

## 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 [Airport Sponsor’s](#) proposed ~~federal~~ action. This section presents the issue being addressed and the benefits of the [Sponsor’s](#) 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 [Sponsor’s](#) proposed ~~federal~~ action will need to comply with.

**Comment [VL1]:** Differentiate between the proposed action (what the Airport Sponsor is proposing) and the federal action (what the FAA will take).

**Comment [sbb2]:** See revised text.

#### 2.2 Orlando International Airport

The Orlando International Airport is officially known as MCO. The airport designator code "MCO" comes from the former McCoy Air Force Base, named after Colonel Michael N. W. McCoy. A total of 13,297 acres (5,381 hectares/21 square miles) comprises the airport property, making it the third largest airport in landmass within the United States.

MCO features two 12,000 foot by 200 foot runways (18L-36R and 18R-36L); one 10,000 foot by 150 foot runway (17R-35L); and one 9,000 foot by 150 foot runway (17L-35R). The airport includes a landside terminal and four airside terminals containing 99 gates and covering approximately 6.5 million square feet. The terminal roadway system features tri-level curbside access for the landside building. The airport is accessible from the North by SR436, East and West from SR528 (toll road), and from the South by SR417 (toll road). Parking at the airport is extensive containing over 20,000 paved parking spaces and a 100-space cell phone complimentary waiting lot.

Designated a large hub airport by the FAA, commercial service is available to almost 100 cities world-wide. Currently, Orlando International Airport averages 825 flight operations per day and accommodates almost 34 million annual passengers. In total, OIA is responsible for 16,600 jobs on airport, 62,100 direct and indirect jobs in the community and over \$20 billion a year in regional economic impact<sup>1</sup>.

<sup>1</sup> GOAA staff correspondence, 2009

## 2.3 Purpose of the Proposed Action

The Airport Sponsor's obligation under current Federal Law is to, among other things, ensure that the safe operation of the airport and airway system is the highest aviation priority<sup>2</sup>, be as self-sustaining as possible under the circumstances existing at OIA both in establishing new fees, rates and charges and in generating revenue from all sources to fund OIA, including reasonable reserves and other funds to facilitate financing or other contingencies<sup>3</sup>, and develop and implement airport plans considering the state and local comprehensive long-range land-use plans.<sup>4</sup> OIA is an essential component of Orlando's continued economic development and will function as a multimodal hub for the Central Florida Regions.<sup>5</sup> Growth of the aviation facilities at OIA and the associated, supportive high-technology in the vicinity at OIA is encouraged in order to successfully compete with other cities in the United States and to capture Orlando's fair share of economic opportunity.<sup>6</sup> Consistent with these statutory responsibilities, and the Goals and Objectives of the City of Orlando's Growth Management Plan, the purpose of the proposed action is to develop existing airport property for large scale aviation and aviation support uses for revenue generation. 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 GOAA concerning increasing and diversifying revenue generation, and good planning principles including use of shared infrastructure and consistency with the City of Orlando's comprehensive long-range land use plans and goals for job creation.

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<sup>7</sup>, that airports should be as self-sustaining as possible under the circumstances existing at each particular airport<sup>8</sup>, and the airport plans be developed considering the state and local comprehensive long range land use plans.<sup>9</sup> Consistent with the FAA's statutory responsibilities under 49 USC § 47101, the purpose of the proposed action is to develop existing airport property for large scale aviation and aviation support uses for revenue generation. 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 GOAA concerning increasing and diversifying revenue generation, and good planning principles including use of shared infrastructure and consistency with the City of Orlando's comprehensive, long range land use plans, and goals for job creation.

**Comment [VL3]:** Revise this section to state that the purpose of the proposed action is to develop existing airport property. FAA will define the policies of the U.S. in the FONSI.

**Comment [sbb4]:** See revised text.

<sup>2</sup> 49 U.S.C. §47101 (a) (1)

<sup>3</sup> 49 U.S.C. §47101 (a), (13)

<sup>4</sup> 49 U.S.C. §47101 (e) (1) and (2)

<sup>5</sup> City of Orlando Growth Management Plan, Future Land Use Element, Goal 4, Policy 4.2.1, November 2010

<sup>6</sup> City of Orlando Growth Management Plan, Future Land Use Element, Goal 4, Policy 4.1.1, November 2010

<sup>7</sup> 49 U.S.C. §47101 (a) (1)

<sup>8</sup> 49 U.S.C. §47101 (a), (13)

<sup>9</sup> 49 U.S.C. §47101 (e) (1) and (2)

## 2.4 Need for the Proposed Action

### 2.4.1 Provide for Major Aviation Facilities

The proposed action is to ~~provide the capability to expeditiously~~ develop large scale aviation facilities at OIA consistent with GOAA's obligations in Section 2.3 above, as demand warrants. The types of aviation facilities could include but not be limited to uses such as aircraft manufacturing, aircraft maintenance, cargo, fuel 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 2012-2014 time frame and is planned for build out in 2030. The development of major aviation uses at OIA will be driven by user demands.

