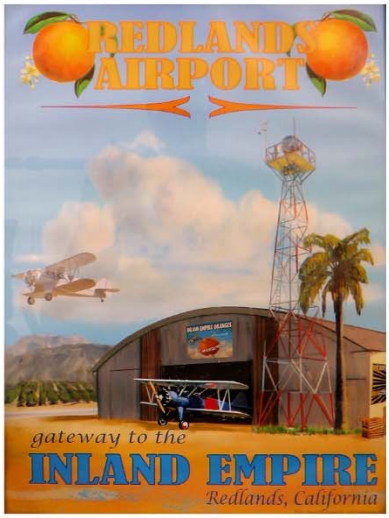
Redlands Municipal Airport

Business Plan



Prepared for:

CITY OF REDLANDS
INCORPORATED 1888

Prepared by:

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Redlands Municipal Airport Business Plan

Final Technical Report

Prepared for:

City of Redlands, California

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EXECUTIVE SUMMARY
Redlands Municipal Airport (REI)
Business Plan

THE PURPOSE OF THIS BUSINESS PLAN FOR REI (Business Plan) is to assess potential means to improve the Airport's financial performance, economic development, and operation. To do this, a number of potential operational and development scenarios were evaluated, providing the City of Redlands with decision-making information. The Plan is founded upon an understanding of current activities at the Airport and sets forth options to address a number of key issues: updated lease agreements, defining the Airport brand, the possible need for new hangar space, the development of non-aviation property, and the continued engagement of the City with its Airport users and tenants. The recommended plan of action from this report rests, in large part, on five primary strategic initiatives:

1) Strengthen the Airport Brand: This initiative begins with a vision of what the Airport can become in the future. From a branding standpoint, there are a number of actions that can be undertaken including: a common paint scheme and beautiful entrance, City representation at the Airport in the form of an Airport Manager, a stand-alone website, a new promotional brochure, and a marketing campaign including direct mail, printed materials, and video/multimedia. Strengthening of the brand will permit the City to better market the Airport to customers in its service area and can increase business aviation use. This is particularly important for increasing market share or attracting aircraft from general aviation airports in the region that may be closing or downsizing over the next 10 years. The recommended branding targets include: Flight Training/Educational Partnering; Personal Flying; and Business Aviation.

2) Increasing Revenues: The City has not been able to afford a full-time manager because net revenues at the Airport have been meager over the last several years. To increase revenues and serve aviation demand, the City should consider getting into the fuel sales business and increasing their role as a property-owner. The entrance into the fuel sales market would require an above-ground AvGas tank, with an eye toward providing Jet-A fuel in the future. The development of hangar lease revenue can occur through the construction of hangars with either grant or other funding.

3) Solving Existing Issues: There are a number of issues facing the City and the Airport. These include the development of acceptable helicopter flight patterns (which should be resolved shortly), the continued removal of the dirt hill on the east side of the Airport, the continuing need to increase communication and trust between the City and Airport patrons,

the need to protect the Airport and surrounding citizens from incompatible land uses, and a number of other issues. Some of these issues are beyond the scope of this Business Plan, others are addressed as a part of the Plan.

4) Non-Aviation Land Uses: Non-aviation land uses can include both on-Airport and off-Airport areas. The Plan identifies areas on the Airport that can be used for revenue generation, including up to 32 acres of land for solar panel farm use. This use is contingent upon environmental clearances, particularly the kangaroo rat habitat. For off-Airport land uses, the City should encourage light industrial and commercial/retail land uses. The City has already protected the Airport from incompatible land uses by requiring avigation easements that restrict noise complaints or litigation for new residential housing in the Airport environs. This information should be publicized so as to prevent misunderstandings.

5) Other Recommendations: There are 34 specific recommendations made by the Plan. Some of these other initiatives covered by the Plan included the potential partnering with San Bernardino Valley College to add flight training at REI (which is the three-letter FAA code for Redlands Municipal Airport) to their existing aviation curriculum. Also, the Plan recommended an update to the existing rates and charges schedule, based upon CPI escalations. Other recommendations involved the possible attraction of a restaurant to the Airport, increased business aviation use, and continued support and expansion of the Hangar 24 AirFest event.

Business Plan Options And Recommendations

A number of recommendations have been made as a part of this Business Plan, all with the ultimate goal of maximize future growth opportunities for the Airport, by increasing aviation activity, encouraging new businesses, or developing new revenue producing facilities. Presented below are prioritized recommendations for the Airport within immediate and future timeframes:

On-Going Initiatives Prior to This Study

- ***Priority #1 – Helicopter Flight Paths:*** Recommendations from the study of helicopter activity and flight paths should be implemented to the benefit of helicopter operators at the Airport.
- ***Priority #2 – AirFest:*** The City should continue to use the Airport as a venue for AirFest and should encourage other events that are compatible with the Airport's operation.
- ***Priority #3 – Annual Credit Grant:*** The City should take advantage of the $10,000 Caltrans annual credit grant to fund operational costs at the Airport.
- ***Priority #4 – Dirt Hill Reduction:*** The City should continue to work with San Bernardino County to have the responsible property owner reduce the size of the dirt hill to the east of the Airport.

Immediate

- ***Priority #1 – Airport Manager:*** The City should fill the vacant Airport Manager's position with City staff stationed at the Airport on a part-time basis.
- ***Priority #2 – Rates & Charges:*** The City should raise selected rates and fees for new leases or as permitted by existing lease agreement terms.

- ***Priority #3 – Land Use Compatibility:*** The City should publicize the full nature of existing avigation easements that restrict noise complaints or litigation for new residential housing in the Airport environs.
  - If land around the Airport is to be developed by private interests, the City should encourage light industrial and commercial/retail land uses.
  - The City should review and update its Airport Land Use Compatibility Plan to ensure that it conforms to the 2011 California Airport Land Use Plan.
- ***Priority #4 – AAB Meetings:*** The City should consider increasing the frequency of Airport Advisory Board meetings to at least one per month.
  - The City should continue to engage existing Airport Users (clients and tenants) to solicit feedback on Airport issues.

