



# 1 INTRODUCTION

This document provides a summary of the analysis and findings from the Master Plan Update for Fort Lauderdale-Hollywood International Airport (the Airport or FLL).

This section of the summary report provides background to the Master Plan Update objectives and the planning process to be followed, presented under the following headings:

- Background to the Master Plan Update
- Master Plan Update – Objective and Process
- Starting Point for the Master Plan Update
- Key Considerations for Planning

## 1.1 BACKGROUND TO THE MASTER PLAN UPDATE

The FLL Master Plan Update was initiated in response to an approved motion by the Broward County Board of County Commissioners (the Board) on December 9, 2003. Among other things, this motion called for the Broward County Aviation Department (BCAD) to:

*Commence the process of updating the Airport Master Plan to include concepts that decommission the crosswind runway, and define a framework for managing aircraft operational demand and growth through planned facility development... through infrastructure development, the number and location of gates and other means, including the review of the westside land use Master Plan [and] evaluate a North Parallel runway, while preferring the South runway.*

The directive to update the FLL Master Plan was part of the Board's endorsement of a program to extend

Runway 9R-27L (the South Runway) within a defined envelope to accommodate operations by the air carrier aircraft fleet projected to serve the Airport.

Subsequent to actions referenced above, the Board approved the County Objective Statement as an input to the Federal Aviation Administration's (FAA's) Environmental Impact Statement (EIS) process for the proposed expansion

of FLL's airfield. Among other things, the 2004 County Objective Statement established a goal to "enhance FLL's capacity to accommodate forecast traffic through the year 2020..." without unreasonable delay for aircraft operations at the Airport.

Inherent in these approvals is a goal to accommodate forecast traffic growth at FLL through the expansion of facilities. This goal is consistent with Development Orders for expansion of the Airport (as approved in 1997 by the City of Fort Lauderdale, the City of Hollywood, and Broward County), which envisioned that the Airport would have three air-carrier-capable runways and passenger terminals with a total of 79 gates. In 2003, the Board voted to examine options for shortening one of these runways—Runway 13-31, the Crosswind Runway—and in 2004, the County Objective Statement established a goal to decommission this runway.

The Master Plan Update was effectively completed in January 2008. Production of this final report was delayed until 2009 as requested by the Broward County Aviation Department (BCAD) to coordinate with the final issuance of the Environmental Impact Statement (EIS) and allow for final minor adjustments. Consequently, the data represented in this report is from prior to 2008 and does not represent changes since that period. A number of tasks have been initiated by the BCAD through General Consulting Contracts which build upon this Master Plan Update, and are based on more current data. Through the course of this planning effort the objective was identified that more frequent updates of the Master Plan should occur to keep pace with the evolving business and technological environment at FLL. It is therefore recommended that review and update of the Master Plan should occur every two to three years in an evolving planning process that is tailored to the requirements and challenges of the Airport.

## 1.2 MASTER PLAN UPDATE - OBJECTIVE AND PROCESS

The objective of the Master Plan Update is to provide a comprehensive plan to guide and coordinate the development of future Airport facilities. The Master Plan Update identifies forecast demand, and outlines a plan for the balanced development of landside, terminal, airfield, and ancillary facilities to accommodate demand in a way that is affordable, and consistent with the broader policies and

goals of the County. It is also intended that the Master Plan Update should serve to inform short-term planning decisions by identifying the relationship between short-term decisions and longer-term implications.

The County structured the Master Plan Update process in two separate phases, as follows:

**Phase 1** – The purpose of Phase 1 was to identify Airport capacity needs based on forecast demand over a next 20 year planning horizon, present alternative Airport development scenarios to the Board reflecting balanced consideration of key factors such as affordability, other County policies, and concerns about managed growth, and provide guidance concerning coordination between short-term planning decisions and the long-term vision for the Airport site.

**Phase 2/3** – The purpose of Phase 2/3 is to complete a comprehensive stakeholder outreach program based on the development options identified in Phase 1, refine the options and findings based on stakeholder input, report the results to the Board, assist the Board in decision-making regarding the adoption of a preferred plan, and begin the implementation process for the plan once adopted.

## 1.3 STARTING POINT FOR THE MASTER PLAN UPDATE

The most recent update to the FLL Master Plan was completed in 1994. Since that time, FLL's passenger traffic has more than doubled, the mix of airlines serving the Airport has fundamentally changed, the fleet of aircraft serving FLL has changed, and, after the realization of significant increases in passenger volumes, in recent times the economics of the airline industry have become more uncertain.

During this period of change, the County successfully completed a \$650 million capital program, which delivered new and improved access and passenger terminal facilities. These facilities include Terminal 1 with 18 gates, the Hibiscus Garage, the Rental Car Center and Cypress Garage, the double-decking of the inbound roadway, and a new interchange between the Airport roadway system, US 1, and I-595.