GOAA (the sponsor) has determined that a large contiguous site of approximately 1,000 acre site is required to which would maximize flexibility for a single large scale end user and/or multiple large scale Aviation Uses. A large contiguous site would maximize the efficiency of the infrastructure and investment required consistent with GOAA's statutory and local responsibilities noted in Section 2.3 above, while increasing the likelihood of successfully marketing and attracting a combination of major aviation uses.

An approximate 1,000 acre planned aviation development example on OIA property is the Tradeport area on the west side of the airport. The Tradeport area includes a total of 1,318 acres of aviation development and infrastructure. "Appendix 2A-Tradeport" provides the location of the Tradeport DRI area at OIA. In 1985, GOAA received local approval (Development of Regional Impact – Development Order) to develop 913 acres of aviation development. This development was adjacent to the existing west ramp area (363 acres) which has direct access to Runway 18R-36L (12,004 feet in length). Currently, the Tradeport area serves numerous existing aviation support facilities including two Continental maintenance hangars, a Federal Express sort facility, a US Postal Service sort facility, Flight Safety facility, the Cessna maintenance facility and Signature and Galaxy Fixed Base Operators (FBO). Revenue generation from land leases in the Tradeport area is estimated to be \$9.4 million annually<sup>10</sup> and generates considerable employment opportunities for the Orlando area. This example of locating aviation development adjacent to an air carrier runway with shared infrastructure and areas for aviation support uses provides further support to in the need to plan large contiguous areas for aviation and aviation support development that can capitalize on shared infrastructure.

The Federal, state, and local approval process for the East Airfield Development Area may take as long as three to six years to complete. ~~Securing the FAA ALP approval~~ NEPA review of GOAA's request to modify its ALP to reflect the Proposed Action is a necessary prerequisite for ~~the airport~~ GOAA to secure necessary required federal approvals for the Proposed Action that will allow GOAA to effectively deliver the land for Aviation Uses consistent with the Purpose and Need. The overall process to obtain necessary government approvals includes a number of steps (**Appendix A** provides further details)<sup>11</sup>:

<sup>10</sup> Source: GOAA Commercial Properties Department

<sup>11</sup> See section 3.5 for status of required permits and approvals

**Comment [VL5]:** The need for a 1000 acre site is not supported. The examples in Appendix do not support. The purpose is to develop the East Airfield development area on demand.

**Comment [sbb6]:** Additional support for the approximate 1,000 acres has been added to Section 2.0 in multiple locations. Information on the Tradeport DRI (an existing approximate 1,000 acre aviation development on OIA property) has been added to this sub-section. A new Appendix item has been added to show the location and acreage area for the Tradeport Area. For the purposes of the response submittal, the appendix item is named "Appendix 2A – Tradeport." During the production of the Final EA, this appendix will be re-lettered to follow the alphabetical order.

**Comment [VL7]:** This is not a statement that FAA can support

**Comment [sbb8]:** See text revision

- Airport Layout Plan (ALP) approval from the FAA for the East Airfield Development Area
- Section 404, Clean Water Act permit from the United States Department of Army Corps of Engineers (USACOE),
- 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) review,
- Various other local construction permits.

Each of the above approvals and such other relevant approvals referenced in Table 3.5-1, is necessary for the Airport Sponsor or the end user to construct an aviation use consistent with the Proposed Action. Because of the length of time and resources necessary to obtain these numerous approvals<sup>12</sup>, the sponsor cannot effectively or efficiently respond to large scale aviation opportunities that could enhance and diversify revenue generation at OIA without first securing the necessary governmental approvals to implement certain components of the Proposed Action important to meeting the Purpose and Need. These components included:

- Demucking and backfilling wetlands with suitable material in accordance with pertinent approvals from the USACOE and SFWMD;
- Construction of all or portions of the master surface water management system in accordance with SFWMD approvals;
- Construction of all or a portion of necessary infrastructure such as utilities, roadway, intersection or other transportation improvements;
- Construction of all or a portion airfield taxiway and apron improvements to the east of Runway 17L/35R.

In order to create a compatible land use and buffer to adjacent residential land uses, it is important to construct buildings, parking areas, landscaping and bufferyard features within the Category B and C areas along the northern and southern portions of Dowden Road,

accommodate, at a minimum, the overall plan and infrastructure for such uses.

The need for obtaining such approvals as a condition precedent to efficiently and effectively attract securing such opportunities consistent with the Proposed Action has been demonstrated at a number of Florida locations.

