

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ORLANDO AIRPORTS DISTRICT OFFICE
ORLANDO, FLORIDA

FINDING OF NO SIGNIFICANT IMPACT

**Airfield Modifications for New Large Aircraft
Orlando International Airport
Orlando, Florida**

June 2010

BACKGROUND: The Greater Orlando Aviation Authority (GOAA), as the Airport Sponsor, is proposing airfield modifications at the Orlando International Airport (OIA) in order for Design Group VI aircraft (such as the A-380 or the B747-800), to operate at the Airport. To facilitate approval of the requested actions, GOAA has submitted to the FAA an Environmental Assessment (EA) dated June 14, 2010.

PROPOSED ACTION: These proposed airfield modifications are associated with access to Runways 18R and 18L, the south cross field taxiway and to the terminal gate area. The Proposed Action environmentally analyzed in the EA includes the following projects:

Taxiway B Shoulder Widening from Taxiway (TW) F to TW B2 – this project would widen the existing taxiway shoulder pavement by adding additional 17.5 feet of paved area on each side to obtain a total of 180 feet paved area for taxiway and shoulders combined. The additional paved shoulder is required for preventing jet blast from the New Large Aircraft outboard engines.

Taxiway B-1 Shoulder Widening from TW B to TW A - this project would widen the existing taxiway shoulder pavement by adding additional 17.5 feet of paved area on each side to obtain a total of 180 feet paved area for taxiway and shoulders combined. The additional paved shoulder is required for preventing jet blast from the New Large Aircraft outboard engines.

Taxiway F Bridge Improvements - this project would strengthen the existing taxiway bridge over the Airport South Access Road (currently designed for a maximum aircraft gross weight of one million pounds) to accommodate Airplane Design Group VI Aircraft with a maximum gross weight of 1.24 million pounds.

Airside 4 Gate Modifications - this project would maximize the aircraft parking capacity at Airside 4, Wing 11 to accommodate the current aircraft mix and future various positions for New Large Aircraft

Taxiway B-2 Extension – this project would extend Taxiway B2 between Runways 18L and 18R (as depicted on the conditionally approved 2005 ALP) to provide dual connector taxiway access to the runway end of Runway 18R, a primary runway at OIA and the designated runway 18 L, meeting the FAA standards for Airplane Design Group VI Aircraft.

The proposed projects are discussed in more detail in Section 1.2 and shown on Figure 1-2 in the attached EA.

PURPOSE AND NEED: Orlando International Airport is currently configured to accommodate operations by aircraft up to and including Airport Design Group V. Group V aircraft include aircraft such as the 747-400 with wingspans of between 171 and 214 feet and a tail height of between 60 and 66 feet. New large aircraft,

designated as Design Group VI, are entering the air carrier fleet and include the Airbus A-380 and 747-800. These larger aircraft have wingspans of between 214 and 262 feet and tail heights of between 66 and 80 feet. With greater freight and passenger capabilities than other aircraft currently in operation, these aircraft are also heavier and require wider pavement sections to support their operation and minimize potential for ingestion of debris. They also require gate modifications to accommodate passenger loading and unloading. While these aircraft are larger and heavier, they are equipped with high bypass engines which actually make them quieter than aircraft such as the 747-400. Additionally, from an emissions per passenger or per pound of freight standpoint, they are also said to have less impact than many of the larger aircraft currently in operation. Activities by these aircraft have the potential to replace multiple flights by smaller aircraft due to their higher load capability.

To remain both a viable and preferable destination for these new large aircraft, OIA must complete these modification before they can be brought into the Orlando market. These modifications will enable passenger carriers to have a wider range of aircraft that they can use to move passengers, and cargo carriers to have additional flexibility in handling air freight.

The need for the proposed airfield modifications has been identified in a number of documents including the *2004 Master Plan Update for OIA*; the 2005 report entitled *Orlando International Airport Prepares for the A380* which identifies the needed construction projects; and, the recent FAA *National Plan of Integrated Airport Systems* (NPIAS) document that includes OIA as one of the airports in the United States likely to be served by the A-380. Section 2.2 of the attached EA summarizes the need as presented in these documents.