Remainder of 2016

- ***Priority #1 – Airport Brand:*** The City should adopt a future brand for the Airport and then weigh all spending and service actions against this vision.
  - The twofold Airport brand should be focused toward aviation customers and local stakeholders.
- ***Priority #2 – Airport Community Value:*** The City should coordinate with economic development agencies and through its online presence to publicize the Airport's Community Value.
  - The City should partner with the Chamber of Commerce and other civics clubs to promote the Value of the Airport to the Community.
- ***Priority #3 – Permitting Process:*** The City should develop an administrative permitting process for sanctioned events at the Airport.
- ***Priority #4 – Hangar Development:*** The City should seek the development of T-hangars and conventional hangar space as demand warrants.

Short Term: 2017 – 2018

- ***Priority #1 – Rules and Regulations:*** The City should develop a set of Airport Rules and Regulations that emphasize safety and conformance to industry standards.
- ***Priority #2 – Fuel Sales:*** The City should consider offering self-service fuel sales for AvGas. If demand warrants over the longer term, consideration should be given to offering Jet-A fuel as well.
  - If the City enters the aviation fuel selling business, it should monitor the demand

feasibility for jet fuel sales at the Airport.

- ***Priority #3 – Lease Policy:*** The City should create a new Airport Lease Policy to clarify tenant-Airport lease responsibilities and future options.
- ***Priority #4 – Minimum Standards:*** The City should create a new Minimum Standards document to clarify and standardize requirements and for aeronautical business at the Airport.
- ***Priority #5 – Solar Panel Farm:*** The City should initiate discussions with local power companies to determine whether a large solar panel farm is feasible at the Airport.
- ***Priority #6 – Flight Training Partnership:*** The City should initiate a direct dialogue with the Provost of San Bernardino Valley College to discuss the potential of adding flight training at REI to their existing aviation curriculum.
- ***Priority #7 – Airport Restaurant:*** The City should determine whether restaurant development at the Airport terminal Lobby is workable, relative to structural requirements and FBO space needs.
  - If the Lobby can be used for a restaurant, the City should request statements of interest from qualified restaurant candidates.

- ***Priority #8 – Ground Transportation:*** The City should ensure that there is adequate ground transportation to and from the Airport for air visitors.
- ***Priority #9 – Online Presence:*** The City should develop social media outlets and an individual website as part of its branding strategy for Redlands Municipal Airport.
- ***Priority #10 – Hangar Development:*** The City should seek the development of T-hangars and conventional hangar space as demand warrants.

Longer Term 2019 – 2025

- ***Priority #1 – Hangar Development:*** The City should seek the development of T-hangars and conventional hangar space as demand warrants.
  - If grant funding is available and waiting lists can be established, the City should consider constructing T-hangars.
  - If private development of new hangars is desired by the City, a lease policy that includes reversion clauses should be implemented beforehand.
- ***Priority #2 – Business Aviation:*** To attract more business aviation, the City must continue to upgrade the Airport brand by finding ways of increasing hangar space, providing jet fuel, increasing perceived security, and marketing these improvements.

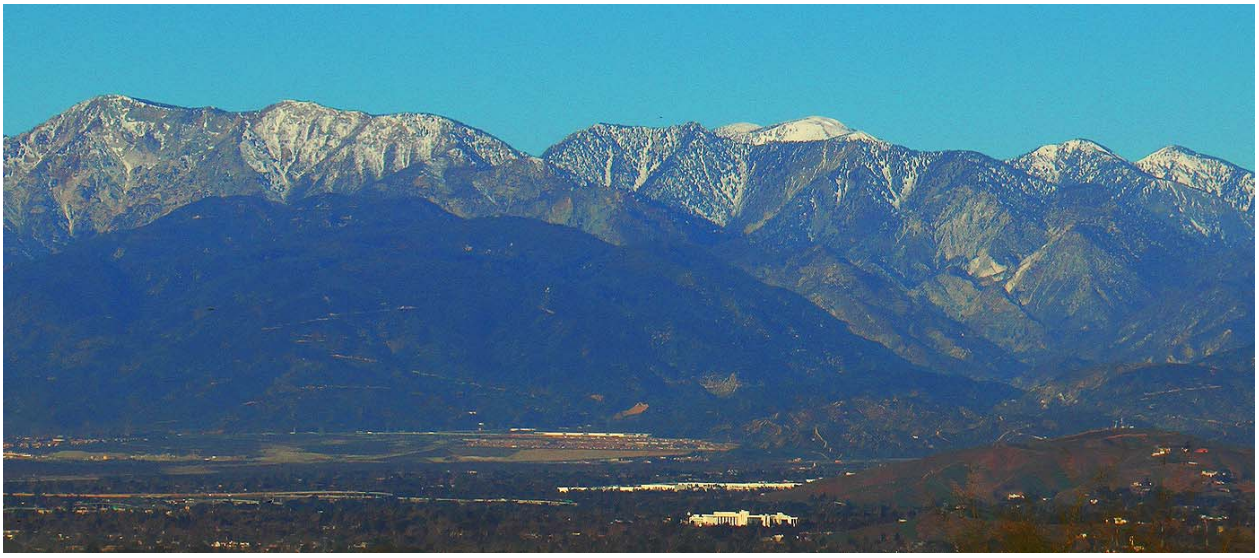
Recommended Plan Pro Forma

Table E-1 includes non-operating expenses and shows the net revenues/deficits projected for each year of the forecast. This optimistic table assumes that **all** revenue enhancement initiatives are undertaken and produce according to their forecasts. As such it represents the highest potential revenue production for Redlands Municipal Airport as envisioned by this Business Plan.

