

Appendix B

Oregon Department of Aviation
Zoning Information



MODEL PUBLIC USE AIRPORT ZONE

- .010. Purpose. The purpose of the Public Use Airport zone is to encourage and support the continued operation and vitality of [public use airports] [name of specific airport(s)] in the [city] [county] by allowing certain airport-related commercial and recreational uses in accordance with state law. [ORS 836.600] **[NOTE: where the jurisdiction contains just one or a couple airports listed in OAR 738-090-0030(1), it may want to identify the airport(s) by name; otherwise, it should use "public use airports"]**
- .020 Application. This zoning district applies to all publicly owned airports in the [city] [county], other than towered airports, that were registered, licensed or otherwise recognized by the Oregon Department of Transportation on or before December 31, 1994 and that, in 1994, were the base for three or more aircraft. It also applies to those privately owned public use airports in the [city] [county] identified by rule by the Department of Transportation as providing important links in air traffic in Oregon, or providing essential safety or emergency services, or being of economic importance to the county where the airport is located. [ORS 836.610(1); see also OAR 738-090-0030(1)] **[NOTE: this section reflects state law. Some jurisdictions like to include this type of provision in their zoning ordinances, while others do not. It's use is optional. Local governments choosing to include this section may wish to substitute the names of the affected airports.]**
- .030 Conformance with Airport Overlay Zones. All uses, activities, facilities and structures allowed in the Public Use Airport Zone shall comply with the requirements of the Public Use Airport Safety and Compatibility Overlay Zone. In the event of a conflict between the requirements of this zone and those of the Public Use Airport Safety and Compatibility Overlay Zone, the requirements of the overlay zone shall control. [ORS 836.619; OAR 660-013-0070, 0080]
- .040 Definitions.
- A. Aircraft. Includes airplanes and helicopters, but not hot air balloons or ultralights.
 - B. Airport sponsor. The owner, manager, person or entity designated to represent the interests of an airport. [OAR 660-013-0020]
- .050. Uses Permitted Outright. The following uses and activities are permitted outright in the Public Use Airport zone:
- A. Customary and usual aviation-related activities, including but not limited to takeoffs and landings; aircraft hangars and tie-downs; construction and maintenance of airport facilities; fixed based operator facilities; a residence for an airport caretaker or security officer; and other activities incidental to the normal operation of an airport. Except as provided in this ordinance, "customary and usual aviation-related activities" do not include residential, commercial, industrial, manufacturing and other uses.

- B. Air passenger and air freight services and facilities, at levels consistent with the classification and needs identified in the Oregon Department of Aviation Airport System Plan.
- C. Emergency medical flight services, including activities, aircraft, accessory structures, and other facilities necessary to support emergency transportation for medical purposes. Emergency medical flight services do not include hospitals, medical offices, medical labs, medical equipment sales, and other similar uses.
- D. Law enforcement and firefighting activities, including aircraft and ground-based activities, facilities and accessory structures necessary to support federal, state or local law enforcement or land management agencies engaged in law enforcement or firefighting activities. Law enforcement and firefighting activities include transport of personnel, aerial observation, and transport of equipment, water, fire retardant and supplies.
- E. Search and rescue operations, including aircraft and ground based activities that promote the orderly and efficient conduct of search or rescue related activities.
- F. Flight instruction, including activities, facilities, and accessory structures located at airport sites that provide education and training directly related to aeronautical activities. Flight instruction includes ground training and aeronautic skills training, but does not include schools for flight attendants, ticket agents or similar personnel.
- G. Aircraft service, maintenance and training, including activities, facilities and accessory structures provided to teach aircraft service and maintenance skills and to maintain, service, refuel or repair aircraft or aircraft components. "Aircraft service, maintenance and training" includes the construction and assembly of aircraft and aircraft components for personal use, but does not include activities, structures or facilities for the manufacturing of aircraft or aircraft-related products for sale to the public.
- H. Aircraft rental, including activities, facilities and accessory structures that support the provision of aircraft for rent or lease to the public.
- I. Aircraft sales and the sale of aeronautic equipment and supplies, including activities, facilities and accessory structures for the storage, display, demonstration and sales of aircraft and aeronautic equipment and supplies to the public but not including activities, facilities or structures for the manufacturing of aircraft or aircraft-related products for sale to the public..
- J. Crop dusting activities, including activities, facilities and structures accessory to crop dusting operations. Crop dusting activities include, but are not limited to, aerial application of chemicals, seed, fertilizer, defoliant and other chemicals or

products used in a commercial agricultural, forestry or rangeland management setting.

- K. Agricultural and Forestry Activities, including activities, facilities and accessory structures that qualify as a "farm use" as defined in ORS 215.203 or "farming practice" as defined in ORS 30.930.
- L. **[NOTE: Other uses, such as commercial or manufacturing uses, may be added to this list if they are consistent with applicable provisions of the acknowledged comprehensive plan and if the uses do not create a safety hazard or otherwise limit approved airport uses. For example, inside an urban growth boundary, commercial or manufacturing uses may be allowed. Outside an urban growth boundary, other uses are permitted only if authorized by a goal exception.] [ORS 836.616; OAR 660-013-0100, 0110]**

.060 Uses Permitted Subject to the Acceptance of the Airport Sponsor. The following uses and activities and their associated facilities and accessory structures are permitted in the Public Use Airport Zone upon demonstration of acceptance by the airport sponsor. [ORS 836.616(2)(j); OAR 660-013-0100(8)]

- A. Aeronautic recreational and sporting activities, including activities, facilities and accessory structures at airports that support recreational usage of aircraft and sporting activities that require the use of aircraft or other devices used and intended for use in flight. Aeronautic recreation and sporting activities authorized under this paragraph include, but are not limited to, fly-ins; glider flights; hot air ballooning; ultralight aircraft flights; displays of aircraft; aeronautic flight skills contests; and gyrocopter flights, but do not include flights carrying parachutists or parachute drops (including all forms of skydiving). **[NOTE: Federally funded airports may need the concurrence of the FAA to preclude some kinds of aeronautic recreational and sporting activities.]**
- B. Flights carrying parachutists, and parachute drops (including all forms of skydiving) onto an airport, but only upon demonstration that the parachutist business has secured approval to use a drop zone that is at least 10 contiguous acres. The configuration of the drop zone shall roughly approximate a square or a circle and may contain structures, trees, or other obstacles only if the remainder of the drop zone provides adequate areas for parachutists to land safely. **[NOTE: where evidence of missed landings and dropped equipment supports the need for a larger area, a larger drop zone may be required.]**

[NOTE: Where there is only one airport within the jurisdiction, the city or county may tailor the provisions of this subsection to the interests of the airport sponsor. For example, if the airport sponsor does not want to allow skydiving or ultralight activity, those provisions can be deleted from the ordinance.]

