

6.H.1 SOCIOECONOMIC IMPACTS; ENVIRONMENTAL JUSTICE; AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

6.H.1.1 Socioeconomic Impacts

As described in Chapter Five, *Affected Environment*, Section 5.H.1.1, *Socioeconomic Impacts*, the factors to be considered in determining potential socioeconomic impacts include, but are not limited to, the following:

- Extensive relocation of residents without the availability of sufficient replacement housing,
- Extensive relocation of community businesses that would create severe economic hardship for the affected communities,
- Disruptions of local traffic patterns that would substantially reduce the levels of service of the roads serving the airport and its surrounding communities, and
- A substantial loss in community tax base.

This section addresses the potential socioeconomic impacts of the runway development alternatives. No residential property acquisitions are required for implementation of the runway development alternatives as described in this Draft EIS. Acquisition of all or a portion of the Wyndham Fort Lauderdale Airport Hotel may be required depending on which alternative is implemented. Access to, or crossing of rights-of-way owned or managed by Broward County, the Florida Department of Transportation (FDOT), the South Florida Water Management District (SFWMD), Florida East Coast (FEC) Railway, or the U.S. Army Corps of Engineers (USACE), may need to be negotiated. Other than the Wyndham Fort Lauderdale Airport Hotel, all other relocations caused by the runway development alternatives would be existing on-airport tenants. Potential tenant relocations are described in terms of the acreage required for each tenant. This description is provided to demonstrate if adequate on-airport land is available for relocation of the tenants. The number and type of tenants impacted by the runway development alternatives are provided in Appendix E, *Alternatives*.

6.H.1.1.1 ALTERNATIVE A: NO ACTION

No construction or development is required with Alternative A. No residential or business relocations would be required. No changes would occur to local roadways, and there would be no loss of community tax base since no land acquisition is required.

Alternative A would have no socioeconomic impacts.

**6.H.1.1.2 ALTERNATIVE B1: REDEVELOP AND EXTEND EXISTING
RUNWAY 9L/27R TO AN 8,600-FOOT BY 150-FOOT ELEVATED
RUNWAY**

**ALTERNATIVE B1b: REDEVELOP AND EXTEND EXISTING
RUNWAY 9L/27R TO AN 8,000-FOOT BY 150-FOOT ELEVATED
RUNWAY WITH EMAS**

**ALTERNATIVE B1c: REDEVELOP AND EXTEND EXISTING
RUNWAY 9L/27R TO AN 8,000-FOOT BY 150-FOOT ELEVATED
RUNWAY WITH EMAS**

Under Alternatives B1, B1b, and B1c, no residential relocations are required. With the exception of the proposed temporary closure of Airport Perimeter Road on the south side of the airport, no changes would occur to local roadways. This alternative would not disrupt local traffic patterns and would not substantially reduce the level of service on airport roads or roadways serving the surrounding community. Impacts on local traffic patterns are discussed in Section 6.H.2.1, *Surface Transportation*

With the redevelopment of Runway 9R/27L, access to, or crossing of rights-of-way owned or managed by Broward County, FDOT, the SFWMD, the FEC Railway, or the USACE may need to be negotiated. The installation of runway approach light systems may require acquisition of avigation easements and/or rights-of-way from these property owners. Any avigation easements or rights-of-way acquisitions would not impact local traffic patterns.

Redevelopment of Runway 9R/27L would require establishment of a Runway Protection Zone (RPZ) extending beyond the airport's east and west property boundaries. The properties located within the RPZ would be affected by arriving and departing aircraft. Owners of properties within an RPZ are prohibited from using the land for uses where people congregate and from constructing structures or other improvements above a specified building height. The height restriction is dependent upon the glide angle required for the safe arrival and departure of aircraft. The FAA recommends that properties within the RPZ be acquired or have an avigation easement that would allow for control of land use, activities, and structures within the RPZ. Any potential avigation easements or right-of-way acquisitions required within the proposed RPZ would not affect local traffic patterns. The acquisition of easements or rights-of-way would not create a substantial loss in community tax base because land could still be developed, but with restrictions. No significant socioeconomic impacts would occur with the implementation of Alternatives B1, B1b, or B1c.

**6.H.1.1.3 ALTERNATIVE B4: BUILD A NEW 6,001-FOOT AT GRADE
RUNWAY WITH EMAS LOCATED 340 FEET NORTH OF EXISTING
SOUTH RUNWAY (TO REPLACE EXISTING RUNWAY 9R/27L)**

No residential or business relocations would be required under Alternative B4. Airport Perimeter Road on the west side of the airport would need to be relocated with no changes occurring to local off-airport roadways. This alternative would not

disrupt local traffic patterns and would not substantially reduce the level of service on airport roads or roadways serving the surrounding community. Impacts to local traffic patterns are discussed in Section 6.H.2.1, *Surface Transportation*.