Table E-1 - Recommended Plan Net Revenue (Deficit)				
Fiscal Year	**Operating Revenues**	**Operating Expenses**	**Non-Operating Expenses**	**Net Surplus/ (Deficit)**
2015	$320,453	$207,171	$108,197	$5,085
2016	$322,841	$396,337	$95,793	($169,288)
2017	$338,711	$229,686	$67,493	$41,532
2018	$375,792	$235,116	$94,446	$46,231
2019	$400,045	$240,685	$94,446	$64,914
2020	$446,913	$246,393	$87,746	$112,775
2021	$493,263	$252,244	$121,399	$119,620
2022	$524,337	$258,245	$121,399	$144,693
2023	$587,713	$266,898	$119,403	$201,412
2024	$592,592	$273,243	$119,403	$199,947
2025	$620,486	$279,750	$119,403	$221,333

Airport Community Value

Our study indicated the Airport generates an average of $4.7 million per year in total economic output and sustained 41 full-time equivalent jobs in the area. A second measure of the value of the Airport involves the current asset value. In this regard, a method was used that first estimated the current replacement value of the facility and then reduced that value by the useful life remaining on each specific asset. This procedure resulted in a replacement value estimate of $103.4 million and a current value of $74.8 million. Taken as a snapshot in time, the total value of the Airport could be estimated to include its annual economic activity ($4.7 million) plus its current asset value ($74.8 million). Adding these two numbers, it can be shown that **the overall value of the Airport to the community is $79.5 million.**



FINAL TECHNICAL REPORT
Redlands Municipal Airport Business Plan

1. INTRODUCTION

THE PURPOSE OF THIS BUSINESS PLAN FOR Redlands Municipal Airport (REI) is to assess potential means to improve the Airport's financial performance, economic development, and operation. To do this, the Business Plan will evaluate a number of potential operational and development scenarios and provide the City of Redlands with decision-making information. We understand that this plan can be a dynamic vehicle to identify new aviation demand markets, support facilities, public-private investment opportunities, improved Airport financial and economic performance, and a better understanding of the mission and value of the Airport by the community and region it serves. Thus, to become more financially self-sufficient, it is likely that specific types of investment should occur, along with a growing perception of the Airport brand. The Airport has significant upside potential, but must take a measured and deliberate business approach to reaching its goals.

It should be noted that a business plan is a strategic effort that provides the vision to guide subsequent studies such as master plans or airport land use compatibility studies. Airport master plans are more directed at physical planning and do not generally incorporate market niche forecasts or proactive branding and marketing activities associated with business planning.

1.1 Understanding & Key Issues

We understand the Redlands Municipal Airport is home to roughly 240 based aircraft. Of these, there are four helicopters and two based jets. The Airport has a 4,504 by 75-foot runway, with a full parallel taxiway. There are significant numbers of T-hangars and box hangars located to the south of the runway, with a large ramp area on the west end which can be used for more hangars, if needed. Of note, the Airport is only four air miles from San Bernardino International Airport (SBD). Additionally, the relatively recent closure and redevelopment of the Rialto Airport has scattered its former based aircraft throughout the valley.

In order to prosper, Redlands Municipal Airport must carve out a niche in the local market. The proximity of SBD and other general aviation airports in the area presents a challenge to the City to expand operations and financial production at Redlands Municipal Airport. This Plan is one step the long process of growing the Airport in harmony with the aviation community and the City stakeholders. Key issues that are recognized at the outset of the business planning process include but are not limited to the following:

- ***Encroachment:*** Potential residential development encroachment could be a limitation to future Airport growth and development, as well as a certain source of ongoing noise and safety complaints. There is a belief in the aviation community that zoning practices in the past have permitted non-compatible encroachment. However, this zoning has been in line with the approved Redlands Airport Land Use Compatibility Plan.
- ***Limitations for Growth:*** If it is not possible to extend the runway length to 5,000 feet, it would limit the Airport's ability to serve certain types of business jets. These larger aircraft

generate a higher-than-average level of revenue for airports that can accommodate them. The current length of 4,504 feet is below the 5,000-foot minimum required by most insurance providers for jet powered operations (without a waiver).

- ***Branding/Marketing:*** There is no cohesive brand for the Airport and its facilities are in need of a facelift. The Airport currently does not have a stand-alone website, or a significant social media presence.
- ***No Jet Fuel:*** The Airport does not currently offer Jet A fuel, which limits the potential to attract business jet aircraft.
- ***Financial Limitations:*** There is no reserve fund to offset financial losses or to provide for disaster or emergency issues. The Airport owes money to the City.
- ***Need for Additional FBO:*** There is a perception that a second FBO (fuel seller) on the field would provide a higher standard of service and more competitive pricing. It was reported that the current FBO does not offer basic essentials such as engine oils and lubricants, which would be a great benefit to Airport tenants.
- ***Tight Entrances:*** It was reported that at least one of the access roads into the Airport is too narrow and too sharply angled for large fuel trucks to easily access the field. There is a need to develop an entrance with larger radius turns.
- ***Severe Congestion:*** It was reported that at certain times there is severe congestion as a result of traffic into and out of the Hangar 24 Craft Brewery.
- ***Safety Issues:*** There is a large, wide, deep drainage ditch which runs parallel to the runway, which should be covered. In addition, there is a need for increased safety protocols limiting the potential for Airport and runway incursions, and improved lighting. It was suggested that weed abatement on the west apron should become a mandatory component of standard maintenance. There is still great concern for a large pile of dirt off the runway end which is now reported to have small trees growing atop it.
- ***Lack of Essential Facilities:*** There was an expressed need for additional facilities such as a wash rack for aircraft, and a facility to wash aircraft engines.
- ***Management:*** The Airport does not have an on-site manager from the City. There is concern with the lack of aviation specific management experience on the City level.
- ***Lack of Public Attractions:*** The Airport does not have on-airport attractions such as restaurants, an aviation museum, or other features that would serve to draw the public to the Airport.
- ***Insurance/Safety Risk:*** Airport security is weak in many places around its perimeter and unauthorized access to the airfield has been a problem.
- ***Lack of Public Awareness:*** There are too few people in the community who know what goes on at the Airport and what its value is to the community.

