



Chapter Eight – Airport Plans

INTRODUCTION

The updated information presented in this Master Plan report is pictorially summarized in the Airport Layout Plan (ALP) drawing set. The current airport improvement recommendations presented in Chapter Six and the capital improvement plan outlined in Chapter Seven are shown in their correct orientation and size on the ALP drawing. In addition to the proposed improvements, the ALP also illustrates the existing runways, taxiways, hangars and other buildings, airport property boundary and other facilities as listed in the Airport Inventory (Chapter One). The purpose of the ALP set is to provide airport management with a scaled, graphic presentation of the airport's 20-year development program. These plans identify areas for future aviation related development, as well as available land, which may be used as an additional revenue source. The ultimate configuration of airport facilities demonstrates a feasible improvement plan that provides for safe, compatible, and efficient airport operations.

The dimensional information provided in the drawings demonstrates compliance with minimum airport design standards established by federal, state, and local authorities. This ALP set was developed in accordance with the guidance outlined in the FAA Advisory Circular (AC) 150/5070-6A, *Airport Master Planning*, 150/5300-13, Change 8, *Airport Design*, and other supporting circulars and orders. Furthermore, these sheets were reviewed to comply with the Airport Layout Plan Checklist-Orlando Airports District Office.

Airport Layout Plan Set

In order to clearly present the recommended airport improvement information, the ALP set includes a number of individual drawing sheets. Several of these drawings are necessary to obtain FAA approval. Additional drawings may be included in the plan set to provide a detailed illustration of areas with complex improvement recommendations, such as the airport's terminal complex. Of the various plans that comprise the plan set, only the Airport Layout Plan drawing requires FAA approval prior to applying for federal or state assistance for any individual development project.

These drawings were developed and produced as a set on 24 x 36 inch sheets. To provide vertical and horizontal accuracy, a digitized map was used as a base for the ALP drawings. The coordinates, elevations, and aerial photogrammetry are in U.S. Survey Feet. The horizontal datum is Florida State Plane Coordinate System, East Zone, North American Datum of 1983/1990 adjustment (NAD 83/90). The vertical datum is the North American Vertical Datum of 1988 (NAVD88). Several features were identified on the map including ground contours with well-defined elevations, man-made or natural features that are visible, trees and bushes, and drainage and utilities structures. In addition, spot elevations were measured for tree canopy, building tops, and edges and tops of poles.

Reduced reproductions of the drawings are included in this chapter herein for illustrative purposes. A full-size set of the drawings was submitted to the FAA and FDOT for approval. An approved ALP set will provide airport management with overall guidance with regards to future development within the airport boundary. The ALP set includes the following individual drawing sheets:

- Cover Sheet (Sheet 1)
- Airport Layout Plan Data Sheet (Sheet 2)
- Airport Layout Plan Set (Sheet 3)
- Terminal Area Plan (Sheet 4)



- Runway 18 Inner Portion of the Approach Surface Drawing (Sheet 5)
- Runway 36 Inner Portion of the Approach Surface Drawing (Sheet 6)
- Runway 9 Inner Portion of the Approach Surface Drawing (Sheet 7)
- Runway 27 Inner Portion of the Approach Surface Drawing (Sheet 8)
- Airport Airspace Drawings (Sheets 9-11)
- On-Airport Land Use Drawing (Sheet 12)
- Property Map (Sheet 13)

Cover Sheet

Basic airport information required under the FAA Airport Layout Plan guidelines is presented on the Cover Sheet. Also highlighted on the Cover Sheet are the project name, federal and state grant numbers, sponsor name and logo, as applicable. The Cover Sheet also displays a location and vicinity map. The location map is a scaled representation of location of the airport in the State of Florida, and a vicinity map shows the Titusville area and the approximate location of the airport. The vicinity map also depicts the roadway system serving the airport and the local community. Also highlighted on the cover sheet is an index, listing component sheets of the plan set to supplement the following narrative summary.

Airport Data Sheet

The Airport Data Sheet contains a list of general notes along with the IFR, VFR and All Weather wind roses. Nine years of wind data gathered from the Titusville, Florida station was purchased from the National Climatic Data Center (NCDC). The data was analyzed using the FAA airport design program to develop the wind roses and coverage percentages.

Airport Layout Plan Drawing

The third sheet is the most complex single drawing of the plan set, representing the airport in its entirety at a scale of 1 inch = 600 feet. The ALP Drawing is a graphic presentation of the actual layout of the physical facilities at TIX, the proposed improvements, and the pertinent clearance and dimensional information required. The ALP also reflects changes in the physical features on the airport, as well as critical land use changes within the vicinity of the airport, which may affect navigable airspace or the ability of the airport to operate.

Major features of the ALP drawing include runways, taxiways, aprons, navigational aids, existing facilities, the roadway system, and non-airport facilities surrounding the perimeter of the airport property. This drawing also includes the runway approaches, runway end elevations, runway high and low points, true azimuths for each runway, and the angle of declination (magnetic north) including the annual rate of change for the magnetic declination. Imaginary elements are also included on the drawing sheet. These include airport reference points (existing and future), ground contours, runway safety areas, runway protection zones, critical areas, future property interests, and other dimensional data recommended by the FAA.