One large-scale, long-term, multi-use project known as the Lake Nona Development of Regional Impact is located directly south of the Proposed Action. Lake Nona is a master-planned project which had obtained governmental authorizations at the federal (e.g., Corps), state (e.g., SFWMD ERP) and

<sup>12</sup> Based on the Airport Sponsor's experience, obtaining Corps approval for major projects at OIA have taken between -- and -- months, approximately -- to completed DRI level of Review, -- months for local development orders and -- months for South Florida Water Management District conceptual approvals and -- months for construction authorization. The South Florida Water Management District issues its conceptual approval environmental resource permit for the Proposed Action 53 months after receipt of the Airport Sponsor's application.

**Comment [VL9]:** Update status in footnotes. How is the last bullet different from the City of Orlando approvals?

**Comment [sbb10]:** Status footnote added to refer the reader to section 3.5 for status. Bullet deleted.

**Comment [VL11]:** Without data provided to support this claim, we cannot support this statement (e.g., are approvals in place necessary to attract large opportunities; provide evidence of this occurring at other Florida locations)

**Comment [sbb12]:** See examples below.

**Comment [VL13]:** This should not be used as an example because it is not aviation use.

**Comment [sbb14]:** GOAA maintains that the three examples provide adequate support for the statement "The need for obtaining such approvals as a condition precedent to efficiently and effectively securing opportunities consistent with the Proposed Action has been demonstrated at a number of Florida locations." It has been GOAA's experience in the operation of OIA and Orlando Executive Airport that securing the necessary governmental approvals in order to timely and predictably deliver construction ready sites for end users is an important component for end user site selection. Such approvals include, but may not be limited to, local development orders to ensure consistency local comprehensive plans, SFWMD permits for master surface water management systems and backbone infrastructure, and, where "waters of the United States" are present, the USACOE. Several of these opportunities have presented themselves at OIA, including Jet Blue University and Maintenance/LiveTV Hangar as well as Flight Safety and Cessna Maintenance facility located on Tradeport located west of Runway 18R-36L. The Lake Nona DRI/Medical City presents another example demonstrating that the probability of securing end-users is increased where certain governmental approvals have been issued. Medical City was located in a portion of the Lake Nona DRI which had obtained a local development order, a conceptual approval permit from the SFWMD and authorization from the USCOE which encompassed all of Lake Nona south of the Greenway (S.R 417) Similar to the Proposed Action, an end user selecting Medical City to construct and operate a facility would obtain construction authorization from both the City and SFWMD prior to constructing and incorporating their facility into the Lake Nona master infrastructure system (e.g., roads, utilities and surface water management).

local levels (e.g., DRI development order) which addressed major issues, including environmental resources. Lake Nona established a 600 acre Science and Technology Park that created the opportunity to attract the Nemours Children's hospital, the University of Central Florida's college of medicine, and plans for the MD Anderson Cancer Center, the Veteran Affairs Medical Center and the University of Florida Academic and Research Center in just over 2 years. Having the governmental authorizations in place for the master plan and associated environmental impacts, size of the site, along with the sharing of major infrastructure, helped facilitate locating these "economic catalysts" to Lake Nona.

-Similar results have been demonstrated at OIA in the past. While smaller in magnitude, the Jet Blue University and Maintenance/LiveTV Hangar are aviation support uses which located to portions of OIA which were included in OIA approved master plan, and were subject to the requisite state and federal environmental approvals. In 2003, Jet Blue announced plans to build a new flight training center and aircraft maintenance hangar at OIA. The two facilities collectively involved an investment of \$160 million and created 150 high paying jobs at OIA. Jet Blue chose to locate the two facilities in central Florida because of the region's dominance in the modeling, simulation and training sector and because the sites proposed by the airport were ready for development. Jet Blue was able to develop a design and construction schedule for the two facilities that would coincide with the company's business plan to expand its aircraft fleet and service area and open the facilities in less than two years because OIA had previously completed the process of obtaining ALP, master plan and environmental approvals for larger areas which included the Jet Blue parcels<sup>13</sup>. Without the new training facility, the airline would have had difficulty meeting the demand for new flight crews.

In contrast to both Lake Nona Medical City and the Jet Blue facilities is The Scripps Research Institute (TSRI) located in Palm Beach County, Florida. TSRI, a large biotechnology research organization headquartered in California, announced plans in 2003 to expand its operations in Florida. TSRI selected Palm Beach County as its preferred location for the Scripps Biomedical Institute, the new research facility and accompanying research park, and announced plans to open the facility in 2006.