While these issues will be addressed by the Business Plan, it was recognized that there are a number of positive factors surrounding the Airport, including:

- ***Flight Training and MRO Development:*** Opportunities exist to increase Flight Training with potential partners and educational institutions. It is believed that area universities, colleges, and technical schools could support a flight school and possibly an aircraft maintenance program. It was suggested that a paint and interior MRO would be a strong addition to the Airport.
- ***Airport Events:*** The Airport could easily host special events in addition to the Hanger 24

Airshow to attract non-aviators to the Airport. Events such as car shows, 5K runs, radio controlled aircraft events, school and scouting group outings, etc., are used by other airports to attract public participation and promote good community relations.

- ***Potential to Develop a Compatible Restaurant:*** Hangar 24 has developed a solid clientele for its brewery, as well as for its Airshow. An opportunity exists to develop a viable restaurant nearby in partnership with Hangar 24, or as a benefit of Hangar 24's traffic. A sports themed "family friendly" restaurant would attract participants and visitors to the Sports complex.
- ***Airport Branding:*** The Airport can improve its brand. It was suggested that the City and the Airport partner more effectively with the Chamber of Commerce to promote the City and the Airport. As infrastructure and services are improved, efforts must be made to expand the brand.
- ***Opportunity to Renegotiate Leases:*** A number of leases are up for renegotiation, which could work greatly in the Airport's favor and provide increased revenues.
- ***Opportunity to Improve FBO Services:*** It was suggested that adding Jet fuel and improved line crew services for aircraft would be a strong attraction for increased activity.
- ***New Technologies:*** It was suggested that there may be compatible openings in the realm of drone piloting and instruction.
- ***Business Aviation Growth:*** Business aviation is forecast to grow faster than any other aviation segment in the United States. Business aircraft constitute a stable growth segment of general aviation that would be ideal marketing objectives for the Airport. The Airport has an opportunity to increase based and transient customers, especially if the Airport can add another 500 feet of runway.
- ***Better Communication with City Staff:*** There has been an improvement in the communication of City staff with Airport patrons. This Business Plan is an example of the City's desire to improve all aspects of its operation of the Airport.

1.2 Desired End Products

The desired end products produced as a result of this analysis include the following:

- ***Mission and Vision Statements:*** Well defined Mission and Vision Statements for the Airport
- ***SWOT Analysis:*** Identification and evaluation of strengths, weaknesses, opportunities, and threats facing the airport.
- ***Branding:*** Present a suggested branding strategy for Redlands Municipal Airport, if warranted. This may include the identification of the need for landscaping, Airport color scheme, logo development, and marketing strategy for the Airport,
- ***Strategic Recommendations:*** Strategic planning recommendations for the Airport, including those for capital development, revenue enhancement, leasing, and marketing.
- ***Revenue Enhancement:*** Analysis and recommendations of revenue enhancement options. This would include but not be limited to the potential impacts of the attraction of more aviation activity and more leasing options. It would also include retention and expansion strategies for existing companies and tenants and potential partnering opportunities with area schools or other businesses.

- ***Non-Aviation Development:*** Explore new business opportunities including development/ use of available aviation and non-aviation Airport lands. This would include out-of-the box thinking for landside developable Airport property.
- ***Business Practices:*** Identify current business practices, lease terms, and systems.
- ***Staffing:*** Identify any operational or staffing issues that may be improved.
- ***Airport Amenities:*** Identify needed Airport amenities and/or services.
- ***Capital Investment:*** Discuss capital investment options.
- ***Pro Formas:*** A 10-year project of revenues and expenses at the Airport for the Baseline case and alternative scenarios including impacts of leasing options and revenue enhancement options, including an evaluation of the Airport's ability to gain financial self-sufficiency.
- ***Airport Community Value:*** Estimate the Airport's asset value and economic impact for outreach to the community and potential business partners.

1.3 Report Outline

In order to address the issues described above and to produce the desired end products, this report has been organized to include the following sections:

- ***Section 1*** - Introduction
- ***Section 2*** - Airport Mission and Management Structure
- ***Appendix 2-A*** – City Council Airport Responsibilities
- ***Section 3*** - Existing Airport Characteristics
- ***Appendix 3-A*** - SWOT Analysis
- ***Appendix 3-B*** – Airport Lease Analysis
- ***Appendix 3-C*** – Survey Results
- ***Section 4*** - Baseline Financial Projection
- ***Appendix 4-A*** – Trend Lines vs. Baselines
- ***Section 5*** - Business Plan Alternatives
- ***Section 6*** - Findings and Recommendations
- ***Section 7*** - Airport Community Value

2. AIRPORT MISSION AND MANAGEMENT STRUCTURE

A CLEARLY ARTICULATED MISSION REFLECTS THE GOALS AND vision for Redlands Municipal Airport. It also empowers the City to develop a long range plan to fulfill the mission and role of the Airport. In this regard, the management structure and capabilities of the Authority must fit with the mission of the Airport to ensure success. Understanding the background, business practices, and management structure of the Airport aids in working through some of the key issues identified in the previous section. As such, the following topics are discussed in this section:

- Current Airport Mission
- Airport Accounting and Business Practices
- Airport Management Structure

2.1 Current Airport Mission

The role of Redlands Municipal Airport is that of a publicly-owned, public-use general aviation facility, providing general aviation services for regional air transportation and pilot training. Redlands Municipal Airport accommodates general aviation activity including all types of propeller aircraft and a number of small jet powered aircraft types. The Airport is owned and operated by the City of Redlands.

Redlands Municipal Airport is an important economic/civic asset for the City and nearby communities along the Interstate 10 corridor. As part of the National Air Transportation System, it functions to meet the air transportation needs for a range of constituents and agencies including: local businesses, recreational use, pilot training, and critical emergency services during a disaster or serious incident. It has been described by some as a "diamond in the rough."