- .070 Uses Permitted Under Prescribed Conditions. The following uses and activities and their associated facilities are permitted in the Public Use Airport Zone upon demonstration of compliance with the standards of this subsection.
- A. [NOTE: Other uses may be included here, subject to such conditions or standards prescribed by the local government, provided that they are consistent with applicable provisions of the acknowledged comprehensive plan and that the uses do not create a safety hazard or otherwise limit approved airport uses.] [ORS 836.616(3); OAR 660-013-0110]
- .080 [NOTE: This model ordinance does not include standards addressing setbacks or other dimensional requirements, access, parking, landscaping, and the like. While not required by statute, a local government may wish to include such provisions in its Public Use Airport Zone.]

MODEL PUBLIC USE AIRPORT SAFETY AND COMPATIBILITY OVERLAY ZONE
(For Public Use Airports with Instrument Approaches)¹

.010 Purpose. The purpose of this overlay zone is to encourage and support the continued operation and vitality of public use airports with instrument approaches by establishing compatibility and safety standards to promote air navigational safety at such public use airports and to reduce potential safety hazards for persons living, working or recreating near such public use airports. [ORS 836.600; ORS 836.619; OAR 660-013-0070; OAR 660-013-0080]

.020 Definitions. [ORS 836.605; ORS 836.623(6); OAR 660-013-0020; OAR 660-013-0070(1)(a), (b); OAR 660-013-0080(1)(a)]

Airport. The strip of land used for taking off and landing aircraft, together with all adjacent land used in connection with the aircraft landing or taking off from the strip of land, including but not limited to land used for existing airport uses.

Airport Direct Impact Area. The area located within 5,000 feet of an airport runway, excluding lands within the runway protection zone and approach surface.

Airport Elevation. The highest point of an airport's usable runway, measured in feet above mean sea level.

Airport Imaginary Surfaces. Imaginary areas in space and on the ground that are established in relation to the airport and its runways. Imaginary areas are defined by the primary surface, runway protection zone, approach surface, horizontal surface, conical surface and transitional surface.

Airport Noise Impact Boundary. Areas located within 1,500 feet of an airport runway or within established noise contour boundaries exceeding 55 Ldn.

Airport Secondary Impact Area. The area located between 5,000 and 10,000 feet from an airport runway.

Airport Sponsor. The owner, manager, or other person or entity designated to represent the interests of an airport.

Approach Surface. A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface.

(A) The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width of:

(1) 2,000 feet for a utility runway having a nonprecision instrument approach;

¹ NOTE: This overlay zone would apply to all airports, including towered airports, identified in OAR 738-090-0030(1) that use nonprecision or precision instrument approach procedures.

- (2) 3,500 feet for a nonprecision instrument runway, other than utility, having visibility minimums greater than three-fourths statute mile;
 - (3) 4,000 feet for a nonprecision instrument runway, other than utility, having visibility minimums at or below three-fourths statute mile; and
 - (4) 16,000 feet for precision instrument runways.
- (B) The approach surface extends for a horizontal distance of
- (1) 5,000 feet at a slope of 20 feet outward for each foot upward for all utility runways;
 - (2) 10,000 feet at a slope of 34 feet outward for each foot upward for all nonprecision instrument runways, other than utility; and
 - (3) 10,000 feet at a slope of 50 feet outward for each one foot upward, with an additional 40,000 feet at slope of 40 feet outward for each one foot upward, for precision instrument runways.
- (C) The outer width of an approach surface will be that width prescribed in this subsection for the most precise approach existing or planned for that runway end.

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

Department of Aviation. The Oregon Department of Aviation, formerly the Aeronautics Division of the Oregon Department of Transportation.

FAA. The Federal Aviation Administration.

FAA's Technical Representative. As used in this ordinance, the federal agency providing the FAA with expertise on wildlife and bird strike hazards as they relate to airports. This may include, but is not limited to, the USDA-APHIS-Wildlife Services.

Height. The highest point of a structure or tree, plant or other object of natural growth, measured from mean sea level.

Horizontal Surface. A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging 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. The radius of each arc is:

(A) 5,000 feet for all runways designated as utility.

(B) 10,000 feet for all other runways.

(C) The radius of the arc specified for each end of a runway will have the same arithmetical value. That value will be the highest determined for either end of the runway. When a 5,000 foot arc is encompassed by tangents connecting two adjacent 10,000 foot arcs, the 5,000 foot arc shall be disregarded on the construction of the perimeter of the horizontal surface.

Nonprecision 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 has been approved, or planned, and for which no precision approach facilities are planned or indicated on an FAA-approved airport layout plan or other FAA planning document.

Obstruction. Any structure or tree, plant or other object of natural growth that penetrates an imaginary surface.

Other than Utility Runway. A runway that is constructed for and intended to be used by turbine-driven aircraft or by propeller-driven aircraft exceeding 12,500 pounds gross weight.

Precision Instrument Runway. A runway having an existing instrument approach procedure utilizing air navigation facilities that provide both horizontal and vertical guidance, such as an Instrument Landing System (ILS) or Precision Approach Radar (PAR). It also means a runway for which a precision approach system is planned and is so indicated by an FAA-approved airport layout plan or other FAA planning document.

Primary Surface. A surface longitudinally centered on a runway. When a runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway. When a runway has no specially prepared hard surface, or planned hard surface, the primary surface ends at each end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The width of the primary surface is:

- (A) 500 feet for utility runways having nonprecision instrument approaches,
- (B) 500 feet for other than utility runways having nonprecision instrument approaches with visibility minimums greater than three-fourths statute mile, and
- (C) 1,000 feet for nonprecision instrument runways with visibility minimums at or below three-fourths statute mile, and for precision instrument runways.

Public Assembly Facility. A permanent or temporary structure or facility, place or activity where concentrations of people gather in reasonably close quarters for purposes such as deliberation, education, worship, shopping, employment, entertainment, recreation, sporting events, or similar activities. Public assembly facilities include, but are not limited to, schools, churches, conference or convention facilities, employment and shopping centers, arenas, athletic fields, stadiums, clubhouses, museums, and similar facilities and places, but do not include parks, golf courses or similar facilities unless used in a manner where people are concentrated in reasonably close quarters. Public assembly facilities also do not include air shows, structures or uses approved by the FAA in an adopted airport master plan, or places where people congregate for short periods of time such as parking lots or bus stops.

Runway. A defined area on an airport prepared for landing and takeoff of aircraft along its length.

Runway Protection Zone (RPZ). An area off the runway end used to enhance the protection of people and property on the ground. The RPZ is trapezoidal in shape and centered about the extended runway centerline. The inner width of the RPZ is the same as the width of the primary surface. The outer width of the RPZ is a function of the type of aircraft and specified approach visibility minimum associated with the runway end. The RPZ extends from each end of the primary surface for a horizontal distance of:

(A) 1,000 feet for utility runways.

(B) 1,700 feet for other than utility runways having nonprecision instrument approaches.

(C) 2,500 feet for precision instrument runways.