The initial site for the TSRI facility was an approximately 1,919-acre agricultural site in rural Palm Beach County which would be used to establish the TSRI facility and affiliated uses. The site was acquired in 2004 (at a cost of more than \$60 million) and consisted of a mix of agricultural, conservation, and other low intensity uses. The site did not have any major infrastructure to serve the facility (e.g., utilities and roadways). The site did not have local, state or federal governmental approvals necessary to construct the TSRI facility, including the surface water management system to serve the facility and affiliated uses. The Palm Beach County Growth Management Plan future land use designation for the site did not include uses such as the TSRI facility and affiliated uses. Accordingly, and development of the site for the TSRI facility and affiliated uses was not consistent with the County's comprehensive plan policies and land use designations. After several years of trying to obtain the entitlements to construct the initial

<sup>13</sup> The Jet Blue Parcels were environmentally reviewed and approved under the Fourth Runway and Midfield Development Area EA (1990). The Jet Blue parcels were included in the 1995 ALP update/approval as part of the terminal support area (land use page of the ALP set). Currently, the 2005 approved ALP has the detail design of both parcels.

**Comment [VL15]:** How big are these 2 facilities? This might help us support either the "large area" or the 150 acres we use as screening criteria.

**Comment [sbb16]:** The Jet Blue University site is approximately 14 acres and the aircraft maintenance hangar site is approximately 15 acres.

**Comment [VL17]:** Provide a reference for these approvals. And we don't approve master plans.

**Comment [sbb18]:** Reference for approvals has been added via footnote. The master plan item has been removed from the text.

**Comment [VL19]:** Ditto per comment VL comment 6.

**Comment [sbb20]:** See response sbb14 (response to VL6 which is now VL13)

TSRI facility, in 2006 the TSRI research facility was moved to an alternative site with most of the necessary governmental approvals, such as local, state and federal approvals, including an approved DRI development order, which facilitated the timely construction of the TSRI facility which was adjacent to a previously approved project where future TSRI facilities could be accommodated, within a previously approved DRI, and future TSRI facilities were planned within an adjacent DRI. This relocation to a site that had obtained necessary government approvals facilitated opening the TSRI facility in only three years<sup>14</sup>.

These examples demonstrate the importance of planning and early attention to the various approval processes and permitting timelines.

### 2.4.1.1 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.

The master development concept provides the flexibility of developing large scale aviation uses and related support under one operator or a number of entities at a single location. An example of the types of development that could be included in a master development/campus type approach is the 150 acre Airbus facility that was pursued by GOAA. With the master development approach, a number of similar facilities could be developed on site and have the additional lands available for shared infrastructure and support facilities. **Appendix B** provides correspondence regarding the potential Airbus facility which describes 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 to enhance and diversify revenue generation by 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, OIA has not had the Federal, state, and local approvals necessary to make otherwise suitable airport owned property available for such Aviation Uses within the time constraints presented by such opportunities.

<sup>14</sup> It is important to note that a legal challenge was filed to issuance of the Section 404 permit for the project at the original site. The federal court in that case concluded in part that the USACE's National Environmental Policy Act (NEPA) review was arbitrary and capricious because it included consideration of only a portion (535 acres) of the entire project site and therefore directed the USACOE to conduct additional environmental analysis.

**Comment [VL21]:** It is interesting that the location already had a DRI, unlike the proposed action.

**Comment [sbb22]:** See added text. After an unsuccessful attempt to obtain the requisite governmental approvals for a site with no approvals, TSRI announced it would open its facility within an existing project with most governmental approvals in place, including the local development order issued in accordance with Section 380.06, Florida Statutes (DRI level of review).

**Comment [VL23]:** 150 acres....not 1000 acres.

**Comment [sbb24]:** The 150 acre Airbus facility is an example consistent with the types of end uses described in the master development/campus style approach development for the site. The EA document provides a description of two approaches to implement the proposed action. One approach would be to accommodate a single end-user that would necessitate most of the site. A second approach would be to accommodate multiple large scale Aviation Uses in a master-planned, campus-type of development which maximize the efficiencies of scale with shared infrastructure. The 150 acre Airbus facility is demonstrative of the type of project that could be accommodated in the latter approach in implementing the Proposed Action.

**Comment [VL25]:** It seems like the only facility supported in Appendix B is the EADS facility. Are there any other "missed opportunities"?

**Comment [sbb26]:** See Comment sbb28 below

**Comment [VL27]:** This was the EADS facility that when in at Mobile. This statement is not supported. The Airbus facility was not located at OIA due to the lack of Federal, state, and local approvals. Did OIA have any of the site selection criteria referenced. Appendix B does not support.

**Comment [sbb28]:** Based upon discussions between GOAA and representatives from Airbus and the Very Large Commercial Transport (VLCT) consortium dating back to the mid-1990's through 2005, in order for an airport to be competitive for the large-scale single use facilities, such as the EADS facility, or the A380 manufacture and assembly facility, the airport needed to own a large parcel of land capable of accommodating the such a large single-use aviation facility or complex of several large scale aviation uses, and sufficient governmental approvals to deliver a construction ready site. At the time of the earliest discussions, GOAA had not acquired any of the East Airfield Development Area. By the time GOAA was discussing the EADS facility in 1995 GOAA had acquired approximately 1,150 acres of the East Airfield Development Area but had not initiated or completed the process to obtain the necessary governmental approvals to meet the minimum needs for the proposed aviation facility.