With the redevelopment of Runway 9R/27L, access to, or crossing of rights-of-way managed by Broward County, FDOT, the SFWMD, the FEC Railway, or the USACE may need to be negotiated. The installation of runway approach light systems may require acquisition of avigation easements and/or rights-of-way from these property owners. Any potential avigation easements and/or right-of-way acquisitions would not impact local traffic patterns.

Redevelopment of Runway 9R/27L would require establishment of a RPZ that extends beyond the airport's east and west property boundaries, as described above. *No significant socioeconomic impacts are anticipated with implementation of Alternative B4.*

6.H.1.14 ALTERNATIVE B5: BUILD A 7,800-FOOT ELEVATED RUNWAY WITH EMAS LOCATED 320 FEET SOUTH OF EXISTING SOUTH RUNWAY (TO REPLACE EXISTING RUNWAY 9R/27L)

Under Alternative B5, no residential relocations would be required. The relocation of the Griffin Road and U.S. Highway 1 intersection and the temporary closure of Airport Perimeter Road on the south side of the airport would occur with no additional changes to local off-airport roadways. This alternative would not disrupt local traffic patterns and would not substantially reduce the level of service on airport roads or roadways serving the surrounding community. Impacts to local traffic are discussed in Section 6.H.2.1, *Surface Transportation*.

With the redevelopment of Runway 9R/27L, access to, or crossing of rights-of-way managed by Broward County, FDOT, the SFWMD, the FEC Railway, or the USACE may need to be negotiated. The installation of runway approach light systems may require the acquisition of avigation easements and/or rights-of-way from these property owners. Any potential avigation easements and/or right-of-way acquisitions would not impact local traffic patterns.

Redevelopment of Runway 9R/27L would require establishment of a RPZ that extends beyond the airport's east and west property boundaries. *No significant socioeconomic impacts are anticipated with implementation of Alternative B5.*

6.H.1.1.5 ALTERNATIVE C1: BUILD A 7,721-FOOT AT GRADE RUNWAY LOCATED 850 FEET NORTH OF EXISTING RUNWAY 9L/27R (A DEPENDENT PARALLEL RUNWAY TO EXISTING RUNWAY 9L/27R)

No residential relocations would be required and no changes in local traffic patterns would occur with implementation of Alternative C1. This alternative would not substantially reduce the level of service on airport roads or roadways serving the surrounding community. Impacts to local traffic patterns are discussed in Section 6.H.2.1, *Surface Transportation*. The preliminary analysis of the tenant leasehold impacts associated with Alternative C1 determined the airport's ability to

accommodate the tenants displaced by construction of Runway 8/26. The number and type of tenants impacted by development of Runway 8/26 were quantified in accordance with tenant leasehold information provided by Broward County's Properties Division. This data also served to determine the amount of vacant airport property that could be available for relocation of tenant facilities. This analysis involved independent assessments for those tenants requiring access to the airfield (airside facilities) and those not requiring airfield access (non-airside). A detailed summary of this preliminary analysis is contained in Appendix E, *Airfield Planning, Design, and Constructability Review*.

Assuming a replacement-in-kind for all tenant facilities, this preliminary analysis determined there would be a deficiency of 40 acres on-airport to accommodate displaced tenants. This deficiency would be associated with tenants that require airside access. This preliminary analysis does not consider any off-site relocation, termination of leaseholds, or consolidation of tenant facilities to accommodate these tenants. At this time, the FAA has determined that there is insufficient information to determine the County's ability to accommodate these tenant facilities at FLL or another Broward County facility. There would be no substantial loss in community tax base. For a complete listing of tenant leasehold impacts, please refer to Appendix E, *Airfield Planning, Design, and Constructability Review*, Table E.1-3 and Table E.1-4.

With redevelopment of Runway 9R/27L, access to, or crossing of rights-of-way managed by Broward County, FDOT, the SFWMD, the FEC Railway, or the USACE may need to be negotiated. The installation of runway approach light systems may require the acquisition of aviation easements and/or rights-of-way from these property owners. Any potential aviation easements and/or right-of-way acquisitions would not impact local traffic patterns.

