

It is also recommended that Taxiway A comply with the minimum centerline separation requirement of 300 feet for a Group II runway with lower than $\frac{3}{4}$ -mile approach visibility minimums, as per FAA AC 150/5300-13, *Airport Design*. Therefore, all new parallel taxiway construction related to Runway 8/26 would have to comply with this standard, as will the existing Taxiway A at the time of its next reconstruction. Additionally, it is recommended that Taxiway B remain at its current 300-foot centerline separation from Runway 13/31.

Note that additional taxiway improvements not discussed in this section could result from long-term landside development concepts. These will be discussed in a subsequent section.

Landside Development Considerations, Alternatives, and Recommendations

Introduction

As the framework of the Airport's ultimate airside development is defined, concepts involving the placement of landside facilities must also be analyzed. The overall objective of the landside development at the Airport is the provision of aviation facilities that are conveniently located and accessible to the community, and that will accommodate the specific requirements of airport users within the planning period. It is also important to take a strategic level look at the potential for airport development opportunities that may lie beyond the planning period or may be realized only for non-demand driven purposes, such as economic growth or private development initiatives.

This section presents the first of those development outlooks. The *Aviation Use Facility Development Areas* narrative below presents the concepts for landside development at the Airport that would be appropriate and reasonable for the fulfillment of the aviation demands as presented in this Master Plan. The following section, *Long-Term Landside Development Considerations*, addresses the long-term development opportunities at the Airport.

Aviation Use Facility Development Areas

Concepts for the development of other aviation use areas at the Airport include considerations for passenger terminal facilities, various types of general aviation aircraft storage facilities (i.e., T-hangars, executive hangars, corporate hangars, FBO hangars, etc.), and aircraft maintenance facilities. The following provides an explanation of the development considerations for each of these functions.

Terminal Building. With the potential for scheduled passenger service at the Airport, the definition of an appropriately sized and located passenger terminal facility and its related functions is an important outcome of this Master Plan Update. Initially, due to the relatively low levels of enplanements anticipated, commercial passenger service operations will likely have to operate out of an existing or temporary structure within the general aviation area on the west side of the Airport. This area already has ramp space, auto access, auto parking, and is consistent with where commercial air service operations had previously been handled at the Airport. Utilizing terminal planning standards and based on the forecasted levels of enplanements, it is projected that Astoria could ultimately require at least a 5,000 square foot facility by the end of the planning period (2024). However, at the inception of the commercial air service and until that service is firmly established and economically viable, the requirements for that facility are significantly less.

Options for utilizing an existing airport facility to accommodate projected scheduled passenger service are limited to the existing airport restaurant building, located on the north end of the current aviation development area, and the former commercial service terminal building and hangar, located just north of the existing T-hangar units. The latter of these is currently occupied by a helicopter operation that transports bar pilots onto ships navigating the Columbia River. Neither facility is currently available; both would likely require that existing tenants be relocated to undetermined locations. Additionally, either facility would require extensive renovations to accommodate the passenger service operation. Although it could be possible for such a commercial service operation to be co-located with the bar pilots, it should be noted that the location of this facility within the current aviation development area is less than desirable. Specifically, the available apron space is limited due to the close proximity of Lektro, Twiss Air Service, general aviation tiedowns, and the T-hangar units.

The other short-term alternative for meeting the demands for commercial service accommodations is to construct or install a temporary, modular facility that would likely be located on or near the existing concrete pad of the former FBO hangar, immediately south of the existing restaurant. This site offers many advantages including existing utilities; level, compacted soils; excellent apron accessibility and capacity; existing auto access; and close proximity to the airport restaurant. This option would afford the Airport the flexibility to reasonably accommodate the inception of air service on relatively short notice with a minimal investment. Given an appropriate configuration, it is also large enough to adequately accommodate these operations for a significant period of time, allowing the Airport time to grow its commercial air service market and ensure the long-term viability of this air service. Note that such a facility in

this location could also be developed in such a manner as to allow for the construction of a permanent terminal building, as well as an airline maintenance hangar that will likely be required.

Ultimately, if commercial passenger service is dramatically successful at the Airport and enplanements far exceed those projected within this plan, this location may not be able to meet those long-term demands. If this occurs, it is recommended that a new passenger terminal development area be established elsewhere on the Airport. An analysis of candidate locations is provided in the following section, *Long-Term Landside Development Considerations*. Note that such an action could also be driven by other factors beyond pure demand. These factors could include private development, or economic development initiatives, where a local community invests in a facility to spur economic growth.

