

# Chapter Five: AIRPORT DEVELOPMENT ALTERNATIVES

## Airport Master Plan Update

### Aurora State Airport

The following section detailing the Preferred Alternative is an addendum to Chapter Five. It will be incorporated into Chapter Five in the Final Draft of the Master Plan.

#### PREFERRED ALTERNATIVE

On March 10, 2011, the above alternatives were presented to the Planning Advisory Committee (PAC) and public. The purpose of the meeting was to gather input towards developing a preferred alternative. In addition to discussion during the meeting, comment forms were available at the meeting and on the project website, and comments were gathered for two weeks after the meeting. Comments varied greatly, from supporting the No Build Alternative to Airport expansion. **Appendix K** documents the discussions and testimony given, as well as the comments received.

Since no consensus for a Preferred Alternative was reached at the PAC meeting, ODA considered PAC and public comments, and then developed a recommended Preferred Alternative for Board consideration.

The Preferred Alternative, shown in **Exhibit 5J**, reflects ODA's plan for developing the Airport. The Preferred Alternative will be the basis for revising the Airport Layout Plan, which establishes FAA grant funding eligibility for airport improvements and must be approved by the FAA. Implementing the airfield improvements in the Preferred Alternative will depend on FAA and ODA funding availability and the results of environmental analyses for individual projects. The private development of landside facilities will depend on the actual growth of aviation demand, market and financing conditions, and local laws and regulations.

The predominant features of the Preferred Alternative are described below.

## Airport Reference Code

As Chapter Three, *Aeronautical Activity Forecasts*, documented, activity at the Airport currently meets the criteria for an ARC of C-II. Meeting the FAA design standards for the appropriate ARC at an airport is important for safety. The Airport currently is designed to ARC B-II standards, although the existing runway width and the runway-to-parallel taxiway separation exceed B-II standards and meet the standards for ARC C-II. **The larger RSA required for ARC C-II can be provided easily, since the ground within the larger RSA is already well-graded for rescue vehicles and aircraft recovery in case of an aircraft undershoot, overshoot, or excursion from the runway.** The major design standards that would need upgrading would be the RPZ and ROFA.

For the current instrument approach visibility minimums, the required RPZ is 700 feet longer for ARC C-II. ODA should control land within the RPZs to prevent incompatible land uses. Residences and places of assembly are examples of incompatible land uses within an RPZ. If fee acquisition is not possible, land use control may be provided through aviation easement. ODA has not initiated consultation with the affected property owners relating to this item.

Vehicles on Highway 551 west of the Airport would be objects within the wider ROFA required for ARC C-II. The highway would only encroach upon this surface by a small margin, and a modification to FAA standards will be requested. Recent discussions with the FAA indicate the request will likely be approved.

## Runway Length

Although this Master Plan has shown that a runway extension is justified according to FAA guidance, ODA has decided that any extension would prove infeasible at this time. An extension to the north might constrain Columbia Helicopters' ability to expand on their private property. An extension to the south might have a negative impact on farmland – a potentially environmentally infeasible situation. A south extension might also have a negative impact on private property and Keil Road. Keil Road provides necessary access for farm equipment/machinery and emergency responders, even though it poses some safety concerns at the intersection with Highway 551.

## Runway/Pavement Strength

The analysis relating to pavement strength in Chapter Four tied runway strength to runway length. Although the runway length will remain the same in the Preferred Alternative, strengthening of the runway's pavement is proposed. **The parallel taxiway currently has 60,000 pounds dual wheel gear strength and it is recommended the runway be overlaid to provide the same pavement strength as the taxiway.** Currently there are airplanes based at the Airport with maximum takeoff weights that exceed the runway's strength rating.

## Instrument Approach Procedures

The need for better instrument approach capability was identified by several Airport users at the beginning of this planning process, and the business aviation industry recommends better approach capability than the Airport has. When visibility is reduced by fog, rain, or snow to a distance below the

minima set for an airport's instrument approaches, airplanes cannot land, resulting in costly trip delay or re-routing.