[NOTE: the outer width of the RPZ is specified by airport type in OAR 660, Division 13, Exhibit 4]

Significant. As it relates to bird strike hazards, "significant" means a level of increased flight activity by birds across an approach surface or runway that is more than incidental or occasional, considering the existing ambient level of flight activity by birds in the vicinity.

Structure. Any constructed or erected object which requires location on the ground or is attached to something located on the ground. Structures include but are not limited to buildings, decks, fences, signs, towers, cranes, flagpoles, antennas, smokestacks, earth formations and overhead transmission lines. Structures do not include paved areas.

Transitional Surface. Those surfaces that extend upward and outward at 90 degree angles to the runway centerline and the runway centerline extended at a slope of seven (7) feet horizontally for each foot vertically from the sides of the primary and approach surfaces to the point of intersection with the horizontal and conical surfaces. Transitional surfaces for those portions of the precision approach surfaces which project through and beyond the limits of the conical surface, extend a distance of 5,000 feet measured horizontally from the edge of the approach surface and at a 90 degree angle to the extended runway centerline.

Utility Runway. A runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 pounds maximum gross weight or less.

Visual Runway. A runway intended solely for the operation of aircraft using visual approach procedures, where no straight-in instrument approach procedures or instrument designations have been approved or planned, or are indicated on an FAA-approved airport layout plan or any other FAA planning document.

Water Impoundment. Includes wastewater treatment settling ponds, surface mining ponds, detention and retention ponds, artificial lakes and ponds, and similar water features. A new water impoundment includes an expansion of an existing water impoundment except where such expansion was previously authorized by land use action approved prior to the effective date of this ordinance.

.030 Imaginary Surface and Noise Impact Boundary Delineation. The airport elevation, the airport noise impact boundary, and the location and dimensions of the runway, primary surface, runway protection zone, approach surface, horizontal surface, conical surface and transitional surface shall be delineated for each airport subject to this overlay zone and shall be made part of the Official Zoning Map. **[NOTE: Airports utilizing best management practices should include direct and secondary impact boundaries in this list.]** All lands, waters and airspace, or portions thereof, that are located within these boundaries or surfaces shall be subject to the requirements of this overlay zone. [ORS 836.619; OAR 660-013-0040(8); OAR 660-013-0070(1); OAR 660-013-0080(1)]

.040 Notice of Land Use and Permit Applications within Overlay Zone Area. Except as otherwise provided herein, written notice of applications for land use or limited land use decisions, including comprehensive plan or zoning amendments, in an area within this overlay zone, shall be provided to the airport sponsor and the Department of Aviation in the same manner as notice is provided to property owners entitled by law to written notice of land use or limited land use applications. [ORS 836.623(1); OAR 738-100-010; ORS 215.416(6); ORS 227.175(6)]

A. Notice shall be provided to the airport sponsor and the Department of Aviation when the property, or a portion thereof, that is subject to the land use or limited land use application is located within 10,000 feet of the sides or ends of a runway:

B. Notice of land use and limited land use applications shall be provided within the following timelines.

1. Notice of land use or limited land use applications involving public hearings shall be provided prior to the public hearing at the same time that written notice of such applications is provided to property owners entitled to such notice.

2. Notice of land use or limited land use applications not involving public hearings shall be provided at least 20 days prior to entry of the initial decision on the land use or limited land use application.

C. Notice of the decision on a land use or limited land use application shall be provided to the airport sponsor and the Department of Aviation within the same timelines that such notice is provided to parties to a land use or limited land use proceeding.

D. Notices required under Paragraphs A-C of this section need not be provided to the airport sponsor or the Department of Aviation where the land use or limited land use application meets all of the following criteria:

1. Would only allow structures of less than 35 feet in height;

2. Involves property located entirely outside the approach surface;

- 3. Does not involve industrial, mining or similar uses that emit smoke, dust or steam; sanitary landfills or water impoundments; or radio, radiotelephone, television or similar transmission facilities or electrical transmission lines; and
- 4. Does not involve wetland mitigation, enhancement, restoration or creation.

.050 Height Limitations on Allowed Uses in Underlying Zones. All uses permitted by the underlying zone shall comply with the height limitations in this Section. When height limitations of the underlying zone are more restrictive than those of this overlay zone, the underlying zone height limitations shall control. [ORS 836.619; OAR 660-013-0070]

- A. Except as provided in subsections B and C of this Section, no structure or tree, plant or other object of natural growth shall penetrate an airport imaginary surface. [ORS 836.619; OAR 660-013-0070(1)]
- B. For areas within airport imaginary surfaces but outside the approach and transition surfaces, where the terrain is at higher elevations than the airport runway surfaces such that existing structures and permitted development penetrate or would penetrate the airport imaginary surfaces, a local government may authorize structures up to 35 feet in height.
- C. Other height exceptions or variances may be permitted when supported in writing by the airport sponsor, the Department of Aviation and the FAA. Applications for height variances shall follow the procedures for other variances and shall be subject to such conditions and terms as recommended by the Department of Aviation and the FAA.

.060 Procedures. An applicant seeking a land use or limited land use approval in an area within this overlay zone shall provide the following information in addition to any other information required in the permit application: [NOTE: where uses otherwise allowed outright become "limited" under this ordinance, the local government needs to identify the applicable administrative review process.]

- A. A map or drawing showing the location of the property in relation to the airport imaginary surfaces. The Planning Department shall provide the applicant with appropriate base maps upon which to locate the property.
- B. Elevation profiles and a site plan, both drawn to scale, including the location and height of all existing and proposed structures, measured in feet above mean sea level.
- C. If a height variance is requested, letters of support from the airport sponsor, the Department of Aviation and the FAA.

.070 Land Use Compatibility Requirements. [Option 1 – Minimum Requirements]
Applications for land use or building permits for properties within the boundaries of this overlay zone shall comply with the requirements of this chapter as provided herein. [ORS 836.619; OAR 660-013-0080]

- A. Noise. Within airport noise impact boundaries, land uses shall be established consistent with the levels identified in OAR 660, Division 13, Exhibit 5. A declaration of anticipated noise levels shall be attached to any subdivision or partition approval or other land use approval or building permit affecting land within airport noise impact boundaries. In areas where the noise level is anticipated to be at or above 55 Ldn, prior to issuance of a building permit for construction of a noise sensitive land use (real property normally used for sleeping or as a school, church, hospital, public library or similar use), the permit applicant shall be required to demonstrate that a noise abatement strategy will be incorporated into the building design that will achieve an indoor noise level equal to or less than 55 Ldn. [OAR 340-035-0045(1)(d), (4)] [NOTE: FAA Order 5100.38A, Chapter 7 provides that interior noise levels should not exceed 45 decibels in all habitable zones.]
- B. Outdoor lighting. No new or expanded industrial, commercial or recreational use shall project lighting directly onto an existing runway or taxiway or into existing airport approach surfaces except where necessary for safe and convenient air travel. Lighting for these uses shall incorporate shielding in their designs to reflect light away from airport approach surfaces. No use shall imitate airport lighting or impede the ability of pilots to distinguish between airport lighting and other lighting.
- C. Glare. No glare producing material, including but not limited to unpainted metal or reflective glass, shall be used on the exterior of structures located within an approach surface or on nearby lands where glare could impede a pilot's vision.
- D. Industrial emissions. No new industrial, mining or similar use, or expansion of an existing industrial, mining or similar use, shall, as part of its regular operations, cause emissions of smoke, dust or steam that could obscure visibility within airport approach surfaces, except upon demonstration, supported by substantial evidence, that mitigation measures imposed as approval conditions will reduce the potential for safety risk or incompatibility with airport operations to an insignificant level. The review authority shall impose such conditions as necessary to ensure that the use does not obscure visibility.
- E. Communications Facilities and Electrical Interference. Proposals for the location of new or expanded radio, radiotelephone, and television transmission facilities and electrical transmission lines within this overlay zone shall be coordinated with the Department of Aviation and the FAA prior to approval. [NOTE: See the additional safeguards set out in the Best Management Practices

