CHAPTER ONE
Goals and Objectives

INTRODUCTION

Due to recent changes at the Airport and areas surrounding its environs, the Jacksonville Aviation Authority (JAA) undertook an update of the Master Plan for Herlong Airport (HEG), which was previously updated in 2000. One of the primary reasons for the update is based upon the Federal Aviation Administration requirements associated with airports receiving development grants to conduct periodic updates to their airport development plans. In addition, Duval County is experiencing a tremendous increase in residential relocation that has resulted in an increase in construction of residential and commercial developments around the airport.

GENERAL GUIDELINES

The goal of the master plan update is to define current and future aviation demand at HEG, the means and alternatives for addressing this demand, the role of the airport in the local, regional and national aviation system, and the need for and financial feasibility of new infrastructure and airport facilities. This project was funded with grants from the U.S. Department of Transportation Federal Aviation Administration (FAA), the Florida Department of Transportation (FDOT) and the Jacksonville Aviation Authority (JAA) and was programmed to begin in 2005 with completion of the study by the end of 2006.

The airport's master plan serves a variety of functions including projecting future aviation activity and development as a financial planning tool and guiding on-airport and adjacent land uses. The primary objective of the master plan update is to create a 20-year development program that will maintain a safe, efficient, economical, and environmentally acceptable airport facility for the JAA, City of Jacksonville, and Duval County. By achieving this objective, the document should provide guidance to satisfy general aviation demand in a financially feasible and responsible manner. This chapter provides general direction to the study with respect to the development of concepts and plans relating to the future development of Herlong Airport. The general approach is to consider alternative airport development plans, necessary to provide a "balanced" airport system.

KEY ISSUES

Overall, this master plan provides a comprehensive overview of the airport's needs during the next 20 years, including issues related to the timing of proposed development, costs for this development, methods of financing, management options, and a clear plan of action. Prior to the start of this master plan update, key issues within the functional categories of facilities, business, operational, properties and environmental issues, were identified by Airport Management as requiring attention, including:

- Functional Issues
  - ✈ Evaluate HEG's role in the JAA Airport System.
  - ✈ Evaluate existing pavement conditions and develop a pavement management plan that maximizes pavement life, maintenance and funding over time.
  - ✈ Evaluate airfield development options that address the primary runway length requirements, runway safety area standards, precision and non-precision approach capability, and future airfield capacity.
  - ✈ Evaluate long-term development options for general aviation, and maximize airside access to general aviation facilities.
  - ✈ Develop options to re-use existing facilities.

- Business Issues
  - ✈ Evaluate potential for aviation and non-aviation development on the airport including residential operations (fly-in or community airpark), airport industrial and/or commerce park.
  - ✈ Prepare capital improvement program (JACIP format) for future development of the airport.

- Operational Issues
  - ✈ Evaluate ground access to existing and future airport development areas with emphasis on minimizing existing impacts to the accessibility of existing airport uses, and future on-airport development areas, including Airport Entrance Road.
  - ✈ Evaluate land use compatibility issues within the airport environs.
  - ✈ Evaluate existing height and land use zoning ordinance for potential impacts to airport operations.
  - ✈ Evaluate increased security requirements associated with GA Security guidelines.
  - ✈ Evaluate existing equipment and on-airport facilities (i.e. PAPIs).
  - ✈ Consider operational issues associated with current fleet mix and airport activities, such as glider operations, skydiving, research and development, aircraft maintenance, fueling, etc.

- Property Issues
  - ✈ Consider development of Residential Airpark and associated land transfer.

- ✈ Conduct review of the land area needs of the airport, and the potential absorption of land for aviation related development.
- ✈ Conduct review of land use on and adjacent to the airport for possible impacts.
- ✈ Consider potential relocation of Gateway NFLE and Pistol Club.
- ✈ Develop a current and up-to-date Property Map (formerly Exhibit A).

- Environmental Issues
  - ✈ Provide overview of environmental factors that may act to limit or guide the development of airport property.
  - ✈ Obtain inventory of permitted projects including existing on-airport ponds.

GOALS AND OBJECTIVES

The overall goal of the master plan update is to provide HEG with detailed planning guidance to ensure that Airport facilities and associated land uses will be adequate to meet short-, intermediate-, and long-term aviation demand. This document will serve as a management guide for the implementation of necessary improvements to meet potential aviation activity demand over a planning period of 20+ years, through the end of 2025.