The Mission of Redlands Municipal Airport

Discussions with City representatives indicate the following mission goals for the Airport:

- To operate a safe, efficient and cost-effective Airport providing for general aviation operations in a manner that preserves the environment.
- To retain existing clientele while taking full advantage of available land, runway size and convenient location to develop revenue producing facilities, attract based aircraft, and provide continued growth.
- To operate in conformity with all applicable laws and Federal Aviation Administration (FAA) requirements.
- To be self-supporting and operate without subsidy from the City's General Fund.
- To attract public participation to ensure that the Airport's mission reflects the concerns of the public, the Airport's users, and local businesses.

Specific objectives that the City has for the Airport are described in its budget documents and include the following:

- Maintain a safe aviation environment
- Provide regular inspection of airport public facilities and equipment and provide maintenance as required
- Administer the City-owned west ramp tie downs
- Administer four land leases
- Administer the airport storm water pollution prevention program
- Provide staff support to the Airport Advisory Board
- Provide routine maintenance and repair of runway lighting, security gates and other airport facilities

At present, the Airport does not have a written mission statement. However, the Airport's mission is linked to the City's core values as endorsed by City Council and its objectives for the Airport. These values cover a wide range of topics, and include applicable statements for the Airport including: fiscal responsibility, sustainability, accountability, and transparency. This covers the way in which the City strives to function, but it does not address the aviation mission of the Airport. With this in mind, a possible mission statement for the Airport might be:

> *"Redlands Municipal Airport strives to be the Inland Empire's first choice for pilot training, business, and personal air transportation, supplementing economic growth and striving for financial self-sufficiency, while maintaining operational safety, outstanding service, and a safe environment for aircraft owners, operators, and the flying public."*

To be most effective, any formally adopted mission statement for the Airport must reflect the desires and goals of the community and its elected and appointed representatives.

As discussed in Section 1, financial self-sufficiency and preservation are the primary goals of the City for the Airport. The challenge to achieving these and other goals at the Airport will depend, in part, upon the City's ability to elevate existing activities to take on new initiatives. While there may be some variety of opinion, Redlands Municipal Airport is recognized by most to be an asset to the City, providing air transportation infrastructure needed for both business and personal travel. Subsequent sections of this Business Plan will further examine the Airport's market potential in an effort to achieve financial and operational goals.

2.2 Airport Accounting and Business Practices

From an accounting standpoint, the Airport functions as an Enterprise fund of the City of Redlands. The underlying accounting system of the City is organized and operated on the basis of separate funds, each of which is considered to be a separate accounting entity. The operations of each fund are accounted for with a separate set of self-balancing accounts that comprise its assets, liabilities, fund equity, revenues and expenditures or expenses, as appropriate. Governmental resources are allocated to and accounted for in individual funds based upon the purposes for which they are to be spent and the means by which spending activities are controlled.

Enterprise Funds

Enterprise funds are used to account for the acquisition, operation and maintenance of governmental facilities and services that are entirely or predominantly self-supporting by user charges. The operations of enterprise funds are accounted for in such a manner as to show a profit or loss similar to comparable private enterprises. Enterprise funds are often created as a means to ensure that tax dollars are not required to provide annual operating cost or future capital improvements of an airport. Communities that have set up enterprise funds for their airports usually do so with the intent that user charges will be set at appropriate levels to cover the activity's operating cost and capital improvements.

However, some communities have established enterprise fund operations that are not self-supporting and are supported by taxes to a certain degree. This mainly happens when fees for services cannot cover operating expenses and/or capital improvements. Technically, the Redlands Municipal Airport cannot make a "profit" because all revenue is pledged toward the operation and capital improvement of the Airport. Public airports that have accepted grants from the FAA must sign assurances that they will not divert revenue to other governmental activities.

In one sense, the enterprise fund for the Airport shields its finances from some City-wide budgeting issues. In some cities, budget cuts are applied evenly to all departments. When an enterprise fund is involved, it often has its own direct funding sources and is not subject to the same departmental budgeting. This is the case at Redlands Municipal Airport.

Airport Accounting Practices

The City derives revenue from the Airport primarily from two sources: hangar rent and ground leases. Hangar rent is the largest revenue source for the City, generating more than 80 percent of total revenues. The City owns 29 hangars and sends out monthly invoices through the Finance Department with feedback from Quality of Life Department. Fuel flowage fees are $0.02 per gallon and are included in the rent charges. Tenants that self-fuel are not charged a flowage fee. Fuel sales by the one FBO (Redlands Aviation) is self-reported and there is currently no audit of these numbers. Gate card registrations raise revenues for the Airport and cost $25, with a $15 annual renewal.

Discussions with City representatives indicate that charges to the Airport by City staff (legal, finance, etc.) may be understated. This would occur if time is expended on Airport work and then not recorded formally. This is somewhat common for General Aviation airports that are owned by Municipal governments. Typically, if the airport is not breaking even, there is a reluctance to worsen the deficit by adding more administrative hours. Conversely, when an airport is generating windfalls, accurate time reporting is used to collect as much from the airport as is legally possible, while avoiding potential revenue diversion off the airport, which is prohibited by the FAA.

Business Model

The business model used by the City for the Airport is one that is employed throughout the nation at most municipal airports. This model involves the provision of airport infrastructure by the municipal government for air transportation by the public. Typically, the airport owner manages and operates the airport, earning revenues from the lease of airport property and facilities, while generating fuel flowage fees from aircraft activity.

At Redlands, the City provides administration of Airport land leases, tie downs, and Airport public facilities and equipment. Further, the City, through its Quality of Life Department, ensures compliance with Federal Aviation Administration and the California Department of Transportation Aviation Division requirements for General Aviation airport facilities. From an operational standpoint, the primary responsibility of the City is the upkeep of the Airport. This involves any mowing, repair, security, and general oversight of the Airport. The City manages 29 hangars that it owns and collects revenue from leaseholders. This is the primary source of revenue for the City from the Airport. The City charges a fuel flowage fee to its FBO and a Gate Access fee for those desiring access to the Airport.