### Phase 1 "Givens"

Recognizing that the facility development process at FLL is ongoing, the following items were deemed to be "givens"

and were not subject to additional review or analysis in Phase 1 of the master planning effort:

**Facilities** – Concourse A and the Cruise Bus Facility, the international terminal facilities at the Terminal 4 site, the pedestrian bridge project, and double-decking of the Airport exit roadway are all projects which the County developed planning documents for, and these projects were not to be reviewed as part of the Master Plan Update.

**EIS Alternatives** – The County re-initiated the FAA's EIS process to gain approval of the Proposed South Runway Extension. As of January 2006, the FAA's EIS process identified a set of eight alternative airfield development projects beyond the "Preferred Alternative" provided by the County to the FAA. An overriding directive for the Master Plan Update was that development options shall be compatible with the alternatives being considered in the EIS process.

**Forecast Demand and Traffic** – The County Objective Statement established a goal to accommodate forecast traffic through the year 2020. The FAA's Terminal Area Forecast (TAF) issued in January 2005 was used as the basis for evaluating airfield alternatives in the FAA's EIS process. As required by the Master Plan Update scope of work, the forecast being used in the EIS is a "given" for defining optional development scenarios in Phase 1 of the Master Plan Update. While the most recent FAA TAF does not provide a forecast beyond 2020, the compatibility of optional development scenarios is to be considered in the Master Plan Update process in the context of growth that may occur at the Airport beyond the forecast horizon.

**Port-Airport Integration** – The County is in the process of an environmental assessment of an automated people-mover system planned to provide service between the passenger terminals at FLL, an Intermodal Center east of FLL, and Port Everglades. It was assumed in the Master Plan Update that a corridor for this people mover will be preserved within the Airport boundary. As of the writing of the Master Plan Update document, due to changes in the federal approval process, the people mover project is in the final stages of state environmental approval which will make it eligible to apply for federal environmental assessment approval when funding becomes available for the project.

In addition to these "givens", certain early analysis undertaken as part of this Master Plan Update and decisions

made by the Board during the course of Phase 1 were also incorporated as “fixed” components of the future development plan for the Airport. These include:

**Decommissioning of Crosswind Runway** – At the request of the Board, the Phase 1 scope of work included an evaluation of the necessity for and utility of the Crosswind Runway. As outlined in Section 5 of this summary report, it was concluded that (1) the Crosswind Runway would have little or no operational value if the South Runway is extended as planned, (2) the Crosswind Runway is likely to be physically incompatible with the South Runway extension if the extension is constructed consistent with the value engineering study completed by URS in February 2005, and (3) the land area at the core of FLL would be better used and more valuable for passenger terminal and support facilities than for a limited-use runway. The County Objective Statement included as a goal the future decommissioning of the Crosswind Runway, which was therefore assumed as a basis for planning in this Master Plan Update.

**North Parallel Runway** – Development of a “close parallel” runway between the current location of Runway 9L-27R (the North Runway) and the current northern boundary of the Airport was included as an alternative in the FAA’s EIS process for the Proposed South Runway Extension, and was evaluated as an option in the November 2003 Leigh Fisher Associates (now Jacobs Consultancy) report, Assessment of Airfield Alternatives. In conjunction with work on the Master Plan Update, the Master Plan team was asked to review the advisability of retaining the option to develop the north parallel runway. It was concluded that preserving the option for a north parallel runway was advisable, at least until (1) the EIS process determines how the airfield at FLL is best expanded, (2) the South Runway is extended, as proposed in the County’s “Preferred Alternative,” or (3) the FAA determines the proposed use restriction for landings of larger aircraft on Runway 9R, after extension. Preservation of the potential to develop a north parallel runway was, therefore, assumed as a basis for planning in Phase 1 of this Master Plan Update. Further analysis by BCAD determined that in order to accommodate a North Parallel Runway, land acquisition will be required.

**General Aviation Facilities** – In recent years, general aviation service providers at FLL have sought to expand facilities to accommodate current and forecast demand.

The Master Plan Update scope of work included an examination of the potential role and facilities for general aviation at FLL. It was concluded that (1) while the share of general aviation operations at FLL is high relative to that of other congested airports nationally, FLL’s share of regional general aviation traffic is low, (2) the FAA TAF indicates only limited increases in future general aviation operations at FLL, (3) the presence of general aviation facilities in multiple areas of the Airport contributes to operational inefficiencies, (4) Broward County should establish policies that consolidate general aviation facilities into one area of the Airport (provisionally defined as the West Side area south of Lee Wagener Boulevard), and (5) Broward County should charge general aviation operators landing fees that, at a minimum, are equivalent to those paid by other airfield users. Preservation and consolidation of general aviation facilities were therefore assumed as a basis for planning in this Master Plan Update.