Aircraft Storage Hangars and Other General Aviation Facilities. Aircraft based at Astoria Regional Airport are currently stored either on the ramp tiedowns, or in the conventional hangars and T-hangars in the southwest quadrant of airport property, adjacent to the main aircraft parking area. There are approximately 60 aircraft currently based at the Airport, with almost all being stored in hangars. As such, these facilities are currently at capacity.

Over the course of the 20-year planning period, the number of based aircraft is forecasted to increase to 98, indicating that an increase in storage facilities to accommodate approximately 38 new aircraft will be required. For the purposes of this planning effort, it is assumed that these additional aircraft will require accommodations within hangar facilities. This reflects the characteristics of current airport patterns, with most aircraft owners preferring some form of indoor storage for reasons of weather and security. Additionally, there is currently a known latent demand for additional indoor aircraft storage facilities. Note that the trend of increasing general aviation aircraft size will also play a role in defining future development needs.

Specifically, in the short-term, the area south of the existing T-hangars can be developed with three additional T-hangar structures that will result in a gain of 30 hangar positions, assuming similar design specification to the existing hangars. There is also the potential to construct two additional T-hangar structures to the west of the existing site that could add up to 18 hangar units. The practicality of this would depend on the potential environmental implications of building on the site. Additionally, conventional hangars to be developed as infill facilities north of the Lektro hangars. However, this potential will be impacted by the future commercial air service operational facility demands identified previously. That being said, it should be

emphasized that there are very few additional development opportunities within the existing general aviation area.

In the long-term, as this general aviation area reaches capacity, new areas on the Airport will need to be developed to accommodate demand. An analysis of candidate locations is provided in the following section, *Long-Term Landside Development Considerations*.

Vehicular Access. The potential for an improved main entrance to the Airport (connecting US Highway 101 with Airport Road (SE 12th Place) has been identified in previous planning documents. In the short-term, US Highway 101 and Airport Road will continue to provide excellent access to the Airport.

Long-Term Landside Development Considerations

Introduction

The purpose of this section is to provide a long-term look at overall airport development strategies beyond that which have been defined in the previous alternatives sections. Given the amount of space available on the Airport with development potential, it is critical that this strategic look be taken in order to ensure that short- or mid-term development initiatives do not run contrary to any long-term development goals.

This section will review long-term development strategies for the Airport, define critical development issues, and identify any areas on the Airport that may be surplus to those long-term airport development needs.

Aviation Use Facility Development Areas

A general review of the Airport was conducted to define those areas that could be available for future landside development. In general, the criteria utilized for determining what areas are deemed to be available for future development include:

- On airport property;
- Clear of all existing and potential runway safety areas, object free areas, and runway protection zones;
- Clear of all existing and potential taxiway object free areas;

- Clear of the runway visibility zone;
- Clear of established airport operational uses; and,
- Capable of having reasonable potential for airside taxiway access.

Following these criteria, four potential development areas were identified and are shown in the following figure entitled *LANDSIDE DEVELOPMENT OPTIONS - DEVELOPMENT AREAS AND ACCESS*. A summary description of each development area and their primary site considerations are included in the following sections.

Northwest Development Area (Area A)

The Northwest Development Area, also termed Area A, is a 30-acre site located between the approach ends of Runway 8 and Runway 13. It is bounded to the north by a levee, to the west by an on-airport drainage slough, and to the south and east by the airfield.

Positive Qualities of Area A

- The area is a completely undeveloped site.
- The site has excellent proximity to the airfield.
- The site has sufficient space to be developed as a dedicated commercial service facility.
- The site would be segregated from all other airport activities, including general aviation and Coast Guard.

Negative Qualities of Area A

- Development of the site would have environmental impacts (including wetlands and floodplains).
- Access to site would require the construction of a new frontage road, located immediately east of the Oregon Coast Highway (US Highway 101), that would start at either SE Marlin Avenue and incorporate either SE 9th Avenue or SE 10th Avenue. This frontage road would also require bridges to cross on-airport streams.

- There is currently inadequate taxiway infrastructure available for airside access to the site that would likely require the construction of at least a partial parallel taxiway to the north of Runway 8/24. This taxiway would likely start at the approach end of Runway 8 and terminate at the extended Taxiway B.
- There are no utilities (including water, electric, telephone, gas, stormwater, and wastewater) on or near the site.
- Unstable soil conditions will require that special construction techniques be employed for buildings and pavement structures, thereby increasing costs.

Recommendations for Area A

Area A is viewed by the Airport as having potential as a development site for a long-term commercial air service terminal area. It is therefore recommended that this area be reserved for the possible development of a commercial air service terminal area as passenger demand or local economic development initiatives warrant. Note that development of this area for this purpose could also result from general aviation demand for the use of the current terminal area.