Redlands Aviation is an FBO that sells fuel and staffs the Airport during operating hours. While there is no Airport Manager from the City, the FBO serves as a *de facto* manager and contact point for the flying public. Because the City is not represented at Airport on a day-to-day basis, the FBO and other businesses at the Airport represent the default brand of the facility. Any impression that a visitor has will be made by the interactions with these public businesses. That can be an asset or a liability to the brand, depending upon the quality of the FBOs involved.

2.3 Current Airport Management Structure

Redlands Municipal Airport is owned and operated by the City of Redlands. Figure 2-1 presents an abbreviated Organizational Chart, showing the direct lines of responsibility and communication for Airport operation and management. The Chart shows the Voters of Redlands at the top, with the City Council responsible for their representation. The City Manager has responsibility for all City Departments, including the Quality of Life Department, in which the Airport is classified. The Quality of Life Director is shown in the line of authority, over his Senior Project Manager, who has responsibility for the two Airport staff. It should be noted that there is currently a vacant Airport Manager position in the City's hierarchy.

In addition to the direct line of authority, there is an Airport Advisory Board that has been appointed by City Council to advise staff and the City Council on all matters relating to Airport management. This Board currently meets every other month to bring attention to Airport issues and concerns to the City Council.

Airport Operations and Staffing

Redlands Municipal Airport is open 24 hours per day, seven days per week, but is only staffed from 8:00 am to 5:00 pm throughout the week, for a total of 63 hours each week. The

Quality of Life Department consists of 13 City divisions and two City staff personnel each work part-time on Airport matters, as needed for maintenance, administrative tasks, code enforcement issue, and meetings with stakeholders. Their overall responsibilities are to keep the Airport operating, groomed, secure, and administratively sound. There is a vacant Airport Manager position listed in the City's organization chart. That position is being evaluated by the City to determine its need and ultimate function.

Figure 2-1 - ***Airport Organization Chart***

Job Descriptions

Job descriptions for the two Airport staff positions are detailed in the following subsections.

Senior Administrative Analyst

Information from the City's website indicates that a Senior Administrative Analyst is under direction to perform budgetary, financial, administrative and analytical support duties; to oversee assigned administrative processes, procedures and programs; and to provide technical and responsible assistance to the Department. Examples of duties include:

- Assist in the preparation and administration of assigned budget(s);
- Maintains and monitors appropriate budgeting controls;
- Researches and writes grant proposals;
- Audits grants and Federal and State entitlements;
- Collects, compiles, and analyzes information from various sources on a variety of specialized topics related to programs administered by the position or by management staff including complex financial, budget, or administrative issues or questions;
- Prepares comprehensive technical records and reports to present and interpret data, identify alternatives, and make and justify recommendations;
- Performs research and analyses on administrative, fiscal, personnel, and operational problems or issues;
- Directs the work activities of assigned clerical personnel;
- Prioritizes and coordinates work assignments;
- Reviews work for accuracy;
- Recommends improvements in work flow, procedures and use of equipment and forms;
- Performs analyses on various accounts as needed for audit and other purposes;
- Monitors expenditure and revenue activity;
- Prepares various reports related to budgetary issues;
- Participates in the preparation of department revenue and expenditure forecasts;
- Participates in the preparation of mid-year and end-of-fiscal-year budget documents;
- Researches and prepares purchase requisitions;
- Tracks department purchases;
- Maintains purchasing records;
- Researches grant opportunities (on line, newsletters, etc.);
- Monitors existing grant programs for compliance with regulations;
- Maintains grant records for audit purposes;
- Generates monthly and periodic budget monitoring reports;
- Assists department managers in analyzing and researching the basis for budget-expenditure variances;
- Builds databases and spreadsheets of financial, budgetary, and other data;
- Drafts reports and recommendations on assigned projects; and
- Performs related duties and responsibilities as assigned.

An Administrative Analyst must have the ability to:

- Research, analyze, and evaluate programs, policies, and procedures;
- Prepare clear and concise correspondence and reports on a variety of financial, budgetary, and administrative issues;
- Conduct research on a wide variety of administrative topics;
- Organize and direct the work of assigned staff;
- Perform responsible and difficult administrative work involving the use of independent judgment and personal initiative;
- Plan, organize, and carry out assignments from management staff with minimal supervision and direction;
- Interpret and apply Federal, State, and local policies, procedures, laws and regulations;
- Develop and administer assigned budgets;
- Interpret and apply administrative and departmental policies and procedures;
- General journal entries and inter-departmental transfers;
- Analyze data and draw logical conclusions;
- Interpret and apply related laws, ordinances, rules, regulations, policies, and procedures;
- Prepare and maintain accurate and complete reports and records;
- Prepare clear, concise, and comprehensive financial analyses;
- Use word processing spreadsheet software;
- Analyze and solve problems;
- Communicate clearly and concisely, both orally and in writing; and
- Establish, maintain, and foster positive and harmonious working relationships with those contacted in the course of work.

Regarding Airport work, the Analyst must help oversee its operation, planning, funding, grant writing, lease enforcement, controlled access gate card system, and maintenance activity.