#### Phase 2/3 “Givens”

In Phase 2/3 of the Master Plan Update, certain of these “givens” were revisited and revised as follows:

**Facilities** – Concourse A and the Cruise Bus Facility, the international terminal facilities at the Terminal 4 site, the pedestrian bridge project, and double-decking of the Airport exit roadway project were all suspended to allow for incorporation of the goals of these projects into the Master Plan Update. As a result, demand for all of these projects was accommodated in a revised program within the recommended Master Plan Update scenario.

**Forecast Demand and Traffic** – The schedule for the completion of the Master Plan Update was delayed as a result of a delay to the EIS process. It was ultimately determined to put the Master Plan Update process on hold until the completion of the EIS and delivery of the FAA’s Record of Decision (ROD), which occurred at the end of 2008. As a result, updated FAA TAF’s were issued annually, indicating significant revisions to the 2005 TAF. Therefore the program and schedule for Master Plan implementation were significantly altered. These developments reinforced the objective of the Master Plan Update to identify a flexible planning platform that accommodates options for development and flexibility for the implementation of those options.

#### 1.4 KEY CONSIDERATIONS FOR PLANNING

At FLL, a number of unique factors need to be recognized and considered in the planning process, including the following:

**Constrained Site** – FLL is significantly land constrained, with little undeveloped land available to accommodate expanded facilities. Transportation infrastructure barriers effectively constrain contiguous expansion of the Airport site. Also, numerous residential and open space areas border the Airport, creating the potential for significant environmental impacts associated with Airport development, particularly in regard to noise exposure associated with aircraft operations. In this context, planning for expansion of Airport facilities must necessarily focus on the highest and best use of all available land, and environmental impacts associated with development must be explicitly considered.

**Increasing Complexity and Risk of Development** – Compounding the space constraints described above, most of the Airport site is now developed, and future development will likely require “redevelopment” of existing facilities. Such redevelopment is likely to be more expensive than new construction on undeveloped sites, and more disruptive and challenging to implement. As discussed elsewhere in this report, the County’s interest in decommissioning the Crosswind Runway is principally motivated by aircraft noise management objectives, but also serves to provide an on-time opportunity to plan the re-use of land contiguous with existing passenger and support facilities.

**Air Traffic Growth Impacts** – The County is in the process of updating FLL’s 1994 Noise Compatibility Study, following the guidelines contained in Federal Aviation Regulations (FAR) Part 150, “Airport Noise Compatibility Planning.” It is anticipated that this update will result in recommendations that will lead to noise abatement procedures and policies to mitigate existing noise exposure in nearby areas and forecast noise exposure associated with new airfield facilities and increased aircraft operations.

**Cost and Affordability** – Airports are increasingly under pressure to consider the cost implications of development decisions, particularly by the airlines. Fewer large-scale development projects have been initiated at origin-destination airports since the recent restructuring of the airline

industry that began in 2001. As a result of the changes in the airline industry and the increased focus on cost management, the affordability of master plan recommendations requires focused consideration. Broward County is relatively unique in starting the Master Plan Update process from a position of having very low Airport rates and charges for airlines and other aeronautical users. While the strategic objective for FLL to remain in the range of lowest-cost airports may need consideration in the context of current and projected demand levels, airline views on future projects that increase user costs are a factor in the development decision-making process.

In the planning context described above, the following key factors were considered in developing the Airport development options outlined in this report.

**Balanced Capacity** – The Master Plan Update should result in recommended facilities that balance airfield, terminal, and landside capacity.

**Regional Transit Integration** – Planning and design initiatives at the Airport should anticipate and accommodate future connections to the regional transit infrastructure.

Future transit connections have been identified in the Florida Intercity Passenger Rail Study and the South Florida East Coast Corridor Transit Analysis Study.

**Sustainable Development** – Planning and design initiatives at the Airport should be based on the fundamental, established principles of Sustainable Design - environmental stewardship, economic and environmental viability, and social and cultural enrichment.

**Airfield Priority** – Given land constraints, airfield facilities necessarily define the residual land envelopes available for other needed development. Given the simultaneous EIS process, this Master Plan Update was undertaken with a goal of developing plans that are compatible with whichever EIS alternative is selected, and ultimately coordinated with the selected EIS alternative.

**Affordability** – Higher cost “demand dependent” terminals and other facilities requiring large volumes of forecast traffic to both materialize and be accommodated subsequent to construction in order to achieve financial feasibility targets are to be avoided. As part of the Master Plan Update process, “demand driven” scenarios were identified and ultimately promoted as the preferred alternative for development.

**Terminal Complex Flexibility** – Passenger terminal configurations that permit the County to phase development, manage costs, and review environmental impacts and progress against mitigation targets are more easily implemented than “all or nothing” solutions. In effect, incremental phased development provides the County with the flexibility to provide as-needed capacity to manage traffic growth in the context of actual demand.

**Common Elements Backbone** – Within two alternative possible visions for FLL at full build-out, a near-term program can be defined with facilities that are common to both outcomes. Defining and adopting a plan with these characteristics will allow progress to be made on facilities needed to accommodate currently evident demand, with the knowledge that such decisions will not preclude future development options.