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. On October 28, 2009, Boeing announced that a second manufacturing and assembly plant for the Boeing 787 aircraft would be located in Charleston, South Carolina. The 240 acre site doubles the existing facility in which Boeing had purchased an ownership interest from Vought in 2008. In May 2010, Boeing announced that certain 787 interior parts would also be manufactured in South Carolina. It is estimated that the 230 firms that provide parts for the 787 could result in bringing as many as 16,000 additional jobs to South Carolina (Appendix C provides further information on these three examples). With the desire to provide for multiple uses similar to [these the examples described above](#) with flexibility to accommodate expansion and maximize the benefit of shared infrastructure, and key suppliers, a site of at least approximately 1,000 acres is considered the minimum that would be required optimal 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 2.4.1). Total aircraft operations at towered facilities are projected to increase 16 percent nationally by 2025 and 265 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. [Continued growth in operations indicates long term demand for aircraft, maintenance activities, and facilities nationally to support aviation demand. The higher growth rates related to Florida and Orlando indicate the opportunity to take advantage of an increasing market share in supporting a variety of aviation related activities.](#)

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.

**Comment [VL29]:** Explain the likelihood of this type of facility locating at OIA...

**Comment [sbb30]:** In order to establish the amount of land necessary to accommodate either a single large scale aviation end use or a number of large scale aviation end users in a master planned/campus style project, GOAA researched the market for existing aviation uses, including the Boeing facility in Everett Washington as an example of a 1,000 acre single use facility, smaller, but still large scale end uses such as aviation component manufacturing, and other associated aviation support uses 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.

**Comment [VL31]:** Ditto VL11

**Comment [sbb32]:** See sbb22 response.

**Comment [VL33]:** Melbourne Airport was strongly considered for this development, however they did not have ALP approval. There is no support information provided in Appendix B for this opportunity.

**Comment [sbb34]:** Further information on these three examples are provided in Appendix C as noted in the text within this paragraph. These examples are not part of Appendix B.

**Comment [VL35]:** 240 acres not 1000....

**Comment [sbb36]:** The 240 acre Boeing facility is an example consistent with the types of end uses described in the master development/campus style approach development for the site. The EA document provides a description of two approaches to implement the proposed action. One approach would be to accommodate a single end-user that would necessitate most of the site. A second approach would be to accommodate multiple lar...

**Comment [VL37]:** This doesn't seem reasonably supported by the information above.

**Comment [sbb38]:** See response provided in sbb6 above.

**Comment [VL39]:** Since you are using the 2008 TAF provide a discussion that compares the 2008 TAF with the most recent TAF – particularly if the forecast numbers are substantially different. If th...

**Comment [sbb40]:** The 2008 TAF was compared with the current year 2010 TAF and it was determined that it was consistent with the current TAF based on the criteria defined in the FAA ...

**Comment [VL41]:** Include the percentages in Table 2.4.1. Explain how this growth in aircraft operations supports the long term demand for facilities to support aviation activities, particular ...

**Comment [sbb42]:** Percentage of total increase were added to Table 2.4.1. Text was added to this paragraph to explain the comment.

**TABLE 2.4.1  
FORECAST TOTAL AND AIR CARRIER OPERATIONS**

Airports	2008	2015	2025	Annual Growth Rate (2008-2025)	Total Increase
<b>Total Operations</b>					
Orlando International Airport	358,787	357,884	468,903	1.6%	31%
State of Florida	8,940,576	9,590,314	11,224,576	1.3%	26%
National	111,461,739	116,434,137	129,382,700	.9%	16%
<b>Air Carrier Operations</b>					
Orlando International Airport	298,734	326,790	430,724	2.2%	44%
State of Florida	1,238,440	1,354,532	1,731,884	2.0%	40%
National	14,038,421	14,809,650	18,214,010	1.5%	30%

The FAA December 2010<sup>99</sup> Terminal Area Forecast (downloaded from <http://aspm.faa.gov/main/taf.asp-ontaf.asp> on 4/8/15/40/40) increased the total activity projection for OIA to ~~6085~~15,000 in 2025. This equates to a 2.4 percent annual average growth rate from 2009 levels. Total national activity in 2025 was projected at ~~424-117~~ million. Total Florida activity was projected at ~~40-29.5~~ million.

Activity projections utilized in this document (2008 TAF) are within 10% of the current TAF (2010) in 5 years (2015) and within 15% of the current TAF in 10 years (2020). The following information compares the 2008 TAF and 2010 TAF: For year 2015, the 2008 TAF was 357,884 and in 2010 TAF it was 372,294 (a 3.9% difference). For year 2020, the 2008 TAF was 409,579 and the 2010 TAF was 437,320 (a 6.3% difference). The percentage differences are within the criteria defined in the FAA "Guidance on Review and Approval of Aviation Forecasts" (December 23, 2004).