ALTERNATIVES: Because OIA has four air carrier sized runways and numerous taxiways, there were a number of alternatives that could meet the purpose and need. The A-380 and 747-800 are very large aircraft that are expected to travel on long stage lengths (Orlando to and from Europe for example) and with heavy cargo or passenger loads. Runways 18L-36R and 18R-36L are the two longest runways at the Airport at 12,000 feet each. The other two runways at the Airport are 10,000 feet (Runway 17R-35L) and 9,000 feet (Runway 17L-35R) in length.

Aircraft on long stage length flights typically use the Runway 18-36 dual system because of its length and particularly in the summer months when temperatures are high. Thus, from a runway length perspective, the dual Runway 18-36 system would be the best to make taxiway modifications as it would be the preferred runway by pilots operating the new large aircraft.

Thus, the proposed improvements to the Runway 18-36 dual runway system identified above in the **Proposed Action** are the Preferred Alternative. As discussed in Section 5, Environmental Consequences, of the attached EA, the

Preferred Alternative results in either no impact or minimal impact to the 23 environmental categories evaluated in accordance with FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*.

For these reasons, other alternatives (improvements to other runways at the airport) were determined to be not reasonable.

FEDERAL ACTION: The Proposed Action will require revisions to the OIA Airport Layout Plan (ALP) to depict the airfield modifications for the accommodation of Group VI aircraft. The Federal Action is FAA unconditional approval of that portion of the revised ALP depicting the airfield modifications identified in the **Proposed Action** section of this document.

OTHER FEDERAL, STATE AND LOCAL ACTIONS AND PERMITS: FAA approval of the EA and issuance of this FONSI is contingent on the Airport Sponsor completing the following:

- The areas described in the project description are included in the South Florida Water Management District (SFWMD) general permit No. 48-00063-S. This permit has been modified to include all of the work described for the Taxiway B shoulder widening. An application has been submitted to the SFWMD to modify the general permit for work associated with the Taxiway B-1 widening, Taxiway B-2 extension and Taxiway A realignment. No permit is required for the Taxiway F bridge improvements, nor the Airside 4 gate modifications.

ENVIRONMENTAL ISSUES: The environmental consequences section of an EA provides analysis of environmental categories that have the potential to be impacted by the Proposed Action. Due to the Proposed Action being very limited in scope, a majority of the environmental topics listed in FAA Order 1050.1E do not apply. The environmental categories that do not apply, but which are discussed below, include Biotic Resources, Coastal Barriers, Coastal Zone Management, DOT Section 4(f) resources, Federally-listed Threatened and Endangered Species, Energy Supplies/Natural Resources/Sustainable Design, Environmental Justice, Farmlands, Floodplains, Hazardous Materials, Historic and Archeological, Induced Socioeconomic impacts, Social Impacts, Wetlands, and Wild and Scenic Rivers. The remaining impact categories have very minor/temporary impacts or effects; and include Air Quality, Construction, Light Emissions, Noise, Solid Waste, and Water Quality. The No Action alternative does not affect any of the environmental consequence categories.

Air Quality - The City of Orlando and Orange County have been designated attainment areas by the EPA meaning that they meet the National Ambient Air Quality Standards (NAAQS) for all six of the criteria pollutants. As a result, the general conformity rule does not apply to the Proposed Action.

An emissions inventory was conducted to determine whether the proposed action would likely result in a significant air quality impact. This inventory evaluated the net difference in emissions between the Proposed Action and the No Action Alternative. By 2017, it is forecast that 327,148 air carrier/cargo operations will occur at OIA with the proposed action. Of these, the New Large Aircraft will account for 1,400 or .4 percent of total the annual operations for this category of aircraft. The Emissions and Dispersion Modeling System (EDMS-Version 5.1.2) was used to evaluate the air pollutant and pollutant precursors of the 1,400 New Large Aircraft (A380) operations. It was determined that the additional 1,400 A380 aircraft operations and their associated ground service equipment (GSE) would increase the annual emissions of carbon monoxide, volatile organic compounds, nitrogen oxides, sulfur oxides, particulate matter less than 10 microns in diameter, and particulate matter less than 2.5 microns in diameter when compared to the No Action Alternative. The level of increase would be approximately 13 tons, 1 ton, 25 tons, 2 tons, less than 1 ton, and less than 1 ton, respectively. De minimis thresholds are established for each of the NAAQS criteria pollutants at 100 tons annually. Below this level, emissions are considered insignificant or negligible. Since emissions resulting from the Proposed Action are below the de minimis levels for all criteria pollutants, it is unlikely that a NAAQS threshold will be exceeded. Therefore, no significant impact to air quality is expected as a result of the Proposed Action.