alternative below. The Department of Aviation highly recommends those safeguards.]

- F. Use prohibitions in RPZ. Notwithstanding the underlying zoning, the following uses are prohibited in the RPZ.
 - 1. New residential development.
 - 2. Public assembly facilities.
- G. Landfills. No new sanitary landfills shall be permitted within 10,000 feet of any airport runway. Expansions of existing landfill facilities within these distances shall be permitted only upon demonstration that the landfills are designed and will operate so as not to increase the likelihood of bird/aircraft collisions. Timely notice of any proposed expansion shall be provided to the airport sponsor, the Department of Aviation and the FAA, and any approval shall be accompanied by such conditions as are necessary to ensure that an increase in bird/aircraft collisions is not likely to result.

OR

.070 Land Use Compatibility Requirements. [Option 2 – Best Management Practices] Applications for land use or building permits for properties within the boundaries of this overlay zone shall comply with the requirements of this chapter as provided herein. [ORS 836.619; ORS 836.623(1); OAR 660-013-0080]

- A. Noise. Within airport noise impact boundaries, land uses shall be established consistent with the levels identified in OAR 660, Division 13, Exhibit 5. A declaration of anticipated noise levels shall be attached to any subdivision or partition approval or other land use approval or building permit affecting land within airport noise impact boundaries. In areas where the noise level is anticipated to be at or above 55 Ldn, prior to issuance of a building permit for construction of a noise sensitive land use (real property normally used for sleeping or as a school, church, hospital, public library or similar use), the permit applicant shall be required to demonstrate that a noise abatement strategy will be incorporated into the building design that will achieve an indoor noise level equal to or less than 55 Ldn. [NOTE: FAA Order 5100.38A, Chapter 7 provides that interior noise levels should not exceed 45 decibels in all habitable zones.]
- B. Outdoor lighting. No new or expanded industrial, commercial or recreational use shall project lighting directly onto an existing runway or taxiway or into existing airport approach surfaces except where necessary for safe and convenient air travel. Lighting for these uses shall incorporate shielding in their designs to reflect light away from airport approach surfaces. No use shall imitate airport lighting or impede the ability of pilots to distinguish between airport lighting and other lighting.

- C. Glare. No glare producing material, including but not limited to unpainted metal or reflective glass, shall be used on the exterior of structures located within an approach surface or on nearby lands where glare could impede a pilot's vision.
- D. Industrial emissions. No new industrial, mining or similar use, or expansion of an existing industrial, mining or similar use, shall, as part of its regular operations, cause emissions of smoke, dust or steam that could obscure visibility within airport approach surfaces, except upon demonstration, supported by substantial evidence, that mitigation measures imposed as approval conditions will reduce the potential for safety risk or incompatibility with airport operations to an insignificant level. The review authority shall impose such conditions as necessary to ensure that the use does not obscure visibility.
- E. Communications Facilities and Electrical Interference. No use shall cause or create electrical interference with navigational signals or radio communications between an airport and aircraft. Proposals for the location of new or expanded radio, radiotelephone, and television transmission facilities and electrical transmission lines within this overlay zone shall be coordinated with the Department of Aviation and the FAA prior to approval. Approval of cellular and other telephone or radiocommunication towers on leased property located within airport imaginary surfaces shall be conditioned to require their removal within 90 days following the expiration of the lease agreement. A bond or other security shall be required to ensure this result.
- F. Limitations and Restrictions on Allowed Uses in the RPZ, Approach Surface, and Airport Direct and Secondary Impact Areas. The land uses identified in Table 1, and their accessory uses, are permitted, permitted under limited circumstances, or prohibited in the manner therein described. In the event of conflict with the underlying zone, the more restrictive provisions shall control. As used in this section, a limited use means a use that is allowed subject to special standards specific to that use.

TABLE 1

Location	Public Airport	Residential	Commercial	Industrial	Institutional	Farm Use	Roads/ Parking	Utilities	Parks/Open Space	Golf Courses	Athletic Fields	Sanitary Landfills	Water Treatment Plants	Mining	Water Impoundment	Wetland
RPZ ¹	L ²	N	N	N	N	P ³	L ⁴	L ⁵	L ⁶	L ⁷	N	N	N	N	N	N
Approach Surface ⁸	L ⁹	L ¹⁰	L ⁹	L ⁹	L ⁹	P ³	P	L ⁵	P	L ⁷ L ⁹	L ⁹	N	N	L ¹¹	N/L ¹²	L
Direct Impact Area	P	L ¹⁴	L ¹⁵	P	L ¹⁵	P ³	P	L ⁵	P	L ⁷	L ¹⁴	N	N	L ¹¹	L ¹⁶	L
Secondary Impact Area	P	P	P	P	P	P ³	P	L ⁵	P	L ⁷	P	N	N	L ¹¹	L ¹⁶	L

P = Use is Permitted

L = Use is Allowed Under Limited Circumstances (See Footnotes)

N = Use is Not Allowed

Table 1 Footnotes:

