

## CHAPTER SIX

# Airport Layout Plan

The Airport Plans set is at the heart of the master plan document. Information presented in this Master Plan report was pictorially summarized in the Airport Plans set. Major improvements outlined in the preferred concepts for land use, GA terminal area, and other major functional areas on the Airport are incorporated into the updated Airport Layout Plan (ALP). The ALP set is the primary tool used by airport management, FAA and FDOT to guide growth at CRG for the 20-year planning period. Various drawings depict the master plan update recommendations with regard to aviation development for the short-, intermediate-, and long-term.

In order to provide uniformity in the development of the Airport Plans set and to simplify agency review, the Federal Aviation Administration (FAA) requests that planners follow a general format for the presentation of specific information. The recommended format is outlined in the FAA **Advisory Circular (AC) 150/5070-6B, “Airport Master Plans”**. The ALP set for Craig Airport was prepared in conformance with FAA established criteria, and the completed Southern Region Checklist is provided in Appendix J of this report.

The ALP set includes the following individual drawing sheets:

- Cover Sheet (Sheet 1)
- Airport Layout Plan Sheet (Sheet 2)
- General Aviation Terminal Area Drawing (Sheet 3)
- Airport Airspace Drawings, (Sheets 4-6)
- Inner Portion of the Approach Surface Drawing - Runway 32 (Sheet 7)
- Inner Portion of the Approach Surface Drawing - Runway 14 (Sheet 8)
- Inner Portion of the Approach Surface Drawing - Runway 5 (Sheet 9)
- Inner Portion of the Approach Surface Drawing - Runway 23 (Sheet 10)
- Airport Land Use Drawing (Sheets 11-12)
- Airport Property Map (Sheet 13)

These drawings were developed and produced as a set using AutoCAD 2008 from an aerial photo provided by JAA, and NAD 83 and NAVD 88 survey data. Reduced reproductions of the drawings are included in this chapter for illustration purposes only.

A full-size set (24" by 36" format) of the drawings will be submitted to the FAA for approval. An approved ALP is perhaps the single most important planning tool since the drawings provide airport management graphical guidance on future development given existing external constraints.

## 6.1 Cover Sheet

The cover sheet (Sheet 1) serves as the ALP drawing set cover and provides basic information required under the FAA ALP guidelines including:

- location and airport vicinity maps
- project name,
- federal and state grant numbers,
- associated City and State,
- sponsor name and logo, and the party responsible for preparing the ALP set
- an index of individual drawing sheets as well as
- IFR and All Weather Wind Roses and data tables.

## 6.2 Airport Layout Drawing Sheet

The ALP drawing as shown in Sheet 2 depicts all existing facilities and proposed development, to scale, over the 20-year master planning time period. It provides clearance and dimensional information required to show conformance with applicable FAA design standards as outlined in **FAA AC 150/5300-13, Change 11**. The ALP also reflects changes in the physical features on the airport and critical land use changes near the airport that may impact navigable airspace or the ability of the airport to operate. The features of the ALP include, but are not limited to: runways, taxiways, hold aprons, lighting, navigational aids, terminal facilities, hangars, other airport buildings, aircraft parking areas, automobile parking, and airport access elements.

Key dimensional criteria are included for the airfield geometry. This includes, but is not limited to, the size of the runways and various taxiways, runway safety areas and runway object free areas, building restriction lines, and navigational aid critical areas, and other dimensional data recommended by the FAA. Airport coordinates, runway end elevations, runway high and low points, true azimuths for each runway, are also included on the drawing set. Included on the ALP sheet are various data tables required in the FAA checklist. These tables include: Airport Data Table, Runway Data Table, Building Data Table and Declared Distance Table.

Based upon discussions with the Jacksonville Aviation Authority (JAA), major airfield improvements include a 1,600 foot extension to Runway 14-32 and pavement extensions to Taxiway A. General aviation facility improvements include various hangar (i.e. T-hangar, corporate, conventional, etc.), apron and building development as well as associated taxiway, parking and surface access projects.

### 6.3 General Aviation Terminal Area Drawing

The terminal area plan for Craig Airport was updated to reflect existing and future proposed GA development as identified in previous chapters of this study. Sheet 3 provides a detailed drawing of both existing and proposed GA development based upon improvements shown in the ALP sheet. These improvements include: apron parking facilities, aircraft storage, surface access and support facilities. The terminal concept focuses on the development of GA facilities over the 20-year planning period.