Biotic Resources (Including State Listed Species) - The projects related to the Proposed Action will be placed over impervious areas of the airfield or maintained grass areas adjacent to the existing airfield. No state listed species are located in these areas. Thus, no impacts are anticipated.

Coastal Barriers - OIA is not located within the Coastal Barrier Resource System as defined by the Department of the Interior (DOI) under The Coastal Barrier Resources Act of 1982. Thus, no impacts are anticipated.

Coastal Zone Management – The Proposed Action is in accordance with the goals and policies of the airport and local governments; it would occur entirely on airport property, and all permits for construction would be obtained in accordance with local, state, and federal regulations; therefore, it would be consistent with the goals and policies of the Florida Coastal Zone Management Program (CZMP).

Compatible Land Use – As discussed in the noise analysis, no residential or other noise sensitive uses within the future 65 DNL will experience a 1.5 DNL increase and, no significant noise impacts would occur; as such, a similar conclusion can be made that there would be no incompatible land use impacts from the Proposed Action. All construction activities are on-airport.

Construction - All construction activities are on-airport and will be conducted in accordance with FAA AC 150/5370-10, *Standards for Specifying Construction of*

Airports, and by using best management practices (BMPs) in accordance with local, state and Federal regulations. Therefore, impacts due to construction activities would be temporary and not significant.

DOT Section 4(f) Resources – No property would be required from Section 4(f) resources (parks, recreation areas, wildlife refuges) and no indirect effects (such as noise exposure) would occur at such properties. Thus, no direct or indirect impacts to potential Section 4(f) properties are anticipated as a result of the Proposed Action.

Federally Threatened and Endangered (T&E) Species - The projects related to the Proposed Action will be placed over impervious areas of the airfield or maintained grass areas. These areas do not support listed species. Thus, no impacts are anticipated to federally listed T&E Species.

Energy Supply, Natural Resources and Sustainable Design – The Proposed Action would not cause a substantial demand on available energy or natural resource supplies. Therefore, no significant impacts are anticipated.

Environmental Justice - Environmental justice analysis considers the potential of Federal actions to cause disproportionate and adverse effects on low-income or minority populations. Where no property acquisition is involved, Environmental Justice impacts are typically noise related. As the noise analysis shows, no disproportionately high and adverse impacts on minority and low-income populations will occur as a result of the Proposed Action as DNL noise contours are virtually unchanged with the Proposed Action.

Farmlands - The National Resource Conservation Service (NRCS) mapping of farmland designations indicates that no “Important farmlands” are found within the Proposed Action area.

Floodplains – The Proposed Action would not impact any area of the Federal Emergency Management Area (FEMA) designated 100 year floodplain. Thus, no impact to floodplains is anticipated to occur as a result of the Proposed Action.

Hazardous Materials - No sites containing hazardous materials are known to be within the construction areas of the Proposed Action. GOAA will require the contractor to provide a spill response plan in the event contaminants are released during construction. Thus, no significant impacts are anticipated.

Historic and Archaeological – GOAA has conducted a series of past studies and field reviews regarding the presence and significance of historic or archeological sites at OIA. Past surveys of the Proposed Action area conducted for other projects did not reveal any historic or archaeological resources. No impact to these resources is anticipated.

Induced Socioeconomic - The Proposed Action will not induce any shifts or growth in population and will not cause any change in public service demands. There would be no significant changes in business or economic activities. All impacts are due to construction and occur on airport.

Light Emissions and Visual Effects - Taxiway lighting will be installed as part of the proposed projects. The Proposed Action would not result in a substantial increase in light emissions. No visual effects will result from the construction of the Proposed Action.

Noise - The methodology for assessing potential noise impacts included preparing DNL contours¹ for the baseline year 2008 and for the No Action and Proposed Action Alternatives for future years 2012 and 2017. The contours have been prepared to assess if any noise sensitive land uses would experience a significant increase in aircraft noise exposure as a result of the Proposed Action. The results of the EA noise analysis is summarized below:

- √ There are no people or noise sensitive sites located within the baseline year 2008 65 DNL and greater contours.
- √ There are no people or noise sensitive uses located within the future years 2012 and 2017 No Action Alternatives 65 DNL and greater contours.
- √ There are no people or noise sensitive uses located within the future years 2012 and 2017 Proposed Action Alternatives 65 DNL and greater contours.

