CITY OF REDDING CALIFORNIA

Redding Regional Airport

Airport Master Plan

Draft

DRAFT
AIRPORT MASTER PLAN

For

REDDING REGIONAL AIRPORT
City of Redding, California

Prepared for

The City of Redding

By

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Airport Consultants

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REDDING REGIONAL AIRPORT

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RDD

REDDING REGIONAL AIRPORT

REDDING REGIONAL AIRPORT

Introduction

The City of Redding, California owns and operates the Redding Regional Airport (RDD). The airport encompasses 1,535 acres of land and is located approximately seven miles southeast of the central business district. Interstate Highway 5 is approximately two miles to the west of the airport, and Knighton Road provides connection to the Interstate. RDD is a commercial service airport with several airlines operating there. In 2022, more than 200,000 passengers used the airport.

RDD is a vital infrastructure component that supports economic development and the improved quality of life for residents in and around northern California. In addition to serving as an access point for air travelers to the national and international system of airports, the availability of air transport contributes to public safety by supporting police operations, firefighting teams, and air ambulance services.

This master plan is being undertaken for RDD to provide local decision makers and airport administration with guidance for future airport development that will satisfy aviation demands in the region, while also being wholly compatible with the environment and the communities which surround and support the airport.

WHAT IS A MASTER PLAN?

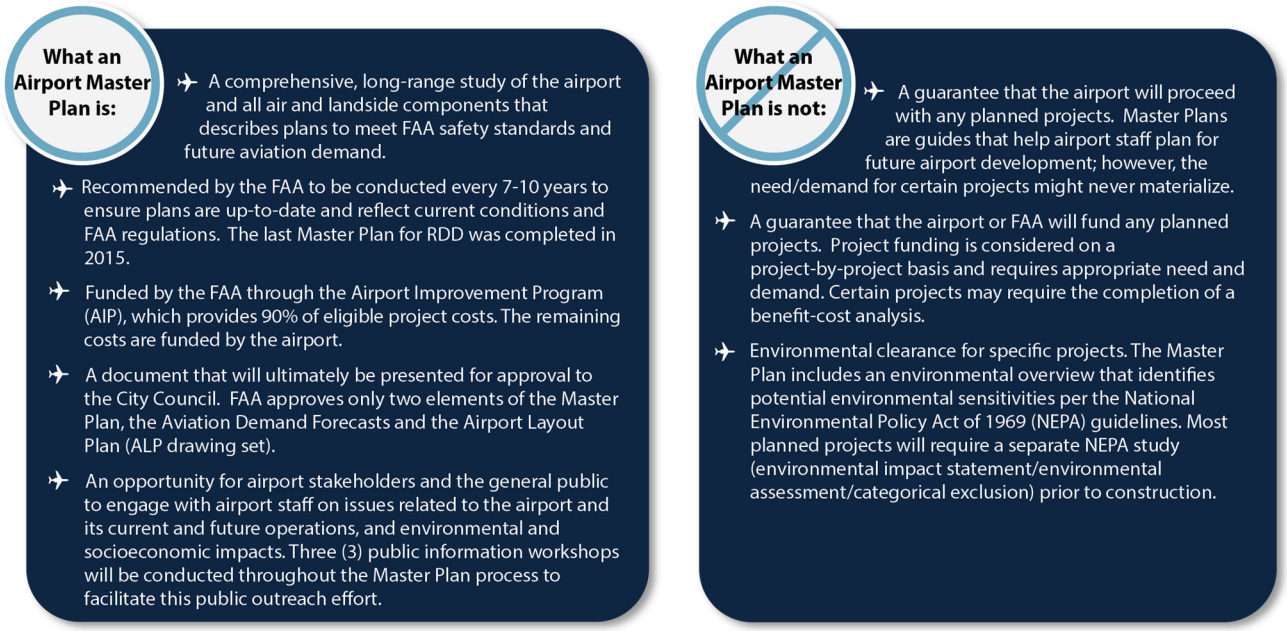
The Federal Aviation Administration (FAA) recommends that airports update their long-term planning documents every seven to 10 years, or as necessary, to address local changes at the airport. The last master plan update for RDD was completed in 2015, and an airport layout plan (ALP) was approved by the FAA in 2018. The City of Redding, the sponsor of RDD, has received a grant from the FAA to update the airport master plan.