The Preferred Alternative proposes no changes to the Runway 17 approach minima, 1 statute mile. For Runway 35 (the calm wind runway), the Preferred Alternative improves the instrument approach to visibility minima greater than  $\frac{3}{4}$  statute mile. The improved approach procedure would use GPS and not require additional navigational aids on the Airport, except for an approach lighting system similar to the system at the north end of the runway. Based on ten years of historical weather data, the improved instrumentation will increase annual Airport usability by 1.3% (nearly five days). In November, the increased use of the Airport will be 3.4% of the time.

In addition to reducing the time the Airport is "closed" due to weather, the instrument approach improvement will enhance aviation safety by increasing regional capability for instrument landings, increasing the margin of safety for VFR traffic, and making it easier for Airport users to adapt to sudden weather changes.

As mentioned previously, the change in ARC to C-II lengthens the RPZ at the north end of the runway, even though there is no change to Runway 17's minima. Most of the RPZ extension will remain on Airport property and where it extends off-airport aviation easements will be sought. With the instrument approach improvement to Runway 35, the RPZ at the south end of the runway becomes much larger, extending beyond current Airport property. ODA will pursue control of the additional land in the Runway 35 RPZ through fee acquisition.

### Air Traffic Control Tower

The ATCT location has yet to be determined through the FAA's tower siting study, which will be conducted in April of 2011. At this time, the ATCT is shown in the central location of the three proposed sites, as a placeholder until a final site has been determined.

### Cargo Apron

The Oregon Aviation Plan (2007) identified the need for a cargo apron at the Airport. This apron would be used for aircraft parking while unloading/loading freight onto ground vehicles; it would not include a sorting facility. The Preferred Alternative places the cargo apron north of Aurora Aviation because of good accessibility to the Airport's current access road.

### North Run-up Area

There is no run-up area to Runway 17, which poses a safety hazard. Current restrictions do not allow construction of a run-up area near the Runway 17 end. As a compromise, a run-up area is proposed approximately 500 feet south of the north end of the parallel taxiway. In order for the run-up area to be constructed, the Aurora Aviation fuel tanks must be relocated.

### Relocation of Fuel Tanks

As stated in prior chapters, the Aurora Aviation fuel tanks are located in an undesirable area due to their close proximity to Airport taxiways. Additionally, the north run-up area is proposed where the fuel

tanks are located. ODA will negotiate relocating these fuel tanks northeast of the Aurora Aviation FBO building.

### **Aurora Rural Fire Protection District**

While an Airport Rescue and Fire Fighting (ARFF) facility is not required for the Airport, the Aurora Rural Fire Protection District has indicated interest in locating a facility on the Airport where they could house their firefighting apparatus. The most desirable location, based on the District's input, is adjacent to the existing fire suppression system centrally located on the Airport near Airport Road.

### **Helicopter Parking**

The helicopter parking area on state-owned property is proposed in an area currently used for fixed-wing tiedowns, approximately 500 feet south of the proposed run-up area. This area separates helicopter and fixed-wing aircraft parking to minimize possible damage to small fixed-wing aircraft by rotor wash.

### **Internal Service Road**

An internal service road is included to help separate vehicular traffic from taxiing aircraft, which will enhance safety. It is intended to be used exclusively by approved operators (ODA and others who must use it for specific purposes, like fuel trucks, etc.).

### **Precision Approach Path Indicators (PAPIs)**

PAPIs should be installed to replace the less precise visual glide slope indicators at the Airport.

### **Demand-Based Improvements**

The Preferred Alternative shows additional hangar and tiedown areas on state-owned property. It is expected that not all of the demand-based needs will be met by development on state-owned land, and development/reconfiguration of private property will likely occur. Accordingly, the adjacent 16-acre church camp property is identified as suitable for airport-related development. Within the 20-year planning period, the projected need for additional land that is not currently zoned Public is only 5 acres. However, demand may exceed the forecast or development density may be lower than projected. The church camp property east of the Airport is a logical area for excess demand to be met because it is adjacent to the Airport and on the Airport side of Airport Road.