

SECTION 2

Purpose and Need

2.1 Introduction

As part of the FAA Order 5050.4B, “National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions” and FAA Order 1050.1E, “Environmental Impacts: Policies and Procedures”, the Purpose and Need section of an EA briefly discusses the underlying purpose and need for the proposed federal action. This section presents the issue being addressed and the benefits of the proposed Federal action. It provides the data to support the purpose and need for the project, identifies the parameters for defining a reasonable range of alternatives to be considered and identifies the FAA safety and design issues that the proposed federal action will need to comply with.

2.2 Purpose of the Proposed Action

It is the policy of the United States to undertake airport projects that ensure the safe operation of the airport and airway system as the highest aviation priority and that airports should be as self-sustaining as possible under the circumstances existing at each particular airport.¹ In support of the FAA's statutory responsibilities under 49 USC § 47101(a) (13), the purpose of the proposed action is to obtain the approvals necessary to develop existing airport property for large scale aviation and aviation support uses. It is also a policy of the U.S. for airports to coordinate airport development plans with state and local officials as part of their comprehensive long-range land use plans.² The proposed action's purpose includes the safe, efficient, and secure use of airport property consistent with FAA policies and standards, the vision of the Greater Orlando Aviation Authority concerning increasing and diversifying revenue generation, and the City of Orlando's comprehensive, long-range land use plans, and job creation.

2.3 Need for the Proposed Action

2.3.1 Provide for Major Aviation Facilities

The proposed action is intended to obtain the approvals necessary (including environmental processing, permitting and mitigation) in order to provide the capability to expeditiously develop large scale aviation facilities at OIA as demand warrants. The types of aviation facilities could include but not be limited to uses such as aircraft manufacturing, aircraft maintenance, cargo, fuel

¹ 49 U.S.C. §47101 (a) (1), (13)

² 49 U.S.C. §47101 (g) (1) and (2)

storage, general aviation, and aviation-related office/support services. These types of uses will be referred to as “Aviation Uses” in the remainder of the document. The project is projected to start development in the 2010-2012 time frame and is planned for build out in 2030. The development of major aviation uses at OIA will be driven by user demands.

It is anticipated that the approval process may take as long as three to six years to complete. The approval process includes:

- Environmental approval of the Airport Layout Plan from the FAA
- Section 404, Clean Water Act permit from the United States Department of Army Corps of Engineers (USACE),
- Environmental Resource Permit (ERP) and Water Quality Certification from the South Florida Water Management District (SFWMD),
- City of Orlando planning, zoning, development, and construction approvals,
- State of Florida, Department of Community Affairs development of regional impact (DRI) approvals,
- Various other local construction permits.

Because of the length of the numerous approval processes, OIA can not currently effectively respond to or compete for large scale aviation opportunities and thus, can not expeditiously meet anticipated demand.

2.3.1.1 Major Aviation Facilities – Market Considerations

Over the past ten years, the airport has accommodated a variety of significant new aviation businesses such as: the Jet Blue University / training facility, Jet Blue Live TV maintenance hangar, Cessna maintenance facility, Continental maintenance operations, Flight Safety training facility and the Federal Express distribution facility. The airport has also had opportunities related to a number of large scale aviation business ventures by entities such as Boeing, Airbus and Net Jets.

Appendix A includes correspondence related to a potential Airbus facility that was being pursued for location at OIA. The correspondence provides a good description of the types of site selection criteria necessary to meet the needs for development of their facility. They included:

- Availability of High Quality and Cost Effective Real Estate
- Access to Higher Learning Institutions with Aerospace and Engineering Degrees
- Minimum 9,000 foot Runway
- Easy Access to Highways, Rail and Deep Water Seaport
- State of the Art Infrastructure and Highly Reliable Utilities

While the potential for locating large scale Aviation Use facilities at OIA (such as the proposed Airbus development) has been demonstrated on a number of instances in the past, the airport has not had the federal, state, and local approvals necessary to make certain airport owned property readily available for development of such Aviation Uses.

