments that may be on a new location are considered.

Urban Area: An area having a Center City population of 50,000 or more as defined by the 1990 U.S. Census; may also include other major population concentrations where a systems planning study is deemed necessary.

Usable Fuel: Fuel available for propelling the aircraft. The usable fuel capacity of the aircraft can be a limiting factor for the range and/or load.

- V -

Viewshed: The total area visible from a point (or series of points along a linear transportation facility) and conversely, the area that views the facility.

Visibility Minimum: The minimum standard visibility required for the pilot to establish visual reference in time to descend safely.

Visual Approach: An approach to landing made by visual reference to the surface.

Visual Flight Rules (VFR): Rules that govern the operation of an aircraft during visual flight.

- W -

Wake Turbulence: Phenomena resulting from the passage of an aircraft through the atmosphere. The term includes vortices, thrust stream turbulence, jet blast, jet wash, propeller wash, and rotor wash or downdraft.

Waste Area: An area where excess materials from excavation during construction are deposited.

Waste Site: Property, including structures on a property, which have been impacted by hazardous or environmentally sensitive materials.

Water Table: The upper limit of the portion of ground wholly saturated with water, whether very near the surface or many feet below it.

Watershed: A region or area bounded by a water parting and draining ultimately to a particular watercourse or body of water.

Wetland: Lands frequently inundated or saturated with water. They are an important natural resource that provides flood control, pollution control and habitat for fish, birds and mammals and aquatic life as well. Wetlands are more commonly known as marshes, bogs, swamps, wet meadows, and shallow ponds.

Wetland Delineation: The process of determining the jurisdictional boundary of a wetland.

Wetland Delineation Report: Provides both written and illustrated data to define the boundaries of those topographic features within a study area and which meet the Federal definition of “wetland” as contained in 33 CFR 323.2(c). A delineation report represents the first step in overall wetland study process, evaluates the importance of a wetland, and ultimately assesses the effects of a project on a wetland.

Wetland Finding Procedure: The wetland finding procedure establishes the criteria and procedures for satisfying the wetland finding requirements of Executive Order 11990. It requires documentation of wetlands associated with the project including a description of the wetlands, identification of wetland impacts, documentation of alternatives analysis and development of a mitigation plan for unavoidable impacts.

Wind Coverage: The percent of time that runway crosswind components are below an acceptable velocity.

Windsock: Cone-shaped cloth sock located at airports to indicate wind direction and to some extent wind velocity.

- X -

- Y -

- Z -

NOTE: Definitions presented within this appendix represent official definitions listed within “Airport Planning and Management—4th Edition,” “FAA Airport Design Standards;” “FAA Air Quality Procedures for Civilian Airports and Air Force Bases Technical Handbook;” and other applicable guidance documents.