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

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.<sup>15</sup> 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. Access to belly cargo of passenger aircraft can facilitate the quick movement of materials virtually anywhere in the county. The high volume of aviation activity also provides a market for future maintenance to aircraft. 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 (150,000 ft<sup>2</sup> building on a 25 acres site) is expected to employ approximately 200 skilled workers by 2011.<sup>16</sup> 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.<sup>17</sup> 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

<sup>15</sup> www.portcanaveral.org/cargo

<sup>16</sup> Embraer Aviation News Release, May 13, 2008, *Embraer Plans to Expand its Operations in the US.*

<sup>17</sup> Orlando Business Journal, October 17, 2008, *Melbourne International to Land Another Aircraft Maker?*

**Comment [VL43]:** Explain this statement.

**Comment [sbb44]:** Additional text added to explain this statement.

**Comment [VL45]:** Melbourne requests ALP approval once they have a proposed action.....

**Comment [sbb46]:** GOAA has reviewed the MLB Master Plan. MLB is a land-locked facility with smaller parcels available for aviation support uses. The maximum parcel size of 60 acres. Many of the aviation facilities and developments reflected in the Melbourne Regional Airport Layout Plan dated October 1969 and several airport uses that were propose or identified as "future" on the ALP and the ALP Report supplement dated October 1969 were vested from the DRI level of review requirements established in Section 380.06, Florida Statutes. Binding Letter of Interpretation of Vested Rights Status Melbourne Regional Airport, BLIVR-691-006, State of Florida Department of Community Affairs, August 1, 1991. Finally, the City of Melbourne Comprehensive Plan, Chapter III Transportation Element, Goal 1 Melbourne Transportation Network, Objective 1.8 Aviation Facilities, adopts the Melbourne Airport Master Plan in accordance with the provisions of Section 163.3177(6)(k), Florida Statutes. According to Section 380.06(24)(q), Florida Statutes, any development identified in an airport master plan adopted into a local government comprehensive plan pursuant to Section 163.3177(6)(k), Florida Statutes, is exempt from the DRI level of review.

**Comment [VL47]:** How large is the facility?

**Comment [sbb48]:** The facility is 150,000 square feet on a 25 acres site with an option for an additional 70 acres for future development.

and South America<sup>18</sup> 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.<sup>19</sup> [Since the announcement of Embraer’s investment in the new facilities, two other aviation companies, AAR Corp. and MidairUSA, began pursuing new facilities at the airport. These announcements are directly attributed to the seed effort of the Embraer facility and underscore the desirability of a campus style approach.](#)<sup>20</sup>

#### 2.4.1.2 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.” A portion of 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 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 ([see Appendix 2B-“City of Orlando Information” for a copy of the City of Orlando Future Land Use Element Goal 4](#)). 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 multi-lane roadway system. Innovation Way will extend from UCF to the airport and will include expansion of Dowden Road 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

**Comment [VL49]:** Update with any recent correspondence received from the City. Explain any approval processes.

**Comment [sbb50]:** Other than the updated Future Land Use Map in the Sector Plan, there has been no other recent correspondence regarding the Sector Plan. The updated FLUM is found in Section 5.0, Figure 5.3-2 (updated November 10, 2010).

A new appendix item is being inserted into the document. This appendix item provides a copy of the following items:

- City of Orlando Future Land Use Element Goal 4
- City of Orlando Southeast Sector Plan “Development Guidelines and Standards”
- City of Orlando Land Development Code Chapter 68

For the purposes of GOAA’s response to FAA’s comments, the new appendix item is being referred to as “Appendix 2B – City of Orlando Information”. During the production of the Final EA, this appendix will be re-lettered to follow the alphabetical order.

<sup>18</sup> <http://www.evektor-aircraft.com/>

<sup>19</sup> Orlando Business Journal, October 17, 2008, *Melbourne International Airport on its way to becoming Manufacturing Hub*

<sup>20</sup> [Florida Today Tallahassee.com February 20, 2011, Embraer Seeds Growth in Brevard](#)

allows for shared use of these facilities with future development on site and provides the opportunity for multiple entry points to the property (see Appendix 2B for the City of Orlando Southeast Sector Plan “Development Guidelines and Standards”).

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.<sup>21</sup>

## 2.4.2 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 satisfy GOAA’s obligation to be as self-sustaining as possible under the circumstances at OIA both in establishing new fees, rates and charges and in generating revenue from all sources to fund OIA, including reasonable reserves and other funds to facilitate financing or other contingencies, and supports the FAA’s statutory responsibilities under 49 U.S.C. § 47101 and the airport’s grant obligations.<sup>22</sup> 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.<sup>23</sup> 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.<sup>24</sup>

Comment [VL51]: Remove.

Comment [sbb52]: Text removed. See revised text.