The key objectives associated with this study include:

- ✈ Identify the needed airside, landside, and airspace improvements and recommend options to further optimize the economic aspects of the airport while enhancing the safety and operational capability;
- ✈ Establish an implementation schedule for short-, intermediate-, and long-term improvements and ensure that they are financially feasible;
- ✈ Identify short-term requirements and recommend actions to optimize short-term funding opportunities to be incorporated into the Florida Department of Transportation (FDOT) Joint Automated Capital Improvement Program (JACIP);
- ✈ Insure that short-term actions and recommendations do not preclude long-range planning options;
- ✈ Incorporate the interests of the public and government agencies into the planning process;
- ✈ Remain sensitive to the overall environmental characteristics and needs of the area surrounding the airport; and
- ✈ Incorporate current comprehensive land use (both on- and off-airport property) and recommend developments that are compatible with existing and future land uses.

Therefore, in order to address the various internal and external factors impacting HEG, a list of goals was identified based upon the key issues and objectives impacting HEG in order to provide a guide for the study development. Recommended goals are presented in no particular order, and, thus, no one goal has priority over the other.

Goal No. 1

Continue to meet and enhance the level of service provided to all Airport users.

Objectives:

- Provide adequate runway capacity for estimated demand in terms of aircraft type and annual and hourly operations.
- Provide adequate runway length to meet existing and forecast operations needs.
- Provide opportunities for development of services associated with potential charter and corporate GA, military, flight training, and recreational flying operations.
- Provide for potential integration of military and non-military operations.
- Provide other aviation related support facilities required for a full range of aviation services.
- Provide insight into the estimated future needs of hangar facilities.

Goal No. 2

Provide guidelines for future development, while satisfying anticipated demand.

Objectives:

- Implementation of non-aviation development to enhance revenue diversification.
- Provide adequate airside and landside facilities to meet anticipated demand.
- Effectively market potential commercial and non-commercial aviation facilities.
- Develop self-sustaining commerce and/or industrial parks, which will benefit the Airport and community as a whole.
- Develop a schematic for incorporating 3rd party funding for future development.

Goal No. 3

Provide an Airport that is safe and reliable.

Objectives:

- Provide navigational aids (NAVAIDS) including global positioning system (GPS) and non-GPS approach options, flight support services, and meteorological facilities, which enhance the safety and reliability of operations under all weather conditions.
- Protect FAA mandated safety areas, runway protection zones (RPZs), and other clear zones.
- Minimize possible obstructions to air navigation.
- Provide adequate fire fighting, rescue and emergency services, access roads, facilities, equipment, and personnel to maintain minimum response time under all conditions.
- Ensure that airside and landside operations and facilities meet all applicable security standards.
- Ensure that aircraft parking facilities are adequately sized and easy to negotiate.
- Develop facilities to meet the demands of the current and future critical aircraft.
- Address the need and timeline for a control tower with the expected development of the SATS and Air Taxi segments of the industry.

Goal No. 4

Develop the Airport and its vicinity to minimize negative environmental impacts.

Objective:

- Identify the major environmental issues of concern.
- Minimize potential environmental impacts, and provide special attention to minimizing noise impacts, air and water pollution, and wetland impacts.
- Consider the use and development of airport property to minimize any adverse impacts on other environmental concerns while maintaining a safe environment for users and adjacent land owners (i.e. timber harvesting and wildlife control).
- Design and select noise abatement measures that minimize the number of people exposed to noise above Day-Night Noise Level (DNL) greater than 65 decibels, if applicable.
- In selecting noise abatement actions, avoid actions that would adversely affect capacity, impose restrictions on Airport use that would be discriminatory, or that could erode prudent margins of safety.
- When necessary, encourage local construction restrictions to reduce impact of Airport/aviation.

Goal No. 5

Promote the development of compatible land use in undeveloped areas within the Airport vicinity.

Objectives:

- Promote land use planning and development objectives, for on- and off-Airport land use, which are compatible with the anticipated long-range needs of the Airport and the community as a whole.
- Designate areas for future development hangar homes, maintenance, commerce park, etc.
- Locate Airport facilities so that growth may be controlled through land-use planning and zoning.
- Consider the impacts of the Gun Club on Airport Operations.

Goal No. 6

Develop an Airport that supports local and regional economic goals while accommodating new opportunities or shifts in development patterns.