### 6.4 Airport Airspace Drawings

The Airport Airspace Drawings (Sheets 4 through 6) reflect obstructions affecting navigable airspace as defined in Federal Aviation Regulations (FAR) Part 77. Part 77 was adopted by the FAA to enhance the safe operation of aircraft in the airspace around an airport. Sheets 4 through 6 illustrate the airspace contours consistent with the imaginary surfaces as defined above. These contours are shown in 50-foot intervals as denoted on the plan sheets. Subpart C of FAR Part 77 establishes standards for determining obstructions to air navigation. These regulations enable the establishment of imaginary surfaces, which no object, manmade or natural, should penetrate. FAR Part 77 surfaces are utilized in making zoning and land use planning decisions related to areas adjacent to an airport to protect the navigable airspace from encroachment by hazards that would potentially affect the safety of airport operations.

The FAR Part 77 Imaginary Surfaces Plan depicts the physical features of the area around the airport including existing obstructions that penetrate the surfaces. The specific imaginary surfaces, which should be protected from obstructions, include:

**Primary Surface** - A rectangular area symmetrically which is located about each runway centerline and extending a distance of 200 feet beyond each runway threshold. Width of the Primary Surface is based on the type of approach a particular runway has, while the elevation is the same as that of the runway centerline at all points.

**Horizontal Surface** – A level oval-shaped area situated 150 feet above the airport elevation, extending 5,000 or 10,000 feet outward, depending on the runway category and approach procedure available.

**Conical Surface** - Extends outward for a distance of 4,000 feet beginning at the outer edge of the Horizontal Surface, and sloping upward at a ratio of 20:1.

**Approach Surfaces** - These surfaces begin at the end of the Primary Surface (200 feet beyond the runway threshold) and slope upward at a ratio determined by the runway category and type of approach available to the runway. The width and

elevation of the inner end conforms to that of the Primary Surface while approach surface length and width of the outer end are governed by the runway category and approach procedure available.

**Transitional Surface** - A sloping area beginning at the edges of the Primary and Approach Surfaces and sloping upward and outward at a ratio of 7:1 until it intersects the Horizontal Surface.

## 6.5 Inner Portion of the Approach Surface Drawings

The Inner Portion of the Approach Surface drawing shows both plan and profile views for each runway's RPZ and approaches as shown on the ALP. The purpose of these plans is to locate and document existing objects, which represent obstructions to navigable airspace, and existing and proposed approach slopes for each runway. Additionally, the drawings show the ground profile and terrain features along the extended centerline of each runway end. The Inner Portion of the Approach Surface Drawings for Runways 32, 14, 5 and 23 are shown in Sheets 7 through 10, respectively.

## 6.6 Airport Land Use Drawings

The Land Use drawings depict existing and recommended land use within the airport property boundary as well as parcels contiguous to the airport. Proposed on-airport and contiguous land use was obtained from information provided by the Jacksonville Aviation Authority, City of Jacksonville Planning Department and recommendations outlined in this master plan update. The drawings also include the land use controls within the 60 to 65 DNL contour based upon the City of Jacksonville Zoning Code. This information was used to develop future on-airport land use while minimizing the need for future land acquisition or easements.

The land use drawings, Sheets 11 and 12, depict the existing and future land use of all land in and within the vicinity of the airport. The utilization of this land is represented by several use categories, including Aviation, Non-Aviation, Industrial and Commerce Park, which are labeled in the legend of each drawing. The land use plans have been developed through coordination with the City of Jacksonville to include existing city plans and ensure accuracy. Additionally, the existing (2007) and future (2020) noise contours (60, 65, 70 and 75 DNL) as provided in **Appendix F**, *Airport Noise Analysis*, were superimposed onto Sheets 11 and 12, respectively, to ensure that appropriate aviation-compatible zoning is maintained.

## **6.7 Airport Property Map**

The Airport Property Map (previously referred to as Exhibit A) defines the existing airport boundary for CRG in a graphical and tabular form. The purpose of the drawing and associated tables, as shown in Sheet 13, is to identify historic and future property obtained with federal funds and illustrates major airport facilities, both existing and future, for reference purposes. The property map also identifies contiguous property. No property acquisition is required as a result of recommended airfield developed outlined in this master plan, including the extension of Runway 32. Property acquisition or an aviation easement is recommended for the existing Runway 14 and Runway 5 Runway Protection Zones. One corner of each RPZ in the controlled activity area is not owned or controlled by the Authority. However, all of the Object Free Area and Object Free Area Extension for all runways is owned and controlled by the Authority. Known metes and bounds data is depicted, but have not been field verified as part of this study.

## **6.8 Summary**

The Airport Plans Set is intended to depict the airport's capital development program in graphical form. Preliminary plans were presented to the Jacksonville Aviation Authority management staff, technical advisory committee members, including CACAC and CPAC members, Jacksonville City Council and the City of Jacksonville Planning Department for review and approval. This data was incorporated into the airport plan set to reflect approved airport development for the twenty-year planning period.