One of the key advantages OIA has for accommodating large scale Aviation Use development is the acreage available within the airport property boundary. Availability of a large contiguous land area will provide development flexibility to accommodate a variety of potential uses. It will also allow the airport and potential tenants to benefit from synergies and efficiencies associated with these types of development and maximize both the attractiveness of OIA as well as the return on investment. A variety of large scale aviation use developments were reviewed to determine the amount of area that should be targeted to accommodate this type of development. It was noted that the Boeing manufacturing facility in Everett Washington is 1,025 acres in size. Another major aircraft wing and tail section supplier, the Vought Aircraft Industries, Inc., located at Nashville International Airport, has two million square feet under roof (**Appendix B** provides further information on these two examples). With the desire to provide for multiple uses similar to these, a site of at least 1,000 acres is considered the minimum that would be required to accommodate these uses.

Long term demand for facilities to support aviation activities continues to have a positive outlook. Despite a recent downward revision of FAA's Terminal Area Forecast (TAF) to reflect the impacts of a struggling economy, the FAA continues to project strong growth in the air carrier sector (**Table 2.3.1**). Total aircraft operations at towered facilities are projected to increase 16 percent nationally by 2025 and 25 percent over the same period within the state of Florida. OIA is expected to outpace both national and state aviation growth with a nearly 31 percent increase in total operations by 2025. Air carrier activity is expected to grow at a faster rate than total activity during the same period. This segment of activity is projected to increase by nearly 30 percent nationally and by nearly 40 percent in the state of Florida. Once again, OIA air carrier growth is expected to outpace both the national and state trends with a projected increase of just over 44 percent.

**TABLE 2.3.1
FORECAST TOTAL AND AIR CARRIER OPERATIONS**

Airports	2008	2015	2025	Annual Growth Rate (2008-2025)
Total Operations				
Orlando International Airport	358,787	357,884	468,903	1.6%
State of Florida	8,940,576	9,590,314	11,224,576	1.3%
National	111,461,739	116,434,137	129,382,700	.9%
Air Carrier Operations				
Orlando International Airport	298,734	326,790	430,724	2.2%
State of Florida	1,238,440	1,354,532	1,731,884	2.0%
National	14,038,421	14,809,650	18,214,010	1.5%

Source: FAA December 2008 Terminal Area Forecast (downloaded from <http://aspm.faa.gov/main/taf.asp> on 7/24/09)

OIA is actively marketing large scale Aviation Uses and has developed a conceptual site plan to accommodate these uses while utilizing common infrastructure and support facilities. However,

to effectively market such uses, GOAA needs to assess the environmental consequences of the conceptual site plan. By completing the environmental assessment, permitting and mitigation to support the proposed uses, including ALP approval, the airport will be positioned to take advantage of these opportunities. The Proposed Action will provide significant flexibility in accommodating major aviation facility development as well as support a variety of other aviation related uses.

OIA's location in central Florida makes it an attractive site for large scale Aviation Uses. The Airport's access to the Beachline Expressway (S.R.528), which borders OIA to the north, provides a direct connection to Port Canaveral located 46 miles to the east. Port Canaveral is noted as the "shortest direct entry" port on the east coast which allows for quick and efficient access by cargo vessels.³ The high volume of air carrier and large aircraft activity, both currently and projected in the future, has the potential to create synergy between air carrier passenger activities and other aviation uses. Due to OIA's proximity to Cape Canaveral, access to the many space industry workers provides a skilled workforce attractive to a variety of potential aviation businesses.

It has already been demonstrated that central Florida is a desirable location for this type of aviation business activity and job creation. Melbourne International Airport (MLB), located along central Florida's east coast approximately 26 miles south of Port Canaveral, has been successful in attracting a number of general aircraft manufacturers. In 2008, Brazilian aircraft manufacturer Embraer, announced that it would be developing an aircraft manufacturing facility at MLB for its new "Phenom" business jet aircraft. This facility is expected to employ approximately 200 skilled workers by 2011.⁴ In late 2008, the Orlando Business Journal reported that Comp Air, Inc., has set up temporary residence at MLB while it undertakes the FAA certification process for its new 8 passenger business jet.⁵ This facility is expected to account for as many as 2,000 jobs by 2012. Czech aircraft manufacturer Evector has established Melbourne as their sales, marketing and product support base for North, Central and South America⁶ and Liberty Aerospace has been operating a light aircraft manufacturing base at MLB since 2003. The Orlando Business Journal notes that "airport officials believe the combination of available acreage, infrastructure, permitting, access to the airport and Port Canaveral, and the region's quality of life are all contributing factors" to the attractiveness of the airport for aircraft manufacturing.⁷

