

# Airport Plans

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## Introduction

The plan for the future development of Aspen/Pitkin County Airport has evolved from an analysis of many considerations. Among these are: aviation demand; aviation forecasts; a capacity analysis; aircraft operational characteristics; facility requirements; environmental considerations; and as characterized in the previously noted statement of goals, the general direction or thrust of airport development as prescribed by the Pitkin County management and staff. Forecasts are utilized as a basis for planning; however, facilities are only to be constructed to meet actual demand.

Previous chapters have established and quantified the future development needs of Aspen/Pitkin County Airport. In this chapter, the various elements of the plan are categorically reviewed and detailed in an outline and an FAA specified graphic format. A brief written description of the individual elements represented in the set of *Airport Plans* for Aspen/Pitkin County Airport is accompanied by a graphic description presented in the form of the *Airport Layout Plan* (ALP), the *Airport Airspace Drawings*, the *Approach Surface Drawings*, the *Terminal Area Plan*, the *Land Use Plan*, and the *Airport Property Map*.

## Airport Layout Plan

The Airport Layout Plan (ALP) is a graphic depiction of existing and ultimate airport facilities that may be necessary to enable the airport to properly accommodate future demand. In addition, the ALP also provides detailed information on both airport and runway design criteria, which is necessary to define relationships with applicable FAA standards. The following illustration, entitled *AIRPORT LAYOUT PLAN*, and the following paragraphs describe the major components of the future airport development plan.

## Runway System

The airport's basic runway configuration will be retained. As a component of the examination of the consequences and feasibility of potential improvements that could be recommended as part of the Master Plan, a 1,000-foot extension to the south is indicated on the ALP. This runway extension would be used only for takeoffs to the north. The runways width will remain at 100 feet; however, to facilitate snow removal, paved shoulders are proposed for the runway. The shoulders will be 25 feet in width and will be located on both sides of the runway. The shoulders will be constructed of asphaltic concrete and will be designed to support the weight of the airport's snow removal equipment, but not aircraft. The runway edge lights will not be relocated.

The straight-in instrument approach capabilities at the airport will continue to be associated with Runway 15 (accommodating approaches from the north). Improvements are programmed for the Runway 15 straight-in approach, which will lower its approach visibility minimums. The approach improvements are likely to be driven by advances in satellite navigation [Global Positioning System (GPS)] technology. The physical layout of the airport is programmed to accommodate instrument approach capabilities with a visibility minimum as low as 1-mile (the current public-use approach visibility minimum is 3-miles).

## Taxiway System

The ongoing project to relocate the east side parallel system (Taxiway A) from its existing position (with its centerline 221.5 feet east of the runway centerline) to a location that provides a separation of 320 feet between the runway and taxiway centerlines is recommended to continue. As the redevelopment of Taxiway A continues, the need to provide improved edge and centerline taxiway lights to give pilots improved situational awareness and prevent runway and ramp incursions will likely be needed. Because of the specific circumstances presented at Aspen/Pitkin County Airport, this improved taxiway lighting system will be a unique solution that will require additional study by airport staff and engineers.

The development of a west side parallel taxiway is not indicated on the ALP because the time-frame for its need is not known. In order to minimize opportunities for runway incursions, a west side parallel taxiway system will be strongly recommended or required, before west side aviation development can take place. It is also important to note that if a west side parallel taxiway is constructed, the runway centerline to taxiway centerline separation is recommended to be 320', rather than the standard 400'. This will maximize the development area on the west side of the airport and will prevent the need to relocate Owl Creek Road to accommodate the new parallel taxiway.

## Landside Development

As illustrated on the previously presented, *AIRPORT LAYOUT PLAN*, areas for landside facilities are also allocated. For the purposes of this Master Plan, and to coincide with FAA planning terminology, landside facilities include aircraft storage aprons, hangars, terminal facilities, aviation maintenance facilities, automobile access and parking, support facilities, etc. Detailed descriptions of the landside development areas are provided in the *Terminal Area Plans* section of this chapter. As provided on the Airport Layout Plan, proposed landside development includes:

**Passenger Terminal Facilities.** The location of the passenger terminal facilities at the airport will remain of the east side of the airport, in relatively the same location as existing. Conceptual layouts of future passenger terminal facilities are provided in the previous chapter, entitled *Passenger Terminal Area Development*. An area for the development of future terminal area facilities is indicated on the ALP and additional information will be added to this section following the discussions with the Master Plan's Study Advisory Committee, the Board of County Commissioners and the FAA in November 2003.