Objectives:

- Achieve a level of service and user convenience such that the Airport is a positive factor in regional economic development decisions.
- Achieve capacities of the airfield, the terminal area systems, and industrial park/Commerce Park, so that the Airport may be an attractive location for GA, maintenance, and other aviation related activities.
- Provide appropriate and achievable commercial opportunities adjacent to and on the Airport.
- To assure economic feasibility, identify an equitable distribution of user charges; distribute the burden of capital investment, maintenance, and operating costs, while keeping overall costs within an acceptable level.
- Identify financial alternatives and funding sources available for the implementation of aviation and non-aviation projects.
- Quantify financial resources available for project funding.
- Develop an airport layout plan (ALP) that easily integrates with existing and proposed transportation infrastructure, to encourage economic growth.

Goal No. 7

Minimize aircraft delay associated costs to all airfield users (i.e. military operations, recreational pilots, experimental aircraft, flight training facilities, etc.).

Objectives:

- ✈ Minimize airspace congestion and delays for GA aircraft through procedural changes and/or provision of additional NAVAIDS.
- ✈ Minimize airside congestion through construction of runways, taxiways, and aprons, when the costs of providing the additional capacity are less than the additional operating costs associated with aircraft delays.

Goal No. 8

Ensure adequate and convenient ground access to the Airport.

Objectives:

- ✈ Provide safe access and easy-to-follow signs to Airport roadways and facilities.
- ✈ Provide adequate lane capacity on roads leading to the Airport, to serve existing and future activity.
- ✈ Provide adequate land capacity on internal circulation roadways serving functional areas (terminal, GA, commerce park, etc.).
- ✈ Provide parking facilities (for GA, terminal, commerce park, etc.) that are conveniently located and easily accessible.
- ✈ Maintain close coordination with Regional Planning Council, Metropolitan Planning Organizations (MPO), FDOT, and other transportation groups.

These goals and objectives reflect policy goals to be reached through the master planning process. They include the ultimate development of self-supporting facilities to serve the existing and future aviation needs of the region; the achievement of compatible land uses in the vicinity of the Airport; and provisions for the type of development that will yield the most public benefit of the investment represented by the Airport. Finally, these goals must be manageable within existing limitations of funds and design principles.

As noted, the airport is located within a residential populated area and, therefore, any future developments identified in this study will consider potential community impacts. Considering this, to ensure community and government participation in this study, a Technical Advisory Committee (TAC)

was created to provide technical review of the working papers and to provide input into the entire master plan process. The committee was assembled by Airport Management and includes representatives from JAA, FAA, FDOT, City of Jacksonville, Duval County, airport tenants and the public/community. Multiple opportunities will be available for community and governmental representatives to participate in this study, including through representatives serving on the study's technical advisory committee and through three public meetings held in conjunction with the CPAC meetings. It is important to note that the study results and the future developments presented in this report represent a plan to guide the Jacksonville Aviation Authority in meeting demand as they develop; therefore, no development should be undertaken until there is a clearly identified need for it.

REGULATORY GUIDELINES

This Master Plan is prepared in accordance with Federal Aviation Administration (FAA) Advisory Circulars **AC 150/5370-6B**, *Airport Master Plans*, and **AC 150/5300-13**, **Change 10**, *Airport Design*, in conjunction with the FDOT's *Guidebook for Airport Master Planning* and other related standards. Furthermore, current guidance will be incorporated from the FAA Airports District Office (Orlando), FDOT Aviation Office, JAA, and other local government agencies. Planning efforts of the city, county, region, state, and nation have been coordinated in the Master Plan to provide the most preeminent plan for the benefit of HEG and all of the participating organizations.

In addition, in order to assist JAA in considering the environmental factors that may impact future development at HEG, the following national, state and local legislation was considered. This overview of regulatory guidelines will assist the sponsor and the planning consultant in developing alternatives that are tailored to the airport's size, unique setting and operating environment while also considering the airport's environmental setting, the identification of environmentally related permits and the potential impacts of recommended development projects. An in-depth analysis of existing environmental conditions at HEG is provided in **Chapter Two**, *Inventory of Existing Conditions*.

Water Quality

Legislation

The Federal Water Pollution Control Act, as amended by the Clean Water Act provides the authority to establish water control standards, control discharges into surface and subsurface waters, develop waste treatment management plans and practices, and issue permits for discharges and for dredged and filled materials into surface waters. The Fish and Wildlife Coordination Act requires consultation with the United States Fish and Wildlife Service (USFWS) and the Florida Fish and Wildlife Conservation Commission (FFWCC) when any alteration and/or impounding of water resources is expected. The Federal National Pollution Discharge Elimination System (NPDES) permit program provides regulations that govern the quality of stormwater discharges into water resources of the United States.