Development of Runway 8/26 would require establishment of a RPZ that extends beyond the airport's east and west property boundaries. *No significant socioeconomic impacts are anticipated with implementation of Alternative C1.*

**6.H.1.1.6 ALTERNATIVE D1: REDEVELOP AND EXTEND EXISTING
RUNWAY 9L/27R TO 8,000 FEET AND BUILD A NEW
7,721-FOOT RUNWAY NORTH OF EXISTING RUNWAY 9L/27R
(COMBINATION OF ALTERNATIVES B1b AND C1)**

No residential relocations would be required under Alternative D1. The proposed temporary closure of Airport Perimeter Road on the south side of the airport, no changes would occur to local roadways. This alternative would not disrupt local traffic patterns and would not substantially reduce the level of service on airport roads or roadways serving the surrounding community. Impacts to local traffic patterns are discussed in Section 6.H.2.1, *Surface Transportation*.

A preliminary analysis of the tenant leasehold impacts associated with Alternative D1 was conducted to determine the airport's ability to accommodate the tenants that would be displaced by construction of Runways 9R/27L and 8/26. The number and type of tenants impacted by development of Runway 8/26 were quantified in accordance with tenant leasehold information provided by Broward

County's Properties Division. This data also served to determine the amount of vacant airport property that could be available for the relocation of the tenant facilities. This analysis involves independent assessments for those tenants requiring access to the airfield (airside facilities) and those not requiring airfield access (non-airside). A detailed summary of this preliminary analysis is contained in Appendix E, *Airfield Planning, Design and Constructability Review*.

Assuming a replacement-in-kind for all tenant facilities, this preliminary analysis determined there would be a deficiency of 107 acres on-airport to accommodate displaced tenants. This deficiency would be associated with 75 acres of tenants requiring airside access, while the remaining 32 acres represent tenants not requiring access to the airfield. This preliminary analysis does not consider any off-site relocation, termination of leaseholds, or consolidation of tenant facilities to accommodate these tenants. At this time, the FAA has determined that there is insufficient information to determine the County's ability to accommodate these tenant facilities at FLL or another Broward County facility. There would be no substantial loss in community tax base.

For a complete listing of tenant leasehold impacts, please refer to Appendix E, *Airfield Planning, Design and Constructability Review*, Table E.1-3 and Table E.1-4.

With the redevelopment of Runway 9R/27L and development of Runway 8/26, access to, or crossing of rights-of-way managed by Broward County, FDOT, the SFWMD, the FEC Railway, or the USACE may need to be negotiated. The installation of runway approach light systems may require the acquisition of aviation easements and/or rights-of-way from these property owners. Any potential aviation easements and/or right-of-way acquisitions would not impact local traffic patterns.

Redevelopment of Runway 9L/27R and development of Runway 8/26 would require establishment of a RPZ that extends beyond the airport's east and west property boundaries. *No significant socioeconomic impacts are anticipated with implementation of Alternative D1.*

6.H.1.1.7 ALTERNATIVE D2: BUILD A NEW 6,001-FOOT AT GRADE RUNWAY WITH EMAS LOCATED 340 FEET NORTH OF EXISTING SOUTH RUNWAY AND BUILD A 7,721-FOOT AT GRADE RUNWAY LOCATED 850 FEET NORTH OF EXISTING RUNWAY 9L/27R (COMBINATION OF ALTERNATIVES B4 AND C1)

Under Alternative D2, no residential relocations would be required. The proposed relocation of Airport Perimeter Road on the south side of the airport, no changes would occur to local roadways. This alternative would not disrupt local traffic patterns and would not substantially reduce the level of service on airport roads or roadways serving the surrounding community. Impacts to local traffic patterns are discussed in Section 6.H.2.1, *Surface Transportation*.

A preliminary analysis of the tenant leasehold impacts associated with Alternative D1 was conducted to determine the airport's ability to accommodate the tenants that would be displaced by construction of Runways 9R/27L and 8/26. The

number and type of tenants impacted by development of Runway 8/26 were quantified in accordance with tenant leasehold information provided by Broward County's Properties Division. This data also served to determine the amount of vacant airport property that could be available for the relocation of the tenant facilities. This analysis involves independent assessments for those tenants requiring access to the airfield (airside facilities) and those not requiring airfield access (non-airside). A detailed summary of this preliminary analysis is contained in Appendix E, *Airfield Planning, Design and Constructability Review*.