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.<sup>25</sup> 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

Comment [VL53]: Is this goal stated in a public document (e.g., the master plan)?

Comment [sbb54]: See added footnote.

<sup>21</sup> 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

<sup>22</sup> 49 U.S.C. §47101 (a)(13) and Grant Assurance 24.

<sup>23</sup> 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.”

<sup>24</sup> Greater Orlando Aviation Authority, Comprehensive Annual Financial Report, FY end September 30, 2007.

<sup>25</sup> GOAA Executive Director’s “State of the Airport” address, May 19, 2010 – Keys to Fiscal Stewardship – Keeping cost per enplaned passenger competitive by pursuing non-airline revenue and commercial development. Fitch Affirms Greater Orlando Aviation Authority’s Revenue Bonds at AA- and Affirms Sub Lien at A+, “Sound financial operations with Diverse source of operating revenues.... With airport generating significant revenue from non-airline sources....”

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 that are most closely associated with the type of uses expected in the high intensity airport support uses of the Proposed Action include the 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 of the Proposed Action (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.

[See Section 3.0 for further discussion of 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.

### 2.4.3 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 [to avoid the potential to negatively impact the safe and efficient operation of the airport.](#)

These standards ~~are~~ outlined in the Code of Federal Regulations, various FAA Orders and Advisory Circulars, and other FAA guidance. ~~These~~ address a wide range of issues including airspace protection, aircraft movement areas, navigation aids, air traffic control line-of-sight, wildlife hazard management, safety, security, etc. Additionally, the efficient use of airport property through use of shared infrastructure, along with safety, is a key consideration in maximizing the benefit of any limited infrastructure resource.

Airspace protection is regulated by FAR Part 77, Objects Affecting Navigable Airspace, as well as in FAA Order 8260 Terminal Instrument Procedures or TERPS. Both involve imaginary surfaces that must not be penetrated by any object, both natural and man-made, for the safety of aircraft operations unless approved by the FAA. FAR Part 77 allows the “FAA to identify potential aeronautical hazards in advance thus preventing or minimizing the adverse impacts to safe and efficient use of navigable airspace.” Terminal Instrument Procedures (TERPS) were designed for the various types of instrument approaches that can be made to a runway. TERPS are directly related to the ability of the airport to maintain operation during inclement weather and maintaining these surfaces free of obstacles is critical to the overall capacity and safe operation of the airport. Generally, but not always, ensuring that Part 77 surfaces are not exceeded will minimize potential for impacts to TERPS. These surfaces primarily limit development along the extended runway centerline and, to a lesser extent, areas lateral to the runway. By locating large scale aviation uses at the periphery of the airport, the potential for impacts for airspace related operational impacts is minimized.

Aircraft movement areas include runways, taxiways and apron areas that facilitate the movement of aircraft. These areas have specific design criteria defined by the FAA to ensure the safe and efficient movement of aircraft while arriving/departing or transiting the airfield. These design criteria address a variety of factors including pavement width, shoulder requirements, fillet design, wing tip clearances, taxiway to runway and taxiway/taxilane to fixed or movable object clearances, among others. The clearances provided when developing new facilities should be adequate to accommodate aircraft that might reasonably be expected to use the facilities while providing long term flexibility.

Air Traffic Control line-of-sight also can play a key role in determining whether a new facility will be compatible with airport operations. Controllers must have a clear, unobstructed view of all movement areas (runways, taxiways, holding areas) on the airport. To avoid impeding line of sight, some areas may be restricted from development and others may have height or other limitations placed upon them. Other factors include shadows casted by buildings, future ramp lighting, or other external light sources. By placing large scale development in areas lateral to the runways, along the perimeter of the airport, and beyond the outermost runways, the potential for line of sight conflicts will be ~~eliminated~~reduced.

Comment [VL55]: Shouldn't this be "reduced"?

Comment [sbb56]: Text changed to state "reduced"

Navigational aids or NAVAIDS provide electronic and visual guidance to aircraft arriving to or departing an airport. NAVAID signals can be sensitive to fixed or movable objects located within defined critical areas. Guidance and requirements for minimizing potential signal interference are outlined in FAA Advisory Circulars and Orders. Failure to protect NAVAID critical areas can result in a reduced margin of safety and can impede the operational efficiency and capacity of an airport. These areas are generally located in the immediate vicinity of a runway or along its extended centerline but can extend laterally or be located more remotely depending on the facility. Again, developing large scale aviation uses in areas lateral to the runways, along the perimeter of the airport, and beyond the outermost runways, will minimize potential NAVAID impacts.

Development of facilities with airfield access at a commercial service airport requires that a secure airside operation can be maintained. Access to the airside through buildings will need to be able to be controlled and secured. Access to the airside outside of buildings will require fencing and checkpoints for the secure processing of persons, materials and machinery. The project will require direct airfield access and the configuration of the project and extent to which airside facilities can be shared will maximize the extent to which this can be done efficiently.