Regulatory Agencies

The United States Army Corps of Engineers (COE), the Florida Department of Environmental Protection (FDEP), and the Saint Johns River Water Management District (SJRWMD) have jurisdiction over and regulate activities that alter the landscape and disrupt water flow to wetland areas and surface waters through the Environmental Resource Permitting (ERP) Program in Florida. The program forwards permit applications to other state and federal agencies including the FFWCC and the USFWS. Permitting requirements for construction that exceeds five acres are specified by NPDES regulations and administered by the FDEP.

Historical, Architectural, Archaeological, and Cultural Resources

Legislation

The National Historic Preservation Act of 1966 and the Archaeological and Historic Preservation Act of 1974 provide protection against development impacts that would cause change in historical, architectural, archaeological, or cultural resources.

Regulatory Agencies

The Department of State, Division of Historical Resources is responsible for promoting historical, archaeological, museum, and folk culture resources in Florida.

Biotic Communities

Legislation

The Fish and Wildlife Coordination Act (48 Statute 401 as amended; 16USC et. Seq.) considers impacts to habitat and wildlife. Section 2 of this act requires consultation with USFWS, the United States Department of the Interior (USDI), and state agencies that regulate wildlife whenever water resources are modified by a federal, public, or private agency under federal permit of license.

Regulatory Agencies

The USFWS and FFWCC have authority under the act to provide comments and recommendations concerning vegetation and wildlife resources.

Endangered and Threatened Species

Legislation

The Endangered Species Act of 1973 (ESA), as amended, requires federal agencies, in consultation with and assisted by the USFWS, to ensure that their actions are not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat of such species. Section 7 of the Act states that federal agencies must review their actions: If those actions will affect a listed species or its habitat, they must consult with the United States Fish and Wildlife Service.

Regulatory Agency

The USFWS, the Florida Department of Agriculture and Consumer Services (FDACS), and the FFWCC have jurisdiction over and administer native endangered and threatened species permits for Florida. During the consultation process, the USFWS will determine the significance of potential impacts to federally protected species and will recommend methods to avoid or mitigate for impacts that may occur as a result of the proposed projects.

The FFWCC Threatened and Endangered Species Section reviews and issues permits that involve Florida's protected terrestrial animal species. The FFWCC Bureau of Protected Species Management reviews and issues permits that involve Florida's protected aquatic wildlife species. The FDACS Division of Plant Industry is responsible for providing protection to Florida's protected native plant species that are classified as endangered, threatened, or commercially exploited.

Wetlands

Legislation

Executive Order 11990, Protection of Wetlands, mandates that each federal agency take action to minimize the destruction, loss, or degradation of wetlands, and preserve and enhance their natural values. On the federal level, wetlands are regulated according to Section 404 of the Clean Water Act, which requires a permit for dredging and filling activities that take place in Waters of the United States, including wetlands.

The legal framework for the regulation of activities in wetlands by the State of Florida and by the State's Water Management Districts is provided, in part, by Chapter 373 of the Florida Statutes, *the Florida Water Resources Act of 1972*, specifically 373.414 which states that an activity regulated under this part will not be harmful to water resources; water quality standards will not be violated; and such activity in, on, or over surface waters or wetlands, is not contrary to the public interest. If such an activity significantly degrades or is within an Outstanding Florida Water, the applicant must

provide reasonable assurance that the proposed activity will be clearly in the public interest. Specifics concerning permit requirements are codified in Chapter 40, parts A through E, of the Florida Administrative Code.

Regulatory Agencies

In Northeast Florida, the COE, the FDEP, and the SJRWMD have jurisdiction over and regulate activities that alter the landscape and disrupt water flow to wetland areas and surface waters through the State ERP Program.

Floodplains

Legislation

Executive Order 11988, "Floodplain Management" defines floodplains as lowland areas adjoining inland and coastal waters, especially those areas subject to one percent or greater chance of flooding in any given year.

Regulatory Agencies

The Federal Emergency Management Agency (FEMA) has produced Flood Insurance Rate Maps (FIRMs) for communities participating in the National Flood Insurance Program. The maps detail the 100-year and 500-year base flood elevations. The State of Florida administers and requires compensation for floodplain impacts through the ERP program. SJRWMD has jurisdiction over Northeast Florida.