**East Side General Aviation Facilities.** The general aviation facilities will remain on the east side of the airport in the same general area as they currently exist. The ESID plan for this area indicated that the Aircraft Rescue and Fire Fighting (ARFF) function, as well as the Snow Removal Equipment (SRE) storage building function would be relocated to the west side of the airport. The ESID plan also identified the reuse of the existing ARFF building for FBO functions currently being performed in Buildings #10 and #11 (housing the FBO's ground equipment service facilities) and for housing some non-airport use fire protection equipment. Buildings #10 and #11 have been identified in previous planning studies for removal on the grounds that it is inside the Building Restriction Line (BRL). Although these buildings are inside the BRL, the buildings' heights are not enough to be identified as an obstruction as defined by the FAA (FAR Part 77 - Objects Affecting Navigable Airspace) and the buildings are located outside of the Runway Object Free Area; therefore, there is no mandate to remove them. Being inside the BRL, Buildings #10 and #11 will not be replaced in their existing location when they reach their useful life, but the time for their removal is not specified. In the near-term, it is proposed that Building #11 will be removed with the space being recreated as an additional to the FBO terminal. The existing ARFF building is also recommended for removal (see third bullet below).

The complex history related to the past land use approvals and requirements for general aviation facilities on the east side of the Airport are not comprehensively examined here. Instead, it is the mission of this Airport Master Plan to define a general set of physical development guidelines based on a general understanding of historical development

issues. At the same time, it is recognized that future development at the airport should be as compatible as possible with surrounding land uses, and must follow established FAA criteria related to safety setbacks and community planning criteria, including growth management, scenic impacts, highway setbacks, etc. Many of the historic issues related to past land use approvals/conditions and strategies for future development at the airport will be addressed in greater detail during the formal review and adoption process, during which the Airport Master Plan will be considered in the context of its relation and compliance with the adopted land use policies and regulations contained in the Pitkin County Land Use Code and other applicable planning documents. This process will involve review by the Pitkin County Planning Commission and the Board of County Commissioners.

Following are the development recommendations for the general aviation area:

- The bulk of the transient aircraft operation and the general aviation terminal will remain in the area bounded on the north by the existing aircraft maintenance hangar (building # 12) and on the south by the north edge of the commercial passenger terminal operation area.
- As dictated by the relocation of Taxiway A, establishment of an appropriate Runway/Taxiway Object Free Area, and the construction of replacement general aviation aircraft parking area, some rearrangement of the facilities within this area may occur in the future.
- The exact layout of the transient general aviation ramp will be influenced by future modifications to the layout of facilities in the commercial passenger terminal area, along with commercial passenger terminal parking and access facilities; and the ultimate decision with respect to the removal or reuse of the existing ARFF/SRE building (a new ARFF/SRE building is programmed for construction in 2004 on the west side of the airport). The existing ARFF building is shown on the ALP as “to be removed” with the vacated space being utilized of transient aircraft parking. However, if an appropriate re-use of the existing building can be identified, this recommendation may be modified.
- The aircraft maintenance and storage hangars, fuel farm and ground equipment service facility will remain located in the area defined by the existing maintenance hangar on the south and the air traffic control tower (ATCT) on the north. As described above, the ground equipment service facility (building #10) located at the base of the ATCT may be relocated in the future and the best location for this function will continue to be within this same general zone as it exists today.

- The area north of the ATCT will continue to be used for aircraft storage. The area currently contains aircraft parking apron and patio (open-sided) hangar structures. As recommended in ESID, the aircraft storage apron is programmed to be expanded to the north.
- It is recognized that the use of the itinerant aircraft parking apron causes some noise intrusion concerns at times for the residential area east of the airport (North 40 Subdivision). The primary noise concern is related to the Auxiliary Power Units (APUs) that are used during pre-flight preparations. Airport and FBO management are currently investigating strategies that might lessen the potential for obtrusive APU noise (i.e., the provision of plug-in power for aircraft parking positions). It is also recommended that other opportunities for lessening noise concerns be examined as improvements are contemplated within the general aviation development area. This could include the use of noise buffering structures and/or modifications to the arrangement of parked aircraft on the apron. Effective and affordable noise reduction strategies that are identified should be implemented.
- If a second FBO is accommodated at the airport in the future, its facilities will be located on the west side of the runway.