1. No structures shall be allowed within the Runway Protection Zone. Exceptions shall be made only for structures accessory to airport operations whose location within the RPZ has been approved by the Federal Aviation Administration.
2. In the RPZ, public airport uses are restricted to those uses and facilities that require location in the RPZ.
3. Farming practices that minimize wildlife attractants are encouraged.
4. Roads and parking areas are permitted in the RPZ only upon demonstration that there are no practicable alternatives. Lights, guardrails and related accessory structures are prohibited. Cost may be considered in determining whether practicable alternatives exist.
5. In the RPZ, utilities, powerlines and pipelines must be underground. In approach surfaces and in airport direct and secondary impact areas, the proposed height of utilities shall be coordinated with the airport sponsor and the Department of Aviation.
6. Public assembly facilities are prohibited within the RPZ.
7. Golf courses may be permitted only upon demonstration, supported by substantial evidence, that management techniques will be utilized to reduce existing wildlife attractants and avoid the creation of new wildlife attractants. Such techniques shall be required as conditions of approval. Structures are not permitted within the RPZ. For purposes of this Chapter, tee markers, tee signs, pin cups and pins are not considered to be structures.
8. Within 10,000 feet from the end of the primary surface of a nonprecision instrument runway, and within 50,000 feet from the end of the primary surface of a precision instrument runway.
9. Public assembly facilities may be allowed in an approach surface only if the potential danger to public safety is minimal. In determining whether a proposed use is appropriate, consideration shall be given to: proximity to the RPZ; density of people per acre; frequency of use; level of activity at the airport; and other factors relevant to public safety. In general, high density uses should not be permitted within airport approach surfaces, and non-residential structures should be located outside approach surfaces unless no practicable alternatives exist.
10. Residential densities within approach surfaces should not exceed the following densities: (1) within 500 feet of the outer edge of the RPZ, 1 unit/acre; (2) within 500 to 1,500 feet of the outer edge of the RPZ, 2 units/acre; (3) within 1,500 to 3,000 feet of the outer edge of the RPZ, 4 units/acre.
11. Mining operations involving the creation or expansion of water impoundments shall comply with the requirements of this Chapter regulating water impoundments.
12. Water impoundments are prohibited within 5,000 feet from the end of a runway. See Section .080 regulating water impoundments beyond 5,000 feet from the edge or end of a runway.
13. Wetland mitigation required for projects located within an approach surface or airport direct or secondary impact area shall be authorized only upon demonstration, supported by substantial evidence, that it is impracticable to provide mitigation outside of these areas. Proposals for wetland mitigation shall be coordinated with the airport sponsor, the Department of Aviation, the FAA, and wetland permitting agencies prior to the issuance of required permits. Wetland mitigation shall be designed and located to avoid creating a wildlife hazard or increasing hazardous movements of birds across runways and approach surfaces. Conditions shall be imposed as are appropriate and necessary to prevent in perpetuity an increase in hazardous bird movements across runways and approach surfaces.

See Section .090 for best management practices for airports located near significant wetlands or wildlife habitat areas.

14. Within the transition surface, residential uses and athletic fields are not permitted.
15. Within the transition surface, overnight accommodations, such as hotels, motels, hospitals and dormitories, are not permitted.
16. See Section .080 prohibiting or regulating water impoundments beyond 5,000 feet from the edge or end of a runway.

.080 Water Impoundments within Approach Surfaces and Airport Direct and Secondary Impact Boundaries. Any use or activity that would result in the establishment or expansion of a water impoundment shall comply with the requirements of this section. (ORS 836.623(2); OAR 660-013-0080(1)(f))

- A. No new or expanded water impoundments of one-quarter acre in size or larger are permitted:
 1. Within an approach surface and within 5,000 feet from the end of a runway; or
 2. On land owned by the airport sponsor that is necessary for airport operations.

OR [for airports where it can be demonstrated with substantial evidence that new water impoundments would result in a significant increase in hazardous movements of birds across runways or approach surfaces, taking into consideration mitigation measures or conditions that could reduce safety risks and incompatibility] [ORS 836.623(2)(b), (c); ORS 836.623(4), (5)]

- A. No new or expanded water impoundments of one-quarter acre in size or larger are permitted within 5,000 feet from the end or edge of a runway.
- B. The establishment of a new water impoundment one-quarter acre in size or larger between 5,000 and 10,000 feet of a runway outside an approach surface and between 5,000 feet and 40,000 feet within an approach corridor for an airport with an instrument approach may be permitted only upon determination that such water impoundment, with reasonable and practicable mitigation measures, is not likely to result in a significant increase in hazardous movements of birds feeding, watering or roosting in areas across runways or approach surfaces. [NOTE: FAA Part 77 discourages water impoundments within 50,000 feet of a runway within an approach surface.] [ORS 836.623(2)(c); OAR 660, Division 13, Exhibit 1, Section 3(b)(C);]
 1. Process. An application for approval of a new water impoundment shall be considered utilizing the review process applied to applications for conditional use permits. In addition to the parties required by law to be mailed written notice of the public hearing on the application, written

notice of the hearing shall be mailed to the airport sponsor, the Seattle Airports District Office of the FAA, the FAA's technical representative, and the Oregon Department of Aviation.

- a. Prior to filing its application, the applicant shall coordinate with the airport sponsor, the Department of Aviation, and the FAA (Seattle Airports District Office) and FAA's technical representative regarding the proposed water impoundment, its short and long term potential to significantly increase hazardous movements of birds feeding, watering or roosting in areas across runways or approach surfaces, and proposed mitigation.
 - (1) For water impoundments individually or cumulatively exceeding five (5) acres in size on the subject property, the applicant shall prepare a draft bird strike study as provided in subsection .2 of this section. The airport sponsor, the Department of Aviation, and the FAA and FAA's technical representative shall have 45 days to review the study draft. Their comments shall be included and addressed in a final bird strike study.
 - (2). For water impoundments that do not individually or cumulatively exceed five (5) acres in size on the subject property, the bird strike study requirements in subsection 2 of this section may be reduced or waived upon agreement by the airport sponsor, the Department of Aviation, and the FAA and FAA's technical representative if the applicant can demonstrate, to the satisfaction of the airport sponsor, the Department of Aviation, and the FAA and FAA's technical representative that the proposed water impoundment, with appropriate short and long term mitigation, will not result in a significant increase in hazardous movements of birds feeding, watering or roosting in areas across runways or approach surfaces. As used herein, "appropriate mitigation" means small scale measures of proven reliability that can be applied in perpetuity and that the applicant has the financial resources to support.
- b. An application shall not be deemed complete for land use review purposes until the applicant has filed with the Director the final bird strike study addressing comments from the airport sponsor, the Department of Aviation, and the FAA and FAA's technical representative. When no bird strike study is required, the application shall not be deemed complete until the applicant has filed with the Director correspondence or other proof

demonstrating agreement among the airport sponsor, the Department of Aviation, and the FAA and FAA's technical representative that no bird strike study is required.

2. Bird Strike Study. A bird strike study required under this section shall contain at least the following information:
 - a. A description of the proposed project, its location in relation to the airport, and the bird strike study area, which shall include at least the project site, the airport property, all lands within 10,000 feet from the end or edge of the airport runway, and other surrounding habitat areas which form the local bird ecosystem.
 - b. A description of bird feeding, watering and roosting habitats in the bird strike study area, including discussion of feeding behavior and food sources and identification of loafing, watering, roosting and nesting area locations.
 - c. A description of existing and planned airport operations and air traffic patterns and any available history of bird strike incidents.
 - d. Wildlife surveys and documentation of existing bird species, populations, activities and flight patterns in the bird strike study area. The surveys shall address bird species and their composition; bird population estimates and densities per unit area; feeding behavior; food sources; seasonal use patterns; frequency of occurrence; location of loafing, roosting and nesting areas; and analysis of the relation of bird flight movements to airport traffic patterns and navigational safety. The airport sponsor shall provide approach and departure air space information up to five statutory miles from the airport.
 - e. An evaluation of the anticipated effects of the proposal on the population density, behavior patterns, movements and species composition of birds within the bird strike study area and of the impact of these effects on air navigation and safety considering possible mitigation.
 - f. Identification and evaluation of proposed and alternative short and long term mitigation measures that would prevent a significant increase in hazardous movements of birds feeding, watering or roosting in areas across runways and approach surfaces that otherwise might result from the proposed use. The evaluation shall discuss the proven reliability of proposed measures, their effectiveness over both the short and long term, their costs, and the applicant's financial ability to assure their perpetual

implementation, *i.e.* ongoing implementation for as long as a potential bird strike hazard persists.