The City of Redding is responsible for coordinating capital improvements at RDD, as well as obtaining FAA and California Department of Transportation (Caltrans) aviation development grants. In addition, the city oversees facility enhancements and infrastructure development conducted by private entities at the airport. The **master plan is intended to provide a true vision for how RDD is developed, guidance for future development, and justification for projects** for which the airport may receive funding through an updated capital improvement program (CIP) to demonstrate the future investments required by the, FAA, and Caltrans Aviation.

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 airport staff 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. An additional 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 of Redding recognizes the importance of the airport to the entire region and the associated challenges inherent in providing for its unique operating and improvement needs. The cost of maintaining an airport is an investment which 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 resources for future airport development. Ultimately, continued investment in the airport will allow the region to reap the economic benefits of the airport.

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



WHO IS PREPARING THE MASTER PLAN?

The City of Redding has contracted with the airport planning firm of Coffman Associates, Inc. to undertake the airport master plan. Coffman Associates is an airport consulting firm that specializes in master planning and environmental studies. Coffman Associates will lead the planning team, with support from the following firms:

- **Martinez Geospatial** | Aerial photography, ground survey, and GIS products to meet FAA 5300-18B requirements for Airports GIS data submittal.
- **Quest Energy** | To perform an energy audit of select airport owned buildings and to report on energy saving projects.
- **Mead & Hunt** | Engineering support primarily to offer insights into facility requirements, airfield development alternatives, and estimates of probable costs.
- **SWCA** | Environmental consultants tasked with on-site cultural and biological surveys.

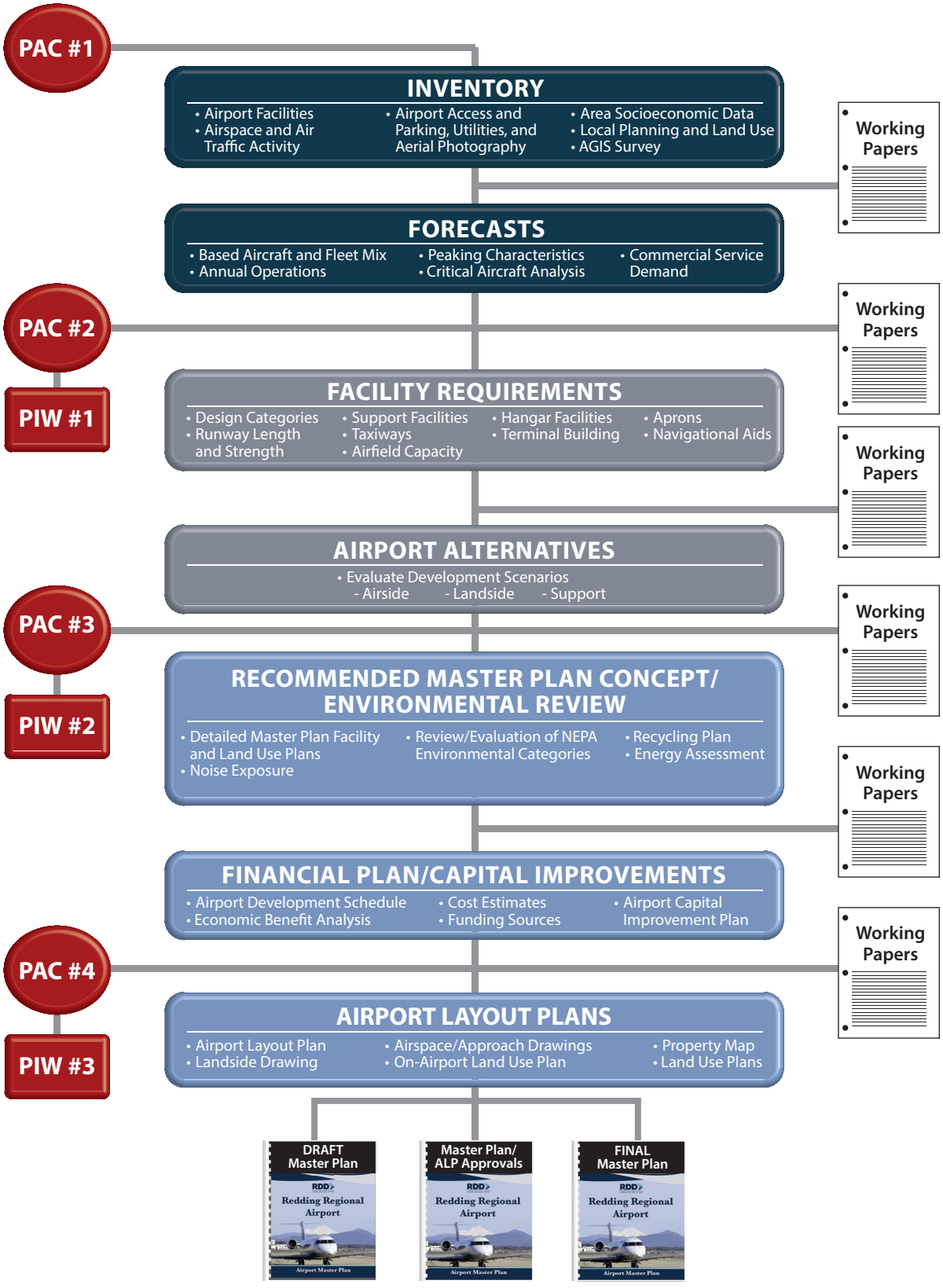
The airport master plan update will be prepared in accordance with FAA requirements, including Advisory Circular (AC) 150/5300-13B, *Airport Design*, and AC 150/5070-6B, *Airport Master Plans*. The plan will be closely coordinated with other planning studies relevant to the area and with aviation plans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