2.3.1.2 Major Aviation Facilities – Planning History at OIA

The need for major aviation facilities at OIA has been identified by the City of Orlando's local land use planning efforts since 1999. OIA is located in an area designated as "The City of Orlando Southeast Sector Plan." This plan's vision statement includes the following:

"The City of Orlando has identified the Southeast Orlando Sector Plan area as a Future Growth Center with the Orlando International Airport as the primary economic and

³ www.portcanaveral.org/cargo

⁴ Embraer Aviation News Release, May 13, 2008, *Embraer Plans to Expand its Operations in the US.*

⁵ Orlando Business Journal, October 17, 2008, *Melbourne International to Land Another Aircraft Maker?*

⁶ <http://www.evector-aircraft.com/>

⁷ Orlando Business Journal, October 17, 2008, *Melbourne International Airport on its way to becoming Manufacturing Hub*

employment generator. In the near future, the Greater Orlando Aviation Authority plans to construct a fourth runway, expand terminal facilities, build new on-site roadways, pursue regional rail transit linkages, and actively market airport-related office and industrial development on the airport property.”

Since “The City of Orlando Southeast Sector Plan” was adopted by the City of Orlando, GOAA has taken measures to meet the goals established for OIA in the City’s plan. The fourth runway was constructed; new on-site roads (including Heintzelman Road and portions of the Goldenrod Road interchange) have been built; south terminal expansion facilities have received Federal approval as reflected on the existing FAA approved ALP, and OIA has identified and maintained rights-of-way for regional and state rail systems on OIA property. The final step in implementing this plan is the marketing and development of Aviation Uses to further enhance the economic benefits and localized employment anticipated in the Sector Plan.

From a surface transportation standpoint, a key consideration in the southeast sector plan was the extension of Alafaya Trail. This extension was planned to provide a link from the University of Central Florida to Narcoossee and Dowden Road. Now dubbed “Innovation Way”, this corridor will support a high tech research corridor and a six lane roadway system. Innovation Way will extend from UCF to the airport and will include expansion of Dowden road all the way to Heintzelman Boulevard. Widening and intersection improvement projects have either already been completed or are in the process of being completed on the Beachline Expressway, immediately north of the airport and Narcoossee Road to the east of the airport. This multiple roadway accessibility allows for shared use of these facilities with future development on site and provides the opportunity for multiple entry points to the property.

Socioeconomic factors such as population growth are projected to remain strong throughout the East Central Florida Region. Total population within this region, which includes Brevard, Volusia, Seminole, Orange, Osceola, and Lake Counties, is expected to increase by nearly 45 percent between 2008 and 2030. This exceeds the state of Florida’s projected growth of 35 percent during the same period. Of the six counties in the Region, population growth is projected to be the greatest in Osceola, Lake and Orange counties, respectively.⁸

2.3.2 Provide for Enhanced Revenue Generation to Offset Airport Operating Costs

The generation of revenue through aviation related development will help the airport sponsor meet the need of off-setting airport operation expenses. The generation of revenue allows the airport to become more efficient, and supports the FAA’s statutory responsibilities under 49 U.S.C. § 47101 and the airport’s grant obligations.⁹ As a base for Florida tourism, Orlando’s travelers are very cost conscious and highly price sensitive. As a result, OIA has among the cheapest fares in the US.¹⁰

⁸ Office of Economic and Demographic Research, Data from the Florida Demographic Estimating Conference, February 2008 and the Florida Demographic Database, August 2008, Florida Census Day Population, 1970-2030

⁹ 49 U.S.C. §47101 (a)(13) and Grant Assurance 24.

¹⁰ Orlando Sentinel, June 29,2008, OIA Flights Clipped, “The average cost of a round-trip ticket out of Orlando was about \$259 during the fourth quarter of 2007 -- ranking OIA as 12th-cheapest of 100 airports across the country.”