Major buildings for both the airside and landside operations are shown for orientation purposes, but are also detailed more specifically on separate sheets. Included is a Building Table that identifies each major existing and future structure, and pertinent information arranged in a chart format. Buildings and structures are identified by numerical codes, followed by the topmost elevations of existing structures. Additional tables include the Airport



Data Table, the Runway Data Table, and other data as appropriate. The drawing also includes a legend symbolically representing existing and future airport facilities and features.

Terminal Area Drawing

The terminal area drawing is incorporated in the ALP set to provide a detailed illustration of the existing and long-term development plan for the terminal complex based on the improvements recommended in the Alternatives chapter, and included on the ALP drawing. As shown, the Terminal Area Drawing denotes the upcoming relocation of the existing terminal building via the construction of a larger new terminal facility. The new building includes additional area to improve circulation and to accommodate additional office area for airport management. Additional vehicular parking spaces are shown east of the terminal to accommodate increased parking demands. The southernmost portion of the drawing has been reconfigured to include new t-hangar structures, associated apron, and a proposed parking lot for t-hangar tenant parking.

Inner Approach Plan and Profile Drawings

Sheets 5 through 8 show plan and profile views of the approach to each existing runway (Runways 18, 36, 9, and 27), as well as the ultimate 680-foot extension on the end of Runway 36. The plan and profile drawings cover the referenced runway end beyond the outer limits of the each runway protection zone (RPZ). These sheets also depict the profiles of the existing and future approach surfaces.

The existing and ultimate approach surfaces related to Runway 18 and Runway 36 are shown on Sheets 5 and 6, respectively. The existing non-precision approach surface (34:1) on Runway 18 is depicted with current obstructions penetrating the surface, whereas, the precision approach (50:1) on Runway 36 currently has no obstructions. Both runway ends are depicted with future precision approach surfaces. Similarly, the approach surfaces related to Runway 9 and Runway 27 are shown on Sheets 7 and 8. Runway 9 currently has a non-precision approach surface (34:1) and the drawing is shown with an ultimate precision approach surface (50:1) configuration. Sheet 8 depicts Runway 27 configured with an existing visual approach surface (20:1) and planned for an ultimate non-precision approach surface.

Any controlling structures, such as roadways, railroads and trees are also shown. Additionally, fixed objects located along the extended runway centerlines are also illustrated on the sheets to provide an indication of the relative distance to the existing and future approach surfaces. Any known obstructions to navigable airspace are listed in an Obstruction Chart with the recommended action for each obstruction.

Airport Airspace Drawing

Sheets 9 through 11 illustrate the airspace contours for TIX based on the ultimate approach types planned for each runway end. The contours are consistent with the imaginary surfaces defined in the FAA Federal Aviation Regulation Part 77, *Objects Affecting Navigable Airspace*.

The drawing, shown at a scale of 1 inch = 2000', and is transposed on a digital quadrangle basemap to provide a reference for the airspace coverage. These sheets cover the airport property and illustrate the ultimate development of the airfield including references to key surface elevations and stationing from the runway ends. The drawing also includes an Obstruction Data Table that catalogs the most recently available information on



obstructions to navigable airspace on and around the airport. Obstructions are noted by their highest elevation above mean sea level where they may penetrate the imaginary surfaces.

On-Airport Land Use Drawing

The On-Airport Land Use Drawing depicts the existing and recommended use of the land on the airport. This plan was developed to achieve optimum utilization of the land within existing airport boundaries. Planning for land use on the airport is based upon two basic objectives: 1) maximization of existing airport property for air transportation and 2) compatibility between the airport and its environs.

The plan sheet also depicts the existing DNL 65 and above noise contours at the airport. The FAA has established national guidelines for land use compatibility related to airport-generated noise impacts. In most cases, noise sensitive land uses are considered incompatible if located within the 65 Ldn noise contour (or higher), unless noise mitigation measures are taken.

Airport Property Map

The existing airport property boundary is illustrated in Sheet 13 of the ALP set. This drawing is based on previous property maps developed for TIX and other available information regarding the current airport property. In addition to the existing property boundary, which includes all property owned in fee simple as well as avigation easements, the drawing also illustrates the proposed property acquisitions and avigation easements recommended in this report. This plan must be updated when the airport changes any property boundary, acquires new property or new easements for airport development. This plan sheet also depicts the legal description of all the properties located within the airport's property fenceline. The property boundaries and associated land use classification data was obtained from existing airport records.

SUMMARY

The ALP set is intended to depict in graphical format the current airport improvement plan. Preliminary plans were presented to the Airport Authority and management staff for discussion and review. After discussions, any significant changes in the proposed development plan should be noted in the "Revisions" portion of the title block on each revised drawing. These revisions are reflected in the ALP set created. The drawings that follow present the direction established by the airport staff for TIX 20-year planning period (2003-2023).