- g. Such other information as is recommended by the FAA's technical representative or is required to demonstrate compliance with the requirements of subsection .3 of this section.

3. Required Findings. The determination whether a proposed new water impoundment, with reasonable and practicable mitigation measures, is likely to significantly increase hazardous movements of birds feeding, watering or roosting in areas across runways or approach surfaces shall be based upon the proposal's potential, both in the short term and in the long term, to significantly increase bird strike hazards to air navigation, and the appropriateness, effectiveness and affordability of proposed mitigation measures or other conditions needed to reduce bird strike hazards. In determining compliance with this standard, the findings shall address each of the following factors:

- a. The demonstrated overall effectiveness and reliability of proposed measures and conditions, in both the short and long term and under similar circumstances and conditions, to avoid a significant increase in bird strike hazards to air navigation. Experimental measures or measures not based on accepted technology and industry practices shall be considered ineffective, inappropriate and of unproven reliability.
- b. The economic, social and environmental impacts of proposed measures to the neighboring community and the affected natural environment.
- c. The applicant's ability to pay for necessary short and long-term mitigation measures, including fallback measures that may be required if initially proposed mitigation measures prove ineffective, and to assure the perpetual implementation of those measures for as long as a potential bird strike hazard persists. An applicant's failure to demonstrate its financial ability to assure the perpetual implementation of necessary and appropriate measures shall render those measures unreasonable and impracticable for purposes of the application.
- d. The applicant's ability to accurately monitor the effectiveness of mitigation over time.
- e. The potential impacts to navigational safety and air travel if the applicant cannot perform necessary mitigation measures or maintain those measures in perpetuity, or if those measures prove

to be ineffective at avoiding a significant increase in bird strike hazards to air navigation.

f. The applicant's reclamation plan.

4. Mitigation Measures and Approval Conditions. A decision approving an application shall require, as conditions of approval, all measures and conditions deemed appropriate and necessary to prevent in perpetuity a significant increase in hazardous movements of birds feeding, watering or roosting in areas across runways and approach surfaces.

a. Only customary measures based on accepted technology and industry practice may be considered and imposed as approval conditions.

b. Serious consideration shall be given to all measures and conditions recommended by the Department of Aviation and the FAA and FAA's technical representative. Generally, such measures and conditions shall be attached to a decision approving an application unless findings are adopted, supported by substantial evidence, demonstrating why such measures and conditions are not necessary to reduce bird hazard impacts resulting from the water impoundment to an insignificant level.

c. A decision to approve shall require from the applicant a performance bond or other form of secure financial support. Such bond or security shall be in an amount sufficient to assure perpetual implementation of appropriate and necessary mitigation measures for as long as a potential bird strike hazard persists.

d. A decision to approve shall require appropriate monitoring of the effectiveness of mitigation over time. Upon request, monitoring data and reports shall be made available to the airport sponsor, the Department of Aviation, and the FAA and FAA's technical representative. The decision shall allow for modifications to approval conditions should existing mitigation measures prove ineffective at preventing a significant increase in hazardous movements of birds feeding, watering or roosting in areas across runways and approach surfaces. Modifications to approval conditions shall be considered utilizing the review process applied to applications for conditional use permits.

5. Exemptions. The requirements of this section shall not apply to:

a. Storm water management basins established by an airport identified under ORS 836.610(1).

- b. Seaplane landing areas within airports identified under ORS 836.610(1).

.090 Wetland Mitigation, Creation, Enhancement and Restoration within Approach Surfaces and Airport Direct and Secondary Impact Boundaries.

- A. Notwithstanding the requirements of Section .080, wetland mitigation, creation, enhancement or restoration projects located within areas regulated under Section .080 shall be allowed upon demonstration of compliance with this requirements of this Section.
- B. Wetland mitigation, creation, enhancement or restoration projects existing or approved on the effective date of this ordinance and located within areas regulated under Section .080 are recognized as lawfully existing uses.
- C. To help avoid increasing safety hazards to air navigation near public use airports, the establishment of wetland mitigation banks in the vicinity of such airports but outside approach surfaces and areas regulated under Section .080 is encouraged.
- D. Applications to expand wetland mitigation projects in existence as of the effective date of this ordinance, and new wetland mitigation projects, that are proposed within areas regulated under Section .080 shall be considered utilizing the review process applied to applications for conditional use permits and shall be permitted upon demonstration that:
 - 1. It is not practicable to provide off-site mitigation; or
 - 2. The affected wetlands provide unique ecological functions, such as critical habitat for threatened or endangered species or ground water discharge, and the area proposed for mitigation is located outside an approach surface.
- E. Wetland mitigation permitted under subsection D. of this Section shall be designed and located to avoid creating a wildlife hazard or increasing hazardous movements of birds across runways or approach surfaces.
- F. Applications to create, enhance or restore wetlands that are proposed to be located within approach surfaces or within areas regulated under Section .080, and that would result in the creation of a new water impoundment or the expansion of an existing water impoundment, shall be considered utilizing the review process applied to applications for conditional use permits and shall be permitted upon demonstration that:

1. The affected wetlands provide unique ecological functions, such as critical habitat for threatened or endangered species or ground water discharge; and
 2. The wetland creation, enhancement or restoration is designed and will be maintained in perpetuity in a manner that will not increase hazardous movements of birds feeding, watering or roosting in areas across runways or approach surfaces.
- G. Proposals for new or expanded wetland mitigation, creation, enhancement or restoration projects regulated under this Section shall be coordinated with the airport sponsor, the Department of Aviation, the FAA and FAA's technical representative, the Oregon Department of Fish & Wildlife (ODFW), the Oregon Division of State Lands (DSL), the US Fish & Wildlife Service (USFWS), and the US Army Corps of Engineers (Corps) as part of the permit application.
- H. A decision approving an application under this Section shall require, as conditions of approval, measures and conditions deemed appropriate and necessary to prevent in perpetuity an increase in hazardous bird movements across runways and approach surfaces.

.100 Nonconforming Uses.