Field Service Supervisor

The Field Services Supervisor is responsible for the supervision of various assigned divisions within the Quality of Life Department. The Field Service Supervisor exercises direct technical and functional supervision over assigned staff. For the Airport, the Field Service Supervisor devotes part of his overall time to tasks such as the following:

- Supervise the daily field operations and maintenance work within assigned divisions;
- Provide front-line supervision and training to assigned staff;
- Recommend and assist in the implementation of goals and objectives;
- Establish schedules and methods of repair, maintenance, and replacement of vehicles and equipment within assigned divisions;
- Procure appropriate equipment, vehicles, materials, supplies, and personnel for divisional areas and projects;
- Maintain daily electronic records of equipment, personnel labor hours, and materials used for each maintenance and repair project;
- Supervise the maintenance and repair of a variety of hand and power tools and equipment;

- Respond to a variety of airport and electrical emergency situations;
- Investigate and resolve customer complaints;
- Supervise inspection, maintenance, and repair functions for equipment in assigned division areas;
- Represent the City in matters concerning assigned areas;
- Supervise, train, and evaluate assigned personnel;
- Provides technical staff assistance on special projects and assignments as needed;
- Prepare and maintain electronic records and reports;
- Prepare staff reports and make council presentations

A Field Service Supervisor must have the ability to:

- Supervise, plan, and coordinate efficient work activities in assigned areas;
- Supervise and coordinate work crews on the repair and maintenance of sidewalks, curbs, gutters, pavement, and storm drains;
- Manage and coordinate the work of maintenance personnel;
- Select, supervise, train, and evaluate staff;
- Establish, maintain, and foster positive and harmonious working relationships with those contacted in the course of work;
- Analyze problems, conduct research, identify alternative solutions, project consequences of proposed actions, make and implement recommendations in support of goals;
- Exercise good judgment, flexibility, creativity, and sensitivity in response to changing situations and needs;
- Communicate effectively, clearly, and concisely, both orally and in writing;
- Prepare and write complete and accurate reports;
- Provide technical advice on airport operations and urban forestry issues.

As the City looks to the future and begins to move toward its goal of integrating the Airport into its economic development infrastructure and becoming more financially self-sufficient, the Airport staffing must be evaluated and potentially adjusted to provide an added level of service and workload distribution. Thus, the Business Plan will examine this issue later in the Recommendations section of the report.

2.4 Summary and Preliminary Observations

Prior to making any recommendations concerning staffing or management structure, more analysis must be made as a part of the Business Plan. This includes the need to examine the future role of the City in managing the Airport, revenue potential from Airport activities, and current job responsibilities. In addition, discussions with the City are important to determine the feasibility of making any changes to the existing operation.

That being said, there are two general observations that can be made preliminarily concerning the workforce and operational situation at Redlands Municipal Airport. The first involves the caliber and motivation of personnel working on Airport administration. From our preliminary observations, City staff exhibit good attitudes and professional work practices,

particularly when compared to previous time periods. This viewpoint is borne out by comments from Airport patrons during the SWOT meeting with the Airport Advisory Board.

Second, the City has a decision to make in whether or not to employ an Airport Manager to function as the point of contact for Airport users and stakeholders. Airport patrons desire this move in order to increase the visibility of the Airport within the City's administrative structure. This decision will be influenced by the future investment in revenue producing facilities by the City and the need for more direct supervision of Airport issues. The Business Plan will make recommendations on this point, later in the planning process.

Appendix 2A:
City Council Airport Responsibilities

Appendix 2-A: City Council Responsibilities for the Airport

As a City-owned facility, Redlands Municipal Airport (REI) is under the direct management responsibility of the Redlands City Council. Therefore, it is essential that City Council members have a fundamental understanding of the responsibilities required of them by the Federal Aviation Administration (FAA), the State of California, the County of San Bernardino, and the City of Redlands. The following is a very brief overview of the responsibilities of the Redlands City Council with regard to properly managing the Redlands Municipal Airport and related land-use issues.

The FAA

The principal role of the FAA is to assure that aviation in the United States is safe. More specifically to Redlands, the FAA is a source of funding for essential infrastructure requirements for the Airports. Because Redlands Municipal Airport qualifies for grants from the FAA the City must provide assurances that the recipients will maintain and operate their facilities safely and efficiently and in accordance with specified conditions. The 39 assurances are typically attached to the application or the grant for Federal assistance, and become part of the final grant offer or in restrictive covenants to property deeds. The duration of these obligations depends on a number of factors, but is typically 20 years from the date that funds are awarded. If however, airport land is purchased with federal funds, the grant assurance runs into perpetuity. For this reason, it is generally not possible for an airport's managing entity to simply close an airport and sell its property for redevelopment as a shopping mall or other use.

All of the assurances are important, but some impact the City Council responsibilities more than others:

- ***#11 – Pavement Preventative Maintenance:*** Requires implementation of a Pavement Management Program
- ***#19 – Operation and Maintenance:*** Assures safe and serviceable condition of facilities – the City must maintain the Airport.
- ***#20 – Hazard Removal and Mitigation:*** Must mitigate existing airspace obstructions or hazards and prevent future hazards
- ***#21 – Compatible Land Use:*** The City will take appropriate action, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft.
- ***#22 – Economic Non-Discrimination:*** There must be good cost information to back up different pricing for commercial operators.
- ***#23 – Exclusive Rights:*** The City cannot grant exclusive rights to a business, but the City can claim exclusive rights (fuel sales, etc. subject to existing lease agreements) if it so desires.
- ***#24 – Fee and Rental Structure:*** The City will maintain a fee and rental structure for the facilities and services which will make the Airport as self-sustaining as possible.

- ***#25 – Airport Revenues:*** The City cannot divert revenues from the Airport to other City departments. This includes any local taxes on aviation fuel. An annual audit is required to ensure proper use of Airport revenues.
- ***#31 – Disposal of Land:*** The City must receive FAA approval to dispose of Airport property or to change from aviation to non-aviation use. There are complex rules associated with this process.
- ***#38 – Hangar Construction:*** The City is empowered to give long term leases to private entities that construct hangars, subject to the City's terms and conditions.

Beyond providing grants and enforcing grant assurances, the FAA is committed to maintaining the safety, capacity and efficiency of airports. The FAA insists that approach and departure surfaces are clear of obstacles to ensure safety and optimize the full capability of an airports runway without restrictions. Under FAA regulations, it is the responsibility of an airport sponsor to maintain unobstructed approach and departure surfaces. This means that the defined glide path for landing, and the specified path for takeoff beyond both runway ends is clear of any buildings, vegetation, dirt piles, or other structures such as cell phone towers. Clearly, the best way to avoid these issues is to prevent them from occurring in the first place. This is where intelligent zoning, and enforcement of federal regulations must be implemented.