Location of storm water ponds or other water bodies is a key consideration for development near an airport. Due to the potential as a wildlife attractant, water bodies should be removed or located as far from the runways and active airfield areas as possible or designed to minimize the potential attractants. Advisory Circular 150/5200-33B, Hazardous Wildlife Attractants On or Near Airports, outlines criteria to minimize potential wildlife conflicts with project development. Detailed design features including incorporation of appropriate design considerations in accordance with the FAA AC 150/5200-33B will be submitted to the SFWMD for review. Additionally, consolidating storm water infrastructure for the entire development site will help in minimizing or managing wildlife attractant issues while maximizing the efficient use of property.

**Comment [VL57]:** Discuss design requirements of stormwater ponds.

**Comment [sbb58]:** See added text.

The land mass required to develop a commercial service airport along with the cost of providing runways, taxiways, NAVAIDS, surface access and other supporting infrastructure is significant. Therefore, using airport land efficiently to maximize the aviation benefit provided for those developments that require direct airfield access or access to airport infrastructure is major consideration when addressing the development of airport property. The airport's experience on the west side of the airfield, along Tradeport drive, 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 running parallel to the runways to facilitate the rapid deployment of military aircraft. Such an approach can limit aircraft parking apron frontage and the 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 at OIA 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.

A fuel farm is being proposed to provide the airport and ancillary users with a second fuel supply. Currently, the airport and its users have access to one fuel farm on the west side of the property. That facility is supplied by refinery sources from the gulf coast via barges across the Gulf of Mexico, a port facility in Tampa and pipeline from the port to central Florida. During the past five years, the impacts of hurricanes and other petroleum supply disruptions have caused the airport to nearly run out of fuel on several occasions. Except for the exceptional measures to "tanker" fuel to the airport via aircraft, the airport would have exhausted its fuel supply. In January 2006, the Florida Department of Environmental Protection advanced Florida's Energy Plan to Governor Bush that included recommendations to promote fuel diversity to the State of Florida. The goal of this Plan was to limit future potential supply disruptions and ensure a stable energy supply.

**Comment [VL59]:** Does this plan support the development of backup fuel farms for airports or have some relevance to the discussion?

**Comment [sbb60]:** Sentence added after this statement to further clarify the goal of the plan. See next paragraph and added footnote reference for additional support.

At Port Canaveral, a 3 million barrel fuel farm recently became operational. Thus, both east and west coast fuel sources can serve the needs of Central Florida. It will also be beneficial for a second fuel farm to be located on east side of the airfield for supply purposes since the current fuel farm is located on the west side of the airfield and the east airfield provides the most direct access to the port, minimizing the need to construct a pipeline across the terminal / airfield complex. Having a separate set of fuel farms provides another set of system redundancy in the event one becomes inoperable due to system failures and or fire. This example is highlighted by the recent fuel farm fire at Miami International Airport, when a short in a fuel pump cause a fire that resulted in hundreds of flight cancelations and disruptions to the national air system<sup>26</sup>. It also improves the competitiveness of fuel price for users of fuel products by expanding the market for refined fuel from the gulf of Mexico to European and middle Eastern refiners.

It also improves the competitiveness of fuel price for users of fuel products.

Comment [VL61]: How?

Comment [sbb62]: This sentence has been deleted.

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<sup>26</sup> Sampson, H. 'Normal' still days away at Miami International Airport after fuel-tank fire. Miami Herald March 25, 2011.

## Continued Comments for Section 2.0

**Comment [SBB 36]:** The 240 acre Boeing facility is an example consistent with the types of end uses described in the master development/campus style approach development for the site. The EA document provides a description of two approaches to implement the proposed action. One approach would be to accommodate a single end-user that would necessitate most of the site. A second approach would be to accommodate multiple large scale Aviation Uses in a master-planned, campus-type of development which maximize the efficiencies of scale with shared infrastructure. The 240 acre Boeing facility is demonstrative of the type of project that could be accommodated in the latter approach in implementing the Proposed Action.

**Comment [VL39]:** Since you are using the 2008 TAF provide a discussion that compares the 2008 TAF with the most recent TAF – particularly if the forecast numbers are substantially different. If the TAF numbers were used for evaluation of environmental consequences, we may need a sensitivity analysis – to show the consequences aren't any different.

**Comment [sbb40]:** The 2008 TAF was compared with the current year 2010 TAF and it was determined that it was consistent with the current TAF based on the criteria defined in the FAA “Guidance on Review and Approval of Aviation Forecasts” (December 23, 2004). See table 2.4.1 footnotes for this comparison.

**Comment [VL 41]:** Include the percentages in Table 2.4.1. Explain how this growth in aircraft operations supports the long term demand for facilities to support aviation activities, particular large scale aviation uses. The projected growth in aircraft operations is related to passengers.