Assuming a replacement-in-kind for all tenant facilities, this preliminary analysis determined there would be a deficiency of 70 acres on-airport to accommodate displaced tenants. This deficiency would be associated with 59 acres of tenants requiring airside access, while the remaining ten acres represent tenants not requiring access to the airfield. This preliminary analysis does not consider any off-site relocation, termination of leaseholds, or consolidation of tenant facilities to accommodate these tenants. At this time, the FAA has determined that there is insufficient information to determine the County's ability to accommodate these tenant facilities at FLL or another Broward County facility. There would be no substantial loss in community tax base.

For a complete listing of tenant leasehold impacts, please refer to Appendix E, *Airfield Planning, Design and Constructability Review*, Table E.1-3 and Table E.1-4.

With the redevelopment of Runway 9R/27L and development of Runway 8/26, access to, or crossing of rights-of-way managed by Broward County, FDOT, the SFWMD, the FEC Railway, or the USACE may need to be negotiated. The installation of runway approach light systems may require the acquisition of avigation easements and/or rights-of-way from these property owners. Any potential avigation easements and/or right-of-way acquisitions would not impact local traffic patterns.

The redevelopment of Runway 9R/27L and development of Runway 8/26 would require establishment of a RPZ that extends beyond the airport's east and west property boundaries. *No significant socioeconomic impacts are anticipated with implementation of Alternative D2.*

6.H.1.2 Environmental Justice

On February 11, 1994, the President of the United States signed Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*. This Executive Order requires all Federal agencies to identify and address disproportionate and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations. The Order also directs Federal agencies to incorporate environmental justice as part of their overall mission by conducting their programs and activities in a manner that provides minority and low-income populations an opportunity to participate in agency programs and activities.

In order to quantify the potential environmental justice impacts associated with the proposed project, a demographic breakdown of population was conducted for the study areas. The objective of this analysis was to determine whether the alternatives being considered would result in disproportionately high or adverse impacts on minority and low-income populations within the Study Area. The potential for disproportionate impacts was evaluated in accordance with Executive Order (EO) 12898 by determining the percentage of minority and low-income populations affected by the impact categories and comparing those percentages to impacts within the overall Study Area.

The 2000 U.S. Census data, by Census Block Groups, were obtained for the Study Area. The Census provides data for smaller geographic areas including block, block group, and tract. The Census block is the smallest unit of Census geography. The block group consists of one or more blocks. A tract consists of multiple block groups.

Table 6.H.1.2-1, *Percentage of Minority Residents and Average Median Household Income in Broward County and the Study Area*, summarizes the percentage of minority residents and the area's income characteristics used for this analysis. The demographic analysis shows that within the Study Area, approximately 36 percent of the population is minority and 64 percent is White. The minority population includes African American, Asians, American Indians, Alaskan Natives, and Hispanics.

**TABLE 6.H.1.2-1
PERCENTAGE OF MINORITY RESIDENTS AND AVERAGE MEDIAN
HOUSEHOLD INCOME IN BROWARD COUNTY AND THE STUDY AREA
Fort Lauderdale-Hollywood International Airport**

Broward County		EIS Study Area	
<u>Race</u>	<u>Percent</u>	<u>Race</u>	<u>Percent</u>
White	51.2	White	64.0
African American	19.9	African American	16.7
Asian	2.2	Asian	1.9
American Indian & Alaskan Native	0.2	American Indian & Alaskan Native	0.5
Hispanic	16.7	Hispanic	16.9
Other	9.8	Other	0
TOTAL	100	TOTAL	100
HOUSEHOLDS BELOW POVERTY LEVEL			
10.8%		11.4%	

Source: The Corradino Group, 2007. The 2000 U.S. Census, Summary File 3.

Within Broward County, the White population comprises approximately 51.2 percent of the population compared to 64 percent in the project Study Area. The percentage of Environmental Justice minority population in Broward County is 39 percent and is 36 percent in the Study Area. The Study Area as compared to Broward County has a smaller percentage of minorities.

For this Draft EIS, the poverty threshold, as established by the Bureau of the Census for the 2000 Census, was used as the low-income threshold. The poverty threshold for a one-person household is \$8,501. A household containing four persons was considered below the poverty level if their household income were less than \$17,029 in 1999. Within the Study Area, approximately 11.4 percent of the households have a total household income less than the Census poverty threshold.

As summarized in Table 6.H.1.2-2, *Evaluation of Factors for Potential Environmental Justice Impacts*, five environmental impact categories were identified that could potentially impact minority and low-income populations in the project Study Area. Based on a review of the direct and indirect effects and the population characteristics of the proposed Study Area, there was only one impact category that could potentially result in disproportionate impacts to minority and low-income populations. The potential noise impacts on minority and low-income populations within the Study Area were analyzed to determine if there would be disproportionate aircraft noise impacts on these populations.