- A. These regulations shall not be construed to require the removal, lowering or alteration of any structure not conforming to these regulations. These regulations shall not require any change in the construction, alteration or intended use of any structure, the construction or alteration of which was begun prior to the effective date of this overlay zone.
- B. Notwithstanding subsection A. of this section, the owner of any existing structure that has an adverse effect on air navigational safety as determined by the Department of Aviation shall install or allow the installation of obstruction markers as deemed necessary by the Department of Aviation, so that the structures become more visible to pilots.
- C. No land use or limited land use approval or other permit shall be granted that would allow a nonconforming use or structure to become a greater hazard to air navigation than it was on the effective date of this overlay zone.

.110 Avigation Easement. Within this overlay zone, the owners of properties that are the subjects of applications for land use or limited land use decisions, for building permits for new residential, commercial, industrial, institutional or recreational buildings or structures intended for inhabitation or occupancy by humans or animals, or for expansions of such buildings or structures by the lesser of 50% or 1000 square feet, shall, as a condition of obtaining such approval or permits, dedicate an avigation easement to the airport sponsor. The avigation easement shall be in a form acceptable to the airport

sponsor and shall be signed and recorded in the deed records of the County. The aviation easement shall allow unobstructed passage for aircraft and ensure safety and use of the airport for the public. Property owners or their representatives are responsible for providing the recorded instrument prior to issuance of building permits.



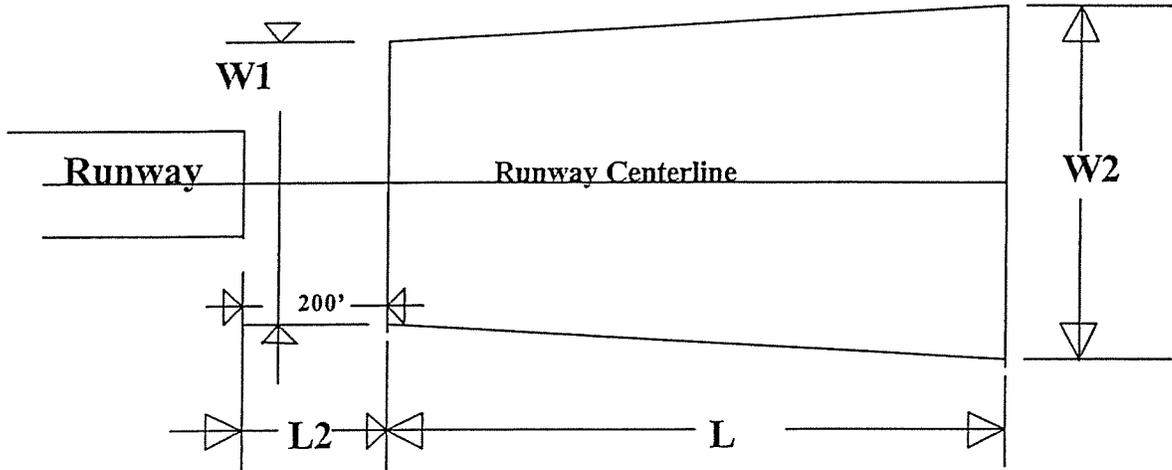
Runway Protection Zone

Runway Protection Zone (RPZ) means an area off the runway end to enhance the protection of people and property on the ground. The Runway Protection Zone is trapezoidal in shape and centered about the extended runway centerline. The RPZ dimension for a particular runway end is a function of the type of aircraft and approach visibility minimum associated for that runway end.

(a) The RPZ extends from each end of the primary surface, as defined in Attachment 1, Section 10, for a horizontal distance of:

- (A) 1,000 feet for all utility and visual runways.
- (B) 1,700 feet for all non-precision instrument runways other than utility;
- (C) 2,500 feet for all precision instrument runways.

Runway Protection Zone (RPZ) Dimensions



L2 = 200 feet for paved runways; 0' for unpaved runways.

Visibility Approach Minimums ^{1/}	Facilities Expected To Serve	Dimensions			
		Length L Feet (meters)	Inner Width W1 Feet (meters)	Outer Width W2 Feet (meters)	RPZ Acres
Visual and Not Lower Than 1-mile (1600 m)	Small Aircraft Exclusively	1,000 (300)	250 (75)	450 (135)	8.035
	Aircraft Approach Categories A&B	1,000 (300)	500 (150)	700 (210)	13.770
	Aircraft Approach Categories C&D	1,700 (510)	500 (150)	1,010 (303)	29.465
Not Lower than 3/4-mile (1200m)	All Aircraft	1,700 (510)	1,000 (300)	1,510 (453)	48.978
Lower than 3/4-mile (1,200m)	All Aircraft	2,500 (750)	1,000 (300)	1,750 (525)	78.914

^{1/} The RPZ dimensional standards are for the runway end with the specified approach visibility minimums.

Aircraft Approach Categories:

Category A: Speed less than 91 knots

Category B: Speed 91 knots or more but less than 121 knots

Category C: Speed 121 knots or more but less than 141 knots.

Category D: Speed 141 knots or more but less than 166 knots.

Exhibit #4

Noise Compatability

LAND USES	YEARLY DAY-NIGHT AVERAGE SOUND LEVEL (DNL) IN DECIBELS				
	55-65	65-70	70-75	75-80	80+
RESIDENTIAL					
Residential, other than mobile homes, transient lodgings	Y	N ¹	N ¹	N	N
Mobile Home Parks / Mobile homes	Y	N	N	N	N
Transient lodgings (models, hotels)	Y	N ¹	N ¹	N	N
PUBLIC USE					
Schools	Y	N ¹	N ¹	N	N
Churches, auditoriums, concert halls, hospitals, nursing homes	Y	25	30	N	N
Governmental services	Y	Y	25	30	N
Transportation/Parking	Y	Y	Y ²	Y ³	Y ⁴
COMMERCIAL					
Offices-business and professional	Y	Y	25	30	N
Wholesale/retail-materials, hardware and farm equipment	Y	Y	Y ²	Y ³	Y ⁴
Retail trade-general	Y	Y	25	30	N
Utilities	Y	Y	Y ²	Y ³	Y ⁴
Communications	Y	Y	25	30	N
MANUFACTURING					
Manufacturing-general	Y	Y	Y ²	Y ³	Y ⁴
Photographic and optical	Y	Y	25	30	N
Agriculture (except livestock) and forestry	Y	Y ⁶	Y ⁷	Y ⁸	Y ⁸
Livestock farming and breeding	Y	Y ⁶	Y ⁷	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y
RECREATIONAL					
Outdoor sports arenas/spectator sports	Y	Y ⁵	Y ⁵	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N
Nature exhibits and zoos	Y	N	N	N	N
Amusement parks, resorts, camps	Y	Y	Y	N	N
Golf courses, riding stables, water recreation	Y	Y	25	30	N

Exhibit # 5

KEY

Y (Yes)	Land Use and related structures compatible without restrictions.
N (No)	Land Use and related structures are not compatible and should be prohibited.
NLR	Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
DNL	Average Day-Night Sound Level
25, 30, 35	Land Use and related structures generally compatible; measures to achieve NLR of 25, 30, 35 dB must be incorporated into design and construction of structure.