MASTER PLAN ELEMENTS AND PROCESS

The master plan has 15 elements that are intended to assist in the evaluation of future facility needs and provide the supporting rationale for their implementation. **Exhibit iA** 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. The Planning Advisory Committee (PAC) is also established at this stage, consisting of airport stakeholders to serve in an advisory capacity throughout the master plan process. General background information will be 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 is collected on existing facilities and operations. Local economic and demographic data are collected to define the local growth trends, and environmental information is gathered to identify potential environmental sensitivities that might affect future improvements. Planning studies which may have relevance to the master plan are also collected. This element includes an AGIS 18B Survey/Obstruction Analysis and the development of new aerial mapping (topographic/planimetric) of the airport and the surrounding environs.



PAC: Master Plan Advisory Committee
PIW: Public Information Workshop

Element 3 – Aviation Demand Forecasts examines the potential aviation demand at RDD. The analysis utilizes local socioeconomic information, as well as national air transportation trends to quantify the levels of aviation activity which can reasonably be expected to occur at RDD over a 20-year period. An existing and ultimate critical design aircraft, based upon 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 which 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 the FAA 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. This includes a detailed analysis of the terminal building needs now and in the future.

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. These alternatives will include both airside (runways/taxiways) and landside (hangars, terminal, etc.) facilities.

Element 6 – Recommended Master Plan Concept and Capital Improvement Program provides both a graphic and narrative description of the recommended plan for the use, development, and operation of the airport. This includes both airside and landside recommendations, as well as on-airport land use classifications, anddevelopment of a 20-year capital program for RDD, analyzing the benefits and costs associated with the recommended plan. Specific costs are established for each project, ensuring logical staging of improvements. Potential funding sources are also identified, as well as a financial plan that focuses on overall annual operating revenues and expenses.

Element 7 – Land Use Compatibility and Environmental Analysis uses the data acquired in Element 3 to analyze land uses adjacent to RDD from a compatibility standpoint. This includes the development of noise exposure contours based on recent flight track data and projected operational outcomes. Land use management techniques will be identified as well as obstruction mitigation strategies to ensure protection of RDD and the surrounding airspace. The environmental evaluation includes a baseline environmental inventory, with consideration given to resource categories within FAA Order 1050.1F, *Desk Reference*. Additionally, a recycling plan and environmental overview will be prepared that will identify potential environmental issues associated with the recommended concept, including mitigation measures that may be necessary for proposed projects.

Element 8 –Environmental Evaluation is a more detailed analysis of the NEPA categories and will include informal consultation with various federal and state agencies, as needed. This element includes an initial environmental inventory and an environmental overview of the recommended development concept. In addition, an energy audit of airport owned buildings will be undertaken.

Element 9 – Airport Layout Plans is the preparation of the official Airport Layout Plan (ALP) drawings based on the recommended development concept. The ALP set is used by the FAA in determining grant eligibility. This element is the second element of the study that is submitted to the FAA for approval. The ALP will be developed in accordance with FAA's SOP 2.00, *Standard Procedure for FAA Review and Approval of Airport Layout Plans* and SOP 3.00, *Standard Operating Procedures for FAA Review of Exhibit 'A' Airport Property Inventory Maps*.