**TABLE 6.H.1.2-2
EVALUATION OF FACTORS FOR POTENTIAL –
ENVIRONMENTAL JUSTICE IMPACTS
Fort Lauderdale-Hollywood International Airport**

<u>Factors</u>
Noise
Air Quality
Water Quality
Hazardous Materials
Cultural Resources

Source: The Corradino Group, 2007

The percentage of minority population and low-income household impacted by the 65+ DNL noise contour were calculated for the runway development alternatives. Table 6.H.1.2-3, *Impacts to Minority and Low-Income Population and Households in 2012 and 2020*, provides a summary of the percentages of the existing minority population and low-income households in the Study Area that would be impacted by aircraft noise generated by each runway development alternative.

**Table 6.H.1.2-3
IMPACTS TO MINORITY AND LOW-INCOME POPULATION
HOUSEHOLDS IN 2012 AND 2020
Fort Lauderdale-Hollywood International Airport**

Alternative	2012		2020	
	Minority Population	Low-Income Households	Minority Population	Low-Income Households
A (No Action)	25.0%	12.1%	27.5%	13.1%
B1	24.5%	12.6%	25.7%	13.2%
B1b	24.2%	13.3%	25.7%	13.2%
B1c (Airport Sponsor's Proposed Project)	23.7%	12.6%	25.7%	13.2%
B4	25.7%	13.2%	25.7%	13.2%
B5	24.5%	12.6%	25.7%	13.2%
C1	25.0%	12.1%	27.5%	13.1%
D1	24.2%	13.3%	25.7%	13.2%
D2	25.7%	13.2%	26.0%	12.7%
Study Area	36.0%	11.4%	36.0%	11.4%

Source: The Corradino Group, 2007. The 2000 U.S. Census, Summary File 3.

For each runway development alternative, the total population of all the block groups that are completely or partially located within the 65+ DNL contours were determined and the percentage of minorities and low-income households were calculated. For purposes of this analysis, the percentages are expressed in terms of the existing minority and low-income populations in the Study Area.

The implementation of any of the runway development alternatives would not disproportionately impact minority or low-income populations. In 2012 all of the runway development alternatives, with the exception of Alternatives B4 and D2, would have a percentage of minority population less than or equal to that of the No Action Alternative because the noise contours do not significantly increase in size or geographical area covered. The minority populations exposed to aircraft noise would not be significantly greater when compared to the overall population in the Study Area.

There are concentrations of low-income populations located in the Study Area. When compared to the low-income threshold established using the Study Area, all of the runway development alternatives would have a higher percentage of low-income households living within the 65+ DNL contour. When comparing all of the runway development alternatives to the No Action Alternative in 2012, there would be minimal increases (1.1 percent or less) in low-income households impacted by aircraft noise.

The noise contours for all of the runway development alternatives are smaller than the No Action Alternative, therefore the percent of minority population in the 65+ DNL noise contour for the Airport Sponsor's Proposed Project and any of the runway development alternatives also would be less than the No Action Alternative. Minority populations surrounding the airport would not disproportionately experience impacts greater in magnitude, or greater in frequency, in aircraft activity and noise than those experienced by the majority population in the airport environs.

The percentage of low-income population in the 65+ DNL noise contour would remain relatively the same if the Airport Sponsor's Proposed Project or any of the runway development alternatives were constructed.

6.H.1.4 Children's Environmental Health and Safety Risks

Based on a review of available data conducted as part of this Draft EIS, implementation of the runway development alternatives would not result in an elevated risk related to health or safety concerns for children. According to the Florida Department of Public Health (FDPH), the primary children's health concern statewide is asthma and related lung disorders.⁹⁰ Based on the analysis detailed in Section 6.B, *Air Quality*, none of the alternatives would create air quality conditions that would worsen breathing conditions for children. Based on the analyses detailed in Section 6.E-1, *Water Quality*, none of the alternatives would result in the release of harmful agents into surface or groundwater resources above levels permitted by state and Federal regulations. Further coordination with agencies would be conducted throughout the EIS process to review health data and identify specific concerns related to children's health and safety.

Based on the analyses conducted in this Draft EIS, implementation of the runway development alternatives would not result in the release of or exposure to significant levels of harmful agents in the water, air, or soil that would affect children's health or safety.

⁹⁰ Florida Department of Health, *Children and Environmental Toxins*. Internet website: <http://www.doh.state.fl.us/family/childhealth>