NOTES

1. Where the community determines that residential or school uses must be allowed, measures to achieve an outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. The use of NLR criteria will not, however, eliminate outdoor noise problems.
2. Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
3. Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
4. Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
5. Land use compatible provided special sound reinforcement systems area installed.
6. Residential Buildings require an NLR of 25 dB.
7. Residential Buildings require an NLR of 30 dB.
8. Residential Buildings not permitted.

Source: F.A.R. Part 150, Appendix A, Table 1.

Public Use Airport Overlay Zone

1. Airport Approach Zone means the land that underlies the approach surface, excluding the Runway Protection Zone.
2. Airport Imaginary Surfaces means surfaces established with relation to the airport and to each runway 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 shall be determined by the most precise approach existing or planned for that runway end.
3. Approach Surface means 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.
 - (a) The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width of:
 - (A) 1,250 feet for that end of a utility runway with only visual approaches.
 - (B) 1,500 feet for that end of a runway other than a utility runway with only visual approaches.
 - (C) 2,000 feet for that end of a utility runway with a non-precision instrument approach.
 - (D) 3,500 feet for that end of a non-precision instrument runway other than utility, having visibility minimums greater than three-fourths statute mile.
 - (E) 4,000 feet for that end of a non-precision instrument runway, other than utility, having a non-precision instrument approach with visibility minimums as low as three-fourths statute mile.
 - (F) 16,000 feet for precision instrument runways.
 - (b) The approach surface extends for a horizontal distance of:
 - (A) 5,000 feet at a slope of 20 to 1 for all utility and visual runways.
 - (B) 10,000 feet at a slope of 34 to 1 for all non-precision instrument runways other than utility.
 - (C) 10,000 feet at a slope of 50 to 1 with an additional 40,000 feet at a slope of 40 to 1 for all precision instrument runways.
 - (c) The outer width of an approach surface to an end of a runway will be that width prescribed in this subsection for the most precise approach existing or planned for that runway end.
4. Conical Surface means a surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.
5. Horizontal Surface means a horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging 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. The radius of each arc is:
 - (a) 5,000 feet for all runways designated as utility or visual.
 - (b) 10,000 feet for all other runways.
 - (c) The radius of the arc specified for each end of a runway will have the same arithmetical value. That value will be the highest determined for either end of the runway. When a 5,000 foot arc is encompassed by tangents connecting two adjacent 10,000 foot arcs, the 5,000 foot arc shall be disregarded on the construction of the perimeter of the horizontal surface.

Exhibit #1

6. Primary Surface means a surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway; but when the runway has no specially prepared hard surface, or planned hard surface, the primary surface ends at each end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The width of the primary surface of a runway will be that width prescribed in this section for the most precise approach existing or planned for either end of the runway. The width of a primary surface is:

- (a) 250 feet for utility runways having only visual approaches.
- (b) 500 feet for utility runways having non-precision approaches.
- (A) For other than utility runways the width is:
 - (i) 500 feet for visual runways having only visual approaches.
 - (ii) 500 feet for non-precision instrument runways having visibility minimums greater than three-fourths statute mile.
 - (iii) 1,000 feet for a non-precision instrument runway having a non-precision instrument approach with visibility minimum as low as three-fourths of a statute mile, and for precision instrument runways.

7. Transitional Surface means those surfaces which extend upward and outward at 90 degree angles to the runway centerline and the runway centerline extended at a slope of seven (7) feet horizontally for each foot vertically from the sides of the primary and approach surfaces to the point of intersection with the horizontal and conical surfaces. Transitional surfaces for those portions of the precision approach surfaces, which project through and beyond the limits of the conical surface, extend a distance of 5,000 feet measured horizontally from the edge of the approach surface and at a 90 degree angle to the extended runway centerline.

8. Non Precision instrument runway means 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, and for which no precision approach facilities are planned, or indicated on an FAA planning document.

9. Precision instrument runway means a runway having an existing instrument approach procedure utilizing an instrument approach procedure utilizing an Instrument Landing System (ILS), or a Precision Approach Radar (PAR). It also means a runway for which a precision approach system is planned and is so indicated by an FAA approved airport layout plan or any other FAA planning document.

10. Runway Protection Zone (RPZ) means an area off the runway end to enhance the protection of people and property on the ground. The dimensions of the RPZ for Public-use airports shall be as depicted in attachment # 4 of these rules.

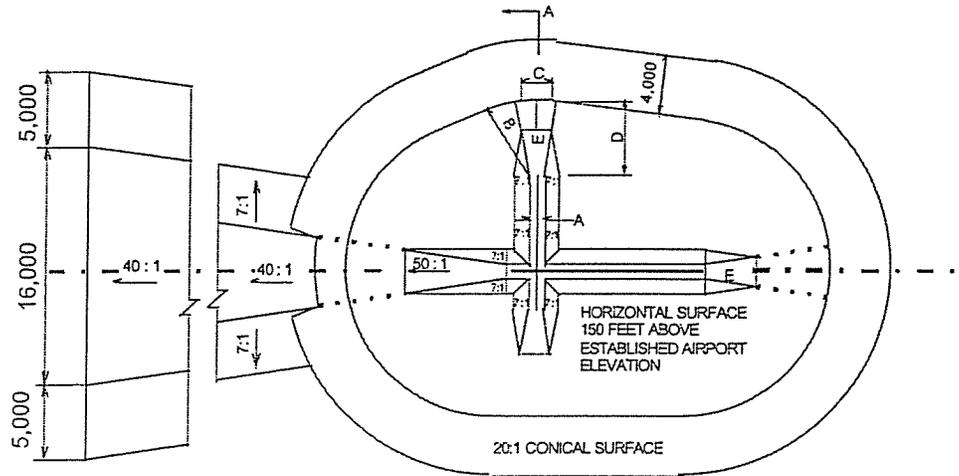
11. Utility runway means a runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 maximum gross weight and less.

Exhibit #1

12. Visual runway means a runway intended solely for the operation of aircraft using visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on an FAA approved airport layout plan, or by any planning documentsubmitted to the FAA by competent authority.

Exhibit # 1

PUBLIC USE AIRPORT OVERLAY ZONE



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY			PRECISION INSTRUMENT RUNWAY
		A	B	A	B		
					C	D	
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	250	500	500	500	1000	1000
B	RADIUS OF HORIZONTAL SURFACE	5,000	5,000	5,000	10,000	10,000	10,000
		VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH			PRECISION INSTRUMENT APPROACH
		A	B	A	B		
C	APPROACH SURFACE WIDTH AT END	1,250	1,500	2,000	3,500	4,000	16,000
D	APPROACH SURFACE LENGTH	5,000	5,000	5,000	10,000	10,000	-
E	APPROACH SLOPE	20:1	20:1	20:1	34:1	34:1	-

- A- UTILITY RUNWAYS
- B- RUNWAYS LARGER THAN UTILITY
- C- VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
- D- VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
- * PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET