



# Introduction

## *WHAT IS A MASTER PLAN?*

The Federal Aviation Administration (FAA) recommends that airports update their long-term planning documents every seven to 10 years, or as necessary, to address local changes at the airport. The last master plan update for Gainesville Municipal Airport (GLE) was completed in 2005, with the most recent airport layout plan (ALP) approved in 2007. The City of Gainesville, which is the sponsor of the airport, has received a grant from the Texas Department of Transportation (TxDOT) Aviation Division to update the airport master plan.

The city is responsible for funding capital improvements at GLE, as well as obtaining FAA and TxDOT development grants. The master plan is intended to provide **a true vision for how GLE is developed, guidance for future development, and justification for projects** for which the airport may receive funding. This is accomplished, in part, through an updated capital improvement program (CIP) to demonstrate the future investments required by the City of Gainesville, TxDOT, and the FAA.

The airport master plan follows a systematic approach outlined by the FAA to identify airport needs in advance of the actual need for improvements. This is done to ensure that the city can coordinate environmental reviews, project approvals, design, financing, and construction to minimize the negative effects of maintaining and operating inadequate or insufficient facilities. An important outcome of the master plan process is a recommended development plan, which reserves sufficient areas for future facility needs. Such planning will protect development areas and ensure they will be readily available when required to meet future needs. The intended outcome of this study is a detailed on-airport land use concept that outlines specific uses for all areas of airport property, including strategies for revenue enhancement.

The preparation of this master plan is evidence that the city recognizes the importance of the airport and the associated challenges inherent in providing for its unique operating and improvement needs. The cost of maintaining an airport is an investment that yields impressive benefits to the local community.

With a sound and realistic master plan, the airport can maintain its role as an important link to the regional, state, national, and global air transportation systems. Moreover, the plan will aid in supporting decisions for directing limited and valuable city resources for future airport development. Continued investment in the airport will ultimately allow the City of Gainesville to reap the economic benefits.

Some common questions regarding what a master plan is / is not are answered in the graphic below.

#### AN AIRPORT MASTER PLAN IS...

- ✓ A comprehensive, long-range study of the airport, including all air and landside components, that describes plans to meet FAA safety standards and future aviation demand.
- ✓ Recommended to be conducted every 7-10 years to ensure plans are up to date and reflect current conditions and FAA regulations. The last master plan for GLE was completed in 2005.
- ✓ Funded by TxDOT-Aviation via the Airport Improvement Program (AIP), which provides 90% of the total project costs. The remaining 10% is funded by the City of Gainesville.
- ✓ A local document that will ultimately be presented for approval from the City of Gainesville. TxDOT-Aviation approves only two elements of the airport master plan: the aviation demand forecasts and the airport layout plan (ALP) drawing set.
- ✓ An opportunity for airport stakeholders and the public to engage with airport staff on issues related to the airport, its current and future operations, and environmental and socioeconomic impacts. Up to three public information workshops will be conducted during the master plan process to facilitate this public outreach effort.

#### AN AIRPORT MASTER PLAN IS NOT...

- ✗ A guarantee that the airport will proceed with any planned projects. Master plans are guides that help airport staff plan for future development; however, the need/demand for certain projects may never materialize.
- ✗ A guarantee that the City of Gainesville or TxDOT-Aviation will fund any planned projects. Project funding is considered on a case-by-case basis and requires appropriate need and demand. Certain projects may require the completion of a benefit-cost analysis.
- ✗ A binding or static plan. Elements of the master plan may be updated to reflect changes in aviation activity at the airport, economic conditions of the region, or the goals of the City of Gainesville.
- ✗ Environmental clearance for specific projects. The master plan includes an environmental overview, which identifies potential environmental sensitivities per *National Environmental Policy Act of 1969* (NEPA) guidelines. Most planned projects will require a separate environmental study prior to construction.

## WHO IS PREPARING THE MASTER PLAN?

The City of Gainesville has contracted with Coffman Associates, Inc. to undertake the airport master plan. Coffman Associates is an airport planning and consulting firm that specializes in master planning and environmental studies. Coffman Associates will lead the planning team with support from KSA and Martinez Geospatial. KSA, a Pape-Dawson company, will provide engineering support including a drainage study and preparation of cost estimates for future capital projects, while Martinez Geospatial will provide updated aerial photography and mapping, a field survey, and airspace obstacle evaluation needs.

The airport master plan is prepared in accordance with FAA requirements, including Advisory Circular (AC) 150/5300-13B, *Airport Design*, and AC 150/5070-6B, *Airport Master Plans* (as amended). The plan is closely coordinated with other planning studies relevant to the area and with aviation plans developed by the FAA and TxDOT. It is also being coordinated with the City of Gainesville and other local and regional agencies, as appropriate.

## GOALS, OBJECTIVES, AND ASSUMPTIONS

The primary goal of this master plan is to provide the framework needed to guide future airport development that will satisfy aviation demand in a cost-effective way while considering potential environmental and socioeconomic impacts. Accomplishing this goal requires an evaluation of the existing airport to decide what actions should be taken to maintain a safe, adequate, and reliable facility. A long-range planning study also requires several baseline assumptions that will be used throughout the analysis. Specific objectives and assumptions for this study are as follows.

### STUDY OBJECTIVES

#### Aviation Demand Forecasts

- Research factors that are likely to affect all air transportation demand segments in the City of Gainesville and the northern portions of the Dallas-Fort Worth Metroplex over the next 20 years. The analysis will include the development of forecasts of potential general aviation, air taxi, and cargo activity elements.
- Determine the airport's current and future critical design aircraft per FAA AC 150/5300-17, *Critical Aircraft and Regular Use Determination*.

#### Facility Requirements

- Analyze the existing airfield system to determine the existing and ultimate runway length required to satisfy the airport's critical aircraft now and into the future.
- Conduct a demand capacity analysis to evaluate the need for capacity enhancements.
- Consider the emergence of unmanned aircraft systems (UAS) and how advanced air mobility (AAM) facilities could be implemented at GLE.
- Conduct a drainage study to assess existing drainage infrastructure and ensure proper water management.

#### Development Alternatives

- Evaluate the highest and best uses of airport property.
- Recommend landside improvements that satisfy anticipated operational growth, including fixed base operator (FBO), specialty aviation service operator (SASO), and other aviation services.

## Capital Improvement Program

- Develop a 20-year demand-based CIP, including a recommended phasing plan.

## Airport Layout Plan (ALP) Update

- Produce accurate base maps of existing and proposed facilities, as well as updated airport layout plan (ALP) drawings consistent with FAA Standard Operating Procedures (SOPs) No. 2.00 and 3.00. This will include updated mapping and an obstruction survey.
- Review future use and zoning of airport property, instrument approach areas, and nearby developments to ensure flight safety and land use compatibility. This will involve the development of new noise exposure contours utilizing the FAA's Aviation Environmental Design Tool (AEDT); application of current land use compatibility guidelines; review of local land use controls and plans; and analysis of land use management techniques.
- Analyze all opportunities and develop strategies for incompatible land use encroachments.

## BASELINE ASSUMPTIONS

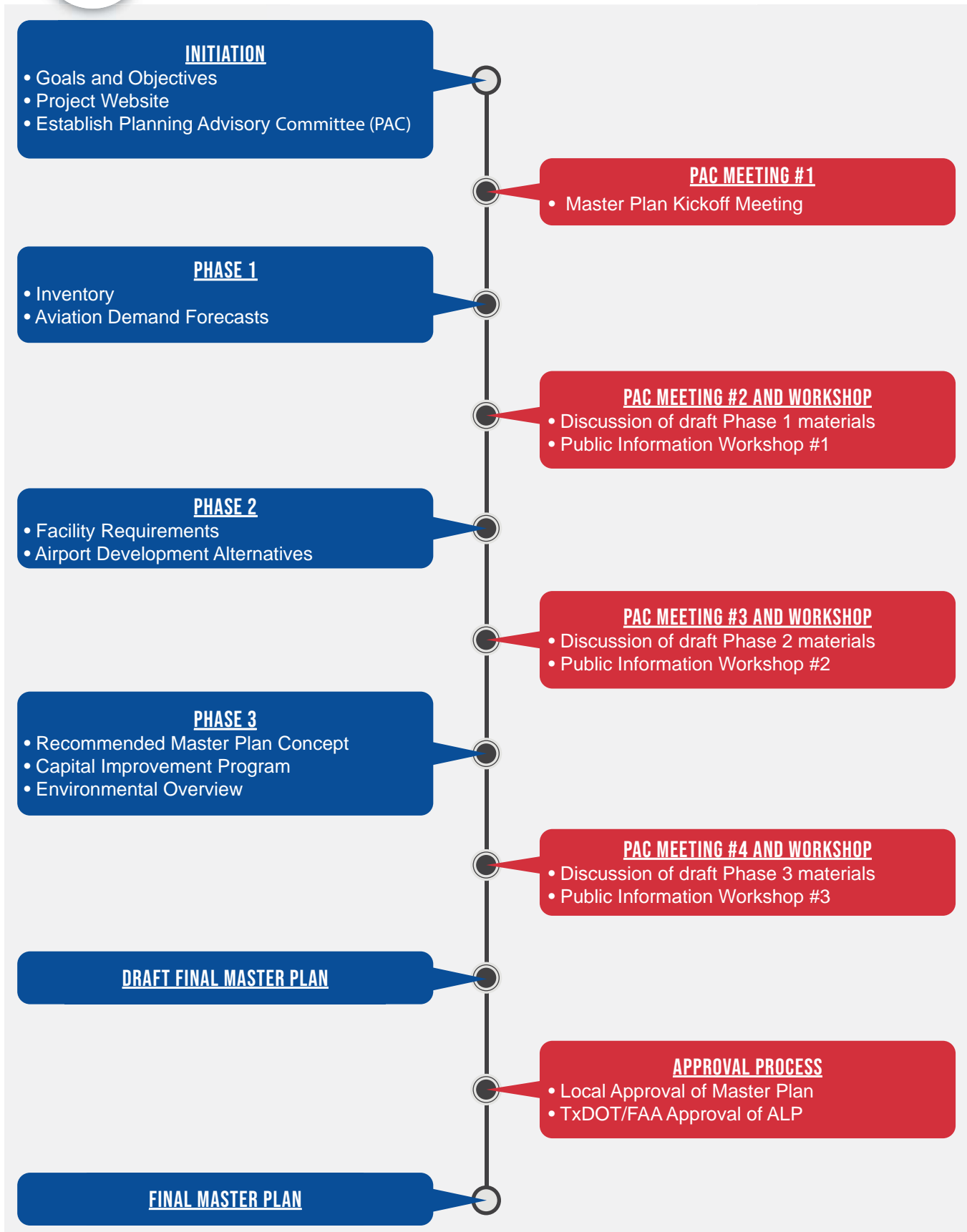
A long-range planning study requires several baseline assumptions that are used throughout this analysis. The baseline assumptions for this study are as follows:

- GLE will continue to accommodate general aviation tenants, as well as itinerant and local aircraft operations by air taxi, general aviation, and military operators, through the 20-year planning period.
- The aviation industry will develop through the planning period as projected by the FAA. Specifics of projected changes in national aviation industries are described in Chapter Two.
- The socioeconomic characteristics of the region will generally change as forecasted (Chapter Two).
- A federal and state airport improvement program will be in place through the planning period to assist in funding future capital development needs.

## MASTER PLAN ELEMENTS AND PROCESS

The master plan has 10 elements that are intended to assist in the evaluation of future facility needs and provide the supporting rationale for their implementation. **Exhibit i** provides a graphical depiction of the process involved with the study.

**Element 1 – Study Initiation and Organization** includes the development of the scope of services, schedule, and study website. Study materials are assembled in a workbook format. General background information is established that includes outlining the goals and objectives to be accomplished during the master plan.



**Element 2 – Inventory of Existing Conditions** is focused on collecting and assembling relevant data pertaining to the airport and the area it serves. Information regarding existing facilities and operations is collected. Local economic and demographic data are collected to define local growth trends and environmental information is gathered to identify potential environmental sensitivities that might affect future improvements. Planning studies that may be relevant to the master plan are also collected.

**Element 3 – Aviation Demand Forecasts** examines the potential aviation demand at GLE. The analysis utilizes local socioeconomic information and national air transportation trends to quantify the levels of aviation activity that can reasonably be expected to occur at GLE over a 20-year period. An existing and ultimate critical design aircraft based on AC 150/5000-17, *Critical Aircraft and Regular Use Determination*, is also established to determine future planning design standards. The results of this effort are used to determine the types and sizes of facilities that will be required to meet the projected aviation demand at the airport through the planning period. This element is one of two elements that are submitted to TxDOT for approval.

**Element 4 – Facility Requirements** determines the available capacities of various facilities at the airport, whether they conform with FAA standards, and what facility updates or new facilities will be needed to comply with FAA requirements and/or projected 20-year demand.

**Element 5 – Airport Development Alternatives** considers a variety of solutions to accommodate projected airside and landside facility needs through the long-term planning period. An analysis is completed to identify the strengths and weaknesses of each proposed development alternative with the intention of determining a single direction for development.

**Element 6 – Recommended Concept/Land Use Compatibility** involves coordination with airport staff and the planning advisory committee to result in the selection of a recommended development concept. The airport's noise exposure and land use compatibility are also evaluated. An environmental overview will identify any potential environmental concerns that must be addressed prior to the implementation of the recommended development program.

**Element 7 – Financial Management and Development Program** analyzes the benefits and costs associated with the recommended plan. Specific project costs are established for the development of a CIP that ensures logical staging of improvements.

**Element 8 – Obstruction Survey and Mapping** includes the development of new aerial mapping (topographic/planimetric) of the airport and surrounding environs. Based on the data received, an obstacle action plan (OAP) will be developed that includes mitigative actions for obstacles that could impede safe air navigation.

**Element 9 – Airport Layout Plans** will be developed based on the recommended development concept. The drawings will meet the requirements of FAA SOP No. 2.00, *Standard Procedure for FAA Review and Approval of Airport Layout Plans (ALPs)* (effective date October 1, 2013). The updated ALP set will be included as an appendix to this study. This is the second element that is submitted to TxDOT for approval.

**Element 10 – Final Reports** produces the draft final report and ALP drawings in print and digital form. These materials will be presented to the City of Gainesville, TxDOT, and the FAA for review and approval. Once approved, a final report will be prepared and made available in print and digital formats.

## COORDINATION AND OUTREACH

This study is of interest to many within the community and region, including local citizens and businesses, community organizations, city officials, airport users/tenants, and aviation organizations. As a component of the regional, state, and national aviation systems, GLE is of importance to state and federal agencies responsible for overseeing the air transportation system.

To assist in the development of the master plan, a planning advisory committee (PAC) was established to act in an advisory role. PAC members meet four times at designated points during the study to review study materials and provide comments to help ensure that a realistic, viable plan is developed.

Draft working paper materials are prepared at various milestones in the planning process. The working paper process allows for timely input and review during each step within the master plan to ensure all issues are fully addressed as the recommended program develops.

A series of three open-house public information workshops is held as part of the study coordination and outreach efforts. Workshops are designed to allow all interested persons to become informed and provide input concerning the master plan process. Notices of meeting times and locations are advertised through local media outlets. All draft working papers, reports, meeting notices, and materials are made available to the public on a study-specific website: [gainesville.airportstudy.net](http://gainesville.airportstudy.net)

## SWOT ANALYSIS

A SWOT analysis is a strategic business planning technique used to identify **S**trengths, **W**eaknesses, **O**pportunities, and **T**hreats associated with an action or plan. The SWOT analysis involves identifying an action, objective, or element, and then identifying the internal and external forces that are positively and negatively impacting that action, objective, or element in a given environment. A SWOT analysis was conducted at the first PAC meeting, the findings of which are presented in **Table i**.



**TABLE i | SWOT Analysis – Gainesville Municipal Airport**

<b>STRENGTHS</b>	<ul style="list-style-type: none"> <li>• Dual runway system; primary Runway 18-36 is 6,000 feet long by 100 feet wide and is capable of accommodating aircraft up to and including mid-sized corporate jets</li> <li>• Airport property encompasses more than 1,300 acres, so there is ample room to grow</li> <li>• GLE's location north of the DFW Metroplex is ideal as the Metroplex continues to grow northward</li> <li>• WinStar Casino, located 11 miles north of GLE, is a major attraction that can contribute to activity at the airport</li> <li>• Airspace around GLE is uncomplicated</li> <li>• Good transportation infrastructure with proximity to Interstate 35 and State Highway 82; rail line is also nearby</li> <li>• Adequate water pressure and volume on and around airport</li> <li>• Runways 18 and 36 have GPS instrument approach procedures with respective visibility minimums of ¾- and ¾-mile</li> <li>• GLE has a height/hazard zoning ordinance in place</li> <li>• Airport offers a mix of aeronautical and non-aeronautical land uses (adjacent industrial park)</li> </ul>
<b>WEAKNESSES</b>	<ul style="list-style-type: none"> <li>• Automated weather observing system (AWOS) has limitations in terms of online accessibility; AWOS data only available via radio and telephone</li> <li>• Lack of infrastructure (utilities, taxiways, other airfield/vehicle pavement) on east side; airfield pavement that exists on the east side is in poor condition</li> <li>• Wastewater serving airport is beyond capacity</li> <li>• Utilities for existing hangars have been tied together and need to be addressed</li> <li>• Hangar development has been somewhat haphazard; a plan for strategic development has not been in place</li> <li>• Lack of perimeter road results in vehicles driving on airfield pavement, including runway crossings</li> <li>• Lack of activity by larger aircraft (i.e., corporate jets)</li> <li>• Some in the community perceive the airport in a negative way</li> </ul>
<b>OPPORTUNITIES</b>	<ul style="list-style-type: none"> <li>• Tax increment reinvestment zone (TIRZ)</li> <li>• Potential for increased commercial passenger options (charter) and air cargo</li> <li>• Public support by local business owners who want to see the airport grow and are supportive of land acquisition opportunities</li> <li>• The master plan will provide an opportunity for the City of Gainesville to promote the airport and improve community engagement and support of GLE</li> <li>• Ultimate disposition of crosswind Runway 13-31; should it be maintained or decommissioned?</li> <li>• New loop road will improve access to the airport</li> <li>• The DFW Metroplex's more complicated airspace makes GLE an attractive option for pilots</li> <li>• Upcoming improvements at the airport and new leasing opportunities</li> </ul>
<b>THREATS</b>	<ul style="list-style-type: none"> <li>• Encroachment of incompatible land uses, such as residential use</li> <li>• Golf course located on airport property limits revenue-generating potential, but closure of the facility may also be viewed negatively within the community</li> </ul>