**Support Facilities.** It is recognized that improved air traffic control tower (ATCT) facilities are needed at the airport. Because of the limited acceptable location options available for the ATCT, the programmed improvement is the addition of a new cab structure on the east side of the existing base building (with the existing cab structure on the west side of the base building being removed). Before any relocation or reconstruction related to the ATCT can take place, the completion of an FAA sponsored ATCT location study will be required.

The Aircraft Rescue and Firefighting/Snow Removal Equipment building, which is presently located on the east side of the airport, is programmed to be relocated to the west side of the airport.

## Airspace Plan

The *Airport Airspace Drawing* is based on Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*. In order to protect the airport's airspace and approaches from hazards that could affect the safe and efficient operation of aircraft, federal criteria contained in FAR Part 77 have been established to provide guidance in controlling the height of objects in the vicinity of the airport. FAR Part 77 criteria specify a set of imaginary surfaces which, when penetrated, identify an object as being an obstruction. Objects are identified using the *Airport Obstruction Chart* published by the National Ocean Service (NOS) of the U.S. Department of Commerce in 1993.

The *AIRPORT AIRSPACE DRAWING*, which is illustrated on the following page, provides a plan view which depicts these criteria as they specifically relate to Aspen/Pitkin County Airport. The plan is based on the ultimate planned runway alignments and lengths, along with the ultimate planned approaches to those runways. As a component of the examination of the consequences and feasibility of potential improvements that could be recommended as part of the Master Plan, a 1,000-foot extension to the south is indicated on the Airport Airspace Drawing. Therefore, for Runway 15/33 it is based on larger-than-utility criteria, with a non-precision instrument approach to Runway 15 and a visual approach to Runway 33.

## Inner Portion of the Approach Surface Drawings

To provide a more detailed view of the inner portions of the Part 77 imaginary approach surfaces and the Runway Protection Zone (RPZ) areas, the following drawings are provided. An RPZ is trapezoidal in shape, centered about the extended runway centerline and typically begins 200 feet beyond the end of the runway. The RPZs are safety areas within which it is desirable to clear all objects (although some uses are normally acceptable). The size of the RPZ is a function of the design aircraft and the visibility minimums associated with the runway's instrument approach capabilities.

The *INNER PORTION OF THE APPROACH SURFACE DRAWINGS*, which are depicted in the following illustrations, provide large-scale drawings with both plan and profile delineations. They are intended to facilitate identification of the roadways, utility lines, railroads, structures, and other possible obstructions that may lie within the confines of the inner approach surface area associated with each runway end. As with the *AIRPORT AIRSPACE DRAWINGS*, the *INNER PORTION OF THE APPROACH SURFACE DRAWINGS* are based upon the ultimate planned runway length, along with the ultimate planned approaches to each runway. As a component of the examination of the consequences and feasibility of potential improvements that could be recommended as part of the Master Plan, a 1,000-foot extension to the south is indicated on these drawings.

## Terminal Area Plan

A written and graphic presentation of the *TERMINAL AREA PLAN*, will be prepared following discussions with the Study Advisory Committee and the Board of County Commissioners during meetings in November 2003. The location of the passenger terminal facilities at the airport will remain of the east side of the airport, in relatively the same location as existing. Conceptual layouts of future passenger terminal facilities are provided in the previous chapter, entitled *Passenger Terminal Area Development*.

## Land Use Plan

The *LAND USE DRAWING*, presented in the following figure, depicts existing and recommended use of all land within the airport property line and in the vicinity of the airport (including the area contained in the future 65 DNL noise contour). The purpose of the Land Use Drawing is to provide airport management a plan for leasing revenue-producing areas on the airport. It also provides guidance to local authorities for establishing appropriate land use zoning in the vicinity of the airport. This drawing will be prepared following discussions with the Study Advisory Committee and the Board of County Commissioners during meetings on August 25 and 26. See refer to the *ENVIRONS LAND USE PLAN* section presented at the end of the *Environmental Review and Land Use Considerations* chapter.

## Airport Property Map

The *AIRPORT PROPERTY MAP (Exhibit A)*, which is presented in the following illustration, indicates how various tracts of land within the airport boundaries were acquired (e.g., Federal funds, surplus property, local funds, etc.). The purpose of the Airport Property Map is to provide information for analyzing the current and future aeronautical use of land acquired with Federal funds. This map is in the process of being prepared and will be finalized upon receipt of survey information that is being compiled by Pitkin County.

Figure H6  
**Terminal Area Plan**  
(TO BE INCLUDED)

Figure H7  
**Land Use Plan**  
(To Be Included)

Figure H8  
**Airport Property Map**  
(To Be Included)