The results of the analysis shows that no noise sensitive area will experience a significant noise impact of 1.5 DNL or greater when comparing the No-Action Alternative with the Proposed Action; thus no significant impact would result.

Social Impacts - The Proposed Action does not require any relocation of or significant impacts on housing or businesses and there will be no loss in community tax base associated with the implementation of the Proposed Action. No surface traffic impacts would result. There would be no project related impacts anticipated to have a disproportionate effect on children's environmental health or safety. There are no significant environmental effects as a result of the implementation of the Proposed Action.

Solid Waste - Minor amounts of solid waste would result from construction of the Proposed Action. All construction waste would be disposed of at the Orange County Landfill.

¹ A noise contour is a line on a map that represents equal levels of noise exposure. The noise contours in the EA present the modeled day/night noise level (DNL) contours for the baseline year 2008, and for the future years 2012 and 2017.

Water Quality - The Stormwater Management program at OIA will detain stormwater flows and provide water quality treatment. As noted in previously, the areas described in the project description are included in the South Florida Water Management District (SFWMD) general permit No. 48-00063-S. This permit has been modified to include all of the work described for the Taxiway B shoulder widening. An application has been submitted to the SFWMD to modify the general permit for work associated with the Taxiway B-1 widening, Taxiway B-2 extension and Taxiway A realignment. No permit is required for the Taxiway F bridge improvements, nor the Airside 4 gate modifications. In addition, all on-site construction activities will be conducted in accordance with FAA AC 150/5370-10, Standards for Specifying Construction of Airports, and by using best management practices (BMPs). Therefore, no significant impacts to water quality are anticipated.

Wetlands - The projects included in the Proposed Action will be placed over impervious areas on the airfield or maintained grass areas. No wetlands would be impacted by the proposed construction.

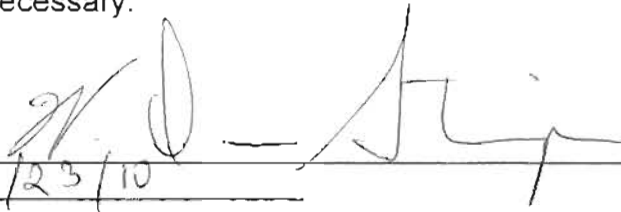
Wild and Scenic Rivers - The nearest designated water body under the Wild and Scenic Rivers System (WSRS) is over 18 miles north of the Proposed Action site. There would be no impacts to WSRS or National Rivers Inventory.

Cumulative Impacts - The cumulative impact of the Proposed Action is the addition of one or two aircraft per day at OIA to the hundreds that currently operate there. While there are other airfield projects planned at OIA, they are minor in nature and are not expected to result in a cumulative impact.

This project when considered with other ongoing or future actions at OIA, for example the proposed development of the East Airfield Development Area for which the GOAA has prepared and submitted an EA to the FAA for review and consideration, would not result in any significant cumulative impacts.. This Proposed Action would not result in any permanent impacts to environmental or natural resources. All impacts are minor and/or temporary in nature. There would be no impacts to wetlands. The East Airfield Development Area EA would impact wetlands; however, the GOAA is currently in the process of developing and dedicating mitigation for these wetland impacts in accordance with Federal and state permit requirements. This mitigation will fully compensate for these wetland impacts.

MITIGATION MEASURES: No mitigation is required.

FEDERAL FINDING OF NO SIGNIFICANT IMPACT: I have carefully and thoroughly considered the facts contained in the attached Environmental Assessment (EA). Based on my independent review, I find the EA is consistent with FAA's regulations and is consistent with the Council on Environmental Quality's regulations implementing the National Environmental Policy Act (NEPA) (40 CFR Part 1500) as well as FAA's Orders 1050.1E and 5050.4B for implementing the procedural provisions of NEPA. Consequently, I find the proposed Federal action will not significantly affect the quality of the human environment or include any condition requiring any consultation pursuant to section 102(2) (C) of NEPA. As a result, the FAA issues this Finding of No significant Impact, determining that an Environmental Impact Statement for this action is not necessary.

APPROVED:  _____
DATE: 6/23/10 _____

DISAPPROVED: _____
DATE: _____