Maximizing use of available land for revenue production is a key strategy that GOAA continues to employ to help offset the airlines and Authority's operating costs. In 2007, OIA generated 29 percent of its total operating revenue from the airlines with the balance coming from a variety of sources including parking, concessions, and the airport hotel.¹¹

GOAA's goal is to continue to maximize the share of operating revenues from non-airline sources to secure the financial viability of the airport enterprise. GOAA's vision for utilizing airport property includes developing Aviation Uses with the flexibility to accommodate either one major aviation user or a combination of multiple large scale Aviation Uses that are located in a manner to allow for the sharing of costly and necessary infrastructure to maximize the efficient use of airport property, and the financial feasibility and marketability for development.

The revenues generated by the proposed action will be used to offset operating costs for GOAA as well as reduce costs to the airlines operating at OIA. The revenue realized from future development on the site will be dependent on the nature and size of the ultimate large-scale facilities to be developed. However, to give an indication of the order-of-magnitude of revenues that may be generated by the proposed aviation support facilities, a review was made of other (albeit smaller in scale) revenue producing facilities at the Airport today. The existing uses at OIA most closely associated with the type of uses expected in the high intensity airport support District include Com Air Hangar, the Federal Express Facility, the Cessna Facility and the Jet Blue Maintenance Hangar Complex. These facilities total approximately 64 acres of property and generate a yearly income of approximately \$1,000,000. The uses on OIA property that closely relate to the medium intensity uses to be located along Dowden Road include the Jet Blue Training Facility and the Flight Safety Facility. These total approximately 18 acres of property and generate approximately \$240,000 annually. These rates were applied to the projected acres of high intensity use and acres of proposed medium density development along Dowden Road to generate an order-of-magnitude of revenue potential at build out. The order-of-magnitude revenue generation would be approximately \$10 million dollars annually for the 600 acres of high intensity use and the 115 acres of medium intensity uses included in the proposed action.

The opportunity to plan infrastructure for an overall site and take advantage of existing infrastructure in a manner that maximizes efficiency and reduces long term development costs is a means to maximize the potential return on investment. The expansion of Narcoossee Road, Dowden Road, the Beachline Expressway and the direct link to the high tech development corridor, Innovation Way, are all factors that will help to improve the revenue potential of the proposed development. This sharing of existing infrastructure for aircraft use and roadway vehicle use reduces the cost of future on-site development. In addition, the development of a master storm water control plan will allow the sharing of water quantity and quality control measures more efficiently and be less costly than a series of smaller individual ponds and watercourses. Development of a master utility plan for a site has the potential to provide similar efficiencies.

¹¹ Greater Orlando Aviation Authority, Comprehensive Annual Financial Report, FY end September 30, 2007.

2.3.3 Meet FAA Standards and Provide for Safe and Efficient Use of Airport Property

Any development at OIA or in the nearby vicinity will need to comply with FAA safety and design standards. These standards are outlined in the Code of Federal Regulations, various FAA Orders, Advisory Circulars, and other FAA guidance. These address a wide range of issues including airspace protection, aircraft movement areas, navigation aids, air traffic control tower line-of-sight, wildlife hazard management, safety, security, etc.

The airport's experience on the west side of the airfield at Tradeport has yielded several lessons on how to improve aviation building and aircraft apron utilization to maximize operational efficiency. The former military facilities that were inherited by GOAA consisted of long linear aircraft aprons near the airfield to facilitate the rapid deployment of military aircraft. Such an approach can limit aircraft apron frontage to interface with aviation support facilities. Aircraft aprons that are perpendicular to the airfield offer the opportunity for more apron frontage in support of aviation support uses and therefore a more efficient use of airport property. The Fed Ex apron and building project illustrates this premise and it is a prime example of how to maximize access efficiency. The military goal for rapid deployment is not applicable to the proposed uses since many commercial operations may occur only once or twice a day and are less time sensitive than military operations.

As the busiest passenger airport in Florida, managing safety concerns while maximizing operational efficiency is a key element of GOAA's mission.