Element 10 – Project Management ensures that a project of this magnitude remains on schedule through regular communication, coordination of various project-related activities (i.e., surveys, on-site evaluations, etc.), and preparation of progress reports.

Element 11 – Public Involvement includes meetings with the PAC as well as other public/administrative presentations. These meetings are planned at various project milestones in order to update airport stakeholders on the progress of the master plan as well as request input from the committee regarding development of the planning study. Additionally, public information workshops are planned to educate and connect with the public to ensure an open and transparent planning process.

Element 12 – Optional Tasks. There are two optional tasks outlined in the scope of services that may be activated, if necessary, during the master planning process. The first is a formal Safety Risk Management panel, which would be assembled with a neutral facilitator and airport stakeholders to evaluate and recommend a solution to any extraordinary challenges for meeting FAA standards. The second is a detailed Runway Protection Zone (RPZ) analysis that may be needed if it is determined that the current or future RPZs are unable to meet land use compatibility guidelines.

Element 13 – Approvals and Final Reports provides documents which depict the findings of the study effort and present the study and its recommendations to appropriate local organizations. The final document incorporates the revisions to previous working papers prepared under earlier elements into a usable master plan document, approved at both the local and federal levels.

Element 14 – California Environmental Quality Act (CEQA) Documentation for Master Plan Approval
In California, public agencies are required to consider the environmental consequences of their discretionary action through the preparation of CEQA documentation. This element includes an CEQA Initial Study to assist the airport sponsor in determining whether the master plan qualifies for a Negative Declaration, a Mitigated Negative Declaration, or will require an Environmental Impact Report (EIR).

Element 15 – Cultural and Biological Surveys
This element is a continuation of an effort currently underway as part of the runway safety area (RSA) project and will encompass the remaining areas of the airport that are not part of the RSA project.

COORDINATION AND OUTREACH

This study is of interest to many within the local community and region. This includes 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, RDD is of importance to both 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) has been established to act in an advisory role. PAC members will meet up to 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 will be 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 that all issues are fully addressed as the recommended program develops.

A series of three open-house public information workshops is also planned 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 will be made available to the public on a study-specific website: www.redding.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 summarized in **Table iA**.

Table iA | RDD SWOT Analysis

STRENGTHS	• RDD offers a 2-runway system capable of serving multiple categories of users/demand groups. • Runway 16-34 will be constructed in Summer 2024. • Excellent location. • Supportive partnerships both on and off airport. • Major economic contributor. • Passenger levels are exploding, nearly doubling in two years.	• Snow removal capability ensures airport remains operational during poor winter weather conditions. • ARFF and emergency response capability. • Two full service FBOs. • CAT-I Instrument approach capability. • Clear airspace. • Reliability, Access, Destination (RAD).
WEAKNESSES	• Terminal building is severely constrained with the growth of enplanements. • Terminal apron is undersized and does not allow for pull through movements. • Cargo facilities are undersized and aging (in need of replacement). • Certain aging infrastructure (primary runway condition). • Land use plan is from the 1980s and is in need of a refresh. • Electrical vault needs to be replaced. • Need longer runway for certain firefighting aircraft.	• Age of airport/facilities. • No sustainable aviation fuel available. • Shortage of pilots, mechanics, and schedulers for airlines. • Hangar availability. • Lack of transit, Uber, Taxis. • Need additional vehicle parking (parking structure).
OPPORTUNITIES	• Potential for a parallel runway. • Approach lighting system to Runway 16. • Growth in commercial service (increasing revenues). • Improved highway access. • AAM/eVTOL, electric charging stations. • Non-Aeronautical development opportunities for more revenue. • FAA funding reauthorization/BIL funding opportunities.	• Re-establishment of an airport committee. • More light industrial businesses. • Improved marketing potential. • Growth in business aviation (Part 135, 91k). • Sustainable aviation fuel. • Improved security/fencing. • Potential "local" funding for runway extension.
THREATS	• Encroachment and homes. • National pilot shortage; general labor shortage. • Airline changes to schedule/equipment.	• Reduced funding availability; inflation. • Evolving FAA standards. • Terminal experience for passengers (too small).