

Chapter Four

AIRPORT PLANS

Airport Layout Plan Report

Grove Field

The airport plans are one of the last steps in the development of an airport layout plan report. They are a pictorial representation and summarization of the efforts made in the airport layout planning process. The previous chapters on Inventory, Forecasting, and Facility Requirements/Alternatives and the reviews provided by the Advisory Committee supply the basis for the future airport layouts that are shown in the airport layout drawings. As was previously discussed, the development at an airport should rely more on actual demand rather than a time-based forecast. The development shown in the airport plans reflects planned development, but the course and timing of this development should be carried forward as airport activity demands rather than in the exact form it has been presented.

AIRPORT LAYOUT PLAN DRAWING SET

Cover Sheet

The cover sheet shows both the location and the vicinity map for Grove Field. A sheet index to the airport layout plan drawing set is also provided on this sheet.

Airport Layout Plan Drawing

The airport layout plan depicts the current airport layout and the proposed improvements to the airport for the 20-year planning period. Descriptions of the improvements and costs over the next 20-years are included in *Chapter 5, Capital Improvements Projects (CIP)*. The future airport development is shown on the airport layout plan as required by the FAA. The plan can be modified to accommodate development as dictated by demand.

Runway visibility minimums, runway protection zones, object free areas, safety areas and other standard airport dimensions are shown in the plan and in the runway data table. Other tables include a legend, an airport data table, a buildings/facilities table, and a non-standard conditions and disposition table.

Airport Airspace Plan Drawing

This drawing shows the Part 77 Imaginary Surfaces for the future layout of Grove Field with a USGS topographic map as the background. Airport imaginary surfaces consist of five different types of surfaces. The surface shapes and dimensions as they apply to Grove Field are discussed below.

Primary Surface: A rectangular surface with a width (centered on the runway centerline) that varies for each runway and a length that extends 200 feet beyond each end of the runway. The elevation of the primary surface corresponds to the elevation of the nearest point of the runway centerline. The width of the primary surface of Runway 7-25 is 250 feet.

Approach Surface: A surface centered on the extended runway centerline, starting at each end of the primary surface (200 feet beyond each end of the runway), at a width equal to that of the primary surface and an elevation equal to that of the end of the runway. The approach surfaces at Grove Field reflect visual approaches to both runway ends. The surface extends at a horizontal distance of 5,000 feet at a slope of 20:1 to a width of 1,250 feet.

Transitional Surface: A sloping 7:1 surface that extends outward and upward at right angles to the runway centerline from the sides of the primary surface and the approach surfaces.

Horizontal Surface: An elliptical surface at an elevation 150 feet above the established airport elevation created by swinging arcs of a 5,000-foot radius from the center of each end of the primary surface.

Conical Surface: A surface extending outward and upward from the horizontal surface at a slope of 20:1 for a horizontal distance of 4,000 feet.

It is ideal to keep these surfaces clear of obstructions whenever possible. The Part 77 surfaces are the basis for protection of the airspace around the airport. Obstructions to these surfaces are identified in the Obstruction Data Tables (on sheets 3, 4 and 5), along with the disposition to address the described obstructions. Obstructions to the Part 77 surfaces were determined based on a review of the USGS map and a preliminary field observation performed by W&H Pacific and RLW Consulting in 2004. Past obstruction removal and the FAA 5010 form were also used to identify the existing obstructions. Future obstructions are estimated based on existing data. Obstruction removal has been incorporated into the capital improvement program.

Runway Approach Plan & Profile Drawings

These drawings provide a plan and profile view of any obstructions within the primary and approach surfaces of the runway. Obstruction Data Tables with proposed dispositions are included for both existing and future scenarios.

Land Use Plan Drawing

A land use plan has been developed for the airport and the surrounding area. This plan includes the zoning on and around the airport per Clark County Code.

In general, land use concerns associated with the areas around airports fall into one of the following categories:

- Lighting
- Glare, Smoke and Dust
- Bird Attractions/Landfills
- Airspace Obstructions and Height Restrictions
- Electrical Interference
- Concentrations of People
- Noise Impacts

Any of these activities can create safety concerns for airport users and people on the ground or can be impacted adversely by airport operations. It is important that these issues be addressed in the land use zoning and development around an airport.