Coastal Zone Management Program

Legislation

The Coastal Zone Management Act (CZMA) aims to preserve, protect, develop, and where possible, restore and enhance the resources of the nation's coastal zone. The Florida Coastal Management Act of 1978 (Chapter 380, Part II, Florida Statutes) authorized the FDEP to develop a comprehensive state coastal management program based upon existing Florida Statutes and Rules.

Regulatory Agency

The FDEP is responsible for directing the implementation of the Florida Coastal Management Program (FCMP). The program is based on a cooperative network of nine agencies including the FDEP, the Florida Department of Community Affairs (DCA), FFWCC, Department of State (DOS), Governor's Office of Planning and Budgeting (OPB), Department of Transportation (DOT),

Department of Health (DOH), and the Division of Forestry within the DACS. SJRWMD is also a cooperating member in the consistency review process for Northeast Florida.

Farmland

Legislation

The Farmland Protection Policy Act of 1981 (FPPA) requires the evaluation of farmland conversion to non-agricultural areas. Prime farmland is land best suited for producing food, feed, forage, fiber, and oilseed crops. This land has the quality, growing season, and moisture supply necessary to produce sustained crop yields with minimal energy and economic input.

Regulatory Agencies

The National Resources Conservation Service (NRCS) has jurisdiction and should be consulted if farmland is to be converted to non-agricultural use by a federally funded project. The consultation determines whether the farmland is classified as "prime" or "unique." If it is, the Farmland Protection Act requires rating the farmland conversion impacts based upon the length of time farmed, amount of farmland remaining in the area, level of local farm support services, and the level of urban land in the area.

MASTER PLANNING PROCESS

The Master Plan provides an effective written and graphic representation of the ultimate development of the Airport and associated land uses adjacent to the Airport, while establishing a schedule of priorities and phasing for the various improvements proposed. The planning document presents a conceptual development plan, over a 20+-year period, for the Airport. Realistic master planning is a continuing and evolutionary process due to the justification and funding required during the implementation process. Many adjustments are likely to take place to meet the changing industry before facilities are designed, approved, and built to completion.

An approved Airport Master Plan provides long-range recommendations for development of an airport and is essential for an airport to qualify for federal and/or state assistance for realization of the plan. Government assistance is provided in the form of financial grants to the airport sponsor. The grants are provided by the FAA through the Airport Improvement Program (AIP) funded by the Federal Aviation Trust Fund and by the FDOT through the Aviation Fuel Tax that funds approximately 60 percent of the State Aviation Program and through the Public Transportation Fund for the remaining 40 percent.

This master plan update provides a systematic outline of the development actions required to maintain and further develop airfield and landside facilities. This process provides the officials responsible for

scheduling, budgeting and ultimate funding of airport improvement projects with an advance notice of the future needs of the Airport. By phasing airport improvements, the development can be conducted in an orderly and timely fashion.

To accomplish the objectives identified, the study included the following tasks:

- Conduct an inventory of existing documents related to the airport, the physical airport facilities, demographics of the airport service area, and airport environment;
- Collect historical operational data, conducting tenant interviews, and forecasting aviation activity through the year 2025;
- Conduct a comprehensive analysis of current airport facilities, determination of trends and activities affecting the airport, the identification and analysis of potential trends in the aviation industry including potential impacts to future operations;
- Evaluate and compare the airfield capacity to expected aviation activity;
- Determine the airport facilities required to meet forecast demand;
- Create a concise Airport Layout Plan (ALP) drawing set reflecting the proposed improvements throughout the master planning time period
- Compile a schedule of the proposed improvements, including cost estimates, phasing and financial feasibility of each proposed improvement; and
- Develop a cost feasible Capital Development Plan (CIP) in FDOT JACIP Format.

A graphic representation of this process is depicted in **Figure 1-1**, *Steps in the Master Planning Process.*

Throughout this process, reviews of the master plan report were conducted at key points such as at the completion of the forecasts and during development of the alternatives. This ensured that input was received from key stakeholders, such as JAA, FAA and FDOT. The individual report chapters provide a detailed explanation of these key steps. It should be noted that each step in the master plan process was built upon information and decisions made during the previous steps. Taken as a whole, the master plan process addressed key issues as identified above as well as illustrated how the study objectives were met.

Figure 1-1
Steps in the Master Planning Process