Caltrans Division of Aeronautics

The Caltrans Division of Aeronautics is responsible for airport and heliport permitting and inspection, and other matters related to aviation in the State of California. Caltrans is typically a mediator between the FAA and local agencies. As such, Caltrans conducts airport safety and permit compliance inspections and updates Airport Master Records (FAA Form 5010) for specified (non-Part 139) public-use airports. Caltrans personnel oversee and manage a wide variety aviation issues, and assist local entities in the safe and effective management of airports statewide.

With regard to airport land-use planning, Caltrans has published a 455 page document entitled, "California Airport Land Use Planning Handbook" in 2011 which may be accessed online at the following address:

http://www.dot.ca.gov/hq/planning/aeronaut/documents/alucp/AirportLandUsePlanningHandbook.pdf

Section 3.6.2 - Practical Considerations, states the following:

> *"The sole responsibility of ALUCs is to prevent incompatible land use development and thereby both protect the public from noise and risks and preserve the utility of airports. In carrying out this responsibility, ALUCs should be guided by objective analyses of airport land use compatibility concerns."*

Of particular interest to Council members is Chapter 5 entitled, "Responsibilities of Local Agencies" which encompasses 20 pages. Topics in this chapter include:

- Consistency of local plans and ordinances with ALUC plans;

- Submitting land use actions for ALUC review;
- Compatibility planning in counties that do not have an ALUC;
- Overruling an ALUC action;
- The role of airport proprietors in airport land use compatibility planning.

In section 5.6 "Role of Airport Proprietors" the introduction states:

> *"Apart from their obligation to submit airport master plans, construction plans of new airports, and plans for airport expansion (when an amended airport permit is required) for airport land use commission review, airport proprietors also have a more basic role in airport land use compatibility matters. There are three facets to this role. One arises because of the relationship between the airport proprietor's actions and the substance of the ALUCP. A second is the airport proprietor's direct responsibility for fostering compatibility between the airport and its environs. Lastly, airport proprietors have a community relations role which can have implications on land use compatibility issues."*

The County of San Bernardino

In 1993, the County of San Bernardino and its incorporated cities elected to dissolve its airport land use commission as the law then allowed. With legislative adoption of the subsequent requirement for local government to continue to engage in airport land use planning, the County and affected cities determined that the alternative process outlined by the legislation was appropriate for all airports within San Bernardino County. Furthermore, the County and cities delegated to each airport owner the responsibility for preparation of an Airport Land Use Compatibility Plan (ALUCP) and established an Airport Mediation Board to help resolve any disputes which may arise out of the plans' preparation.

The concern of Redland Municipal Airport users is the possible creation of noise sensitive areas by the City Council (acting as the Airport Land Use Commission) that then could result in fines to any aircraft owner who violated noise standards. These fines are $1,000 per infraction (California Public Utilities Code, Section 21669.4).

The City of Redlands

The City Council is responsible for the operation and management of the Airport. This includes:

- By Code, the City Council is responsible for all budget items related to the Airport.
- The City Council determines commercial landing fees at the Airport, if any.
- The City Council approves Tie-down and Hangar fees.
- The City Council has the role of Airport Land Use Commission.

As a result of the San Bernardino policy, and in lieu of a standalone Airport Land Use Commission, the Redlands City Council elected to assume the duties of airport management and land-use planning directly. The result was the "Redlands Municipal Airport Land Use

Compatibility Plan" adopted by the Redlands City Council February 1997 and revised in May 2003. This 176 page document may be found online at the following address:

http://www.cityofredlands.org/sites/default/files/qol/Airport/Compatibility%20Plan/Airport%20Land%20Use%20Compability%20Plan.pdf

The following are just a few key excerpts from the "Redlands Municipal Airport Land Use Compatibility Plan" as regards the responsibilities of the Redlands City Council's role in managing the airport:

- The purpose of this Redlands Municipal Airport Land Use Compatibility Plan is to establish criteria by which the City of Redlands can:
  (a) Address airport compatibility issues when making planning decisions affecting land uses in the vicinity of the Redlands Municipal Airport;
  (b) Evaluate the land use compatibility implications of future plans for development or use of the airport; and
  (c) Review proposals for development of other aircraft landing sites, especially heliports, which may affect nearby land uses within the city limits.
- As required by Section 21675 of the Airport Land Use Commission statutes, a compatibility plan must "provide for the orderly growth of each public airport and the area surrounding the airport ... " and "safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general."
- The preparation of compatibility plans must be "guided by" information contained in the Caltrans Airport Land Use Planning Handbook published in 1993 (Revised 2011).
- Noise and safety are the two basic compatibility factors which must be addressed in these reviews.
- Most of the policies are directed toward land uses influenced by the proximity of the Redlands Municipal Airport. In general, this influence area is defined to encompass:
  - All lands on which the uses could be negatively affected by present or future aircraft operations at the Redlands Municipal Airport and
  - Lands on which the uses could negatively affect said airport.
- Property situated immediately beyond each end of the proposed extension of the Redlands Municipal Airport runway should be acquired by the City of Redlands as recommended by the adopted Redlands Municipal Airport Master Plan.
- Airport compatibility concerns also extend to other lands (regardless of their location in the city limits) on which certain land use characteristics could adversely affect the safety of flight. Regardless of location within the City of Redlands, any proposal for construction or alteration of a structure (including antennas) taller than 200 feet above the ground level at the site. (Such structures also require notification to the Federal Aviation Administration in accordance with Federal Aviation Regulations Part 77, Paragraph 77.13(a)(I).)

The following item addresses actions requiring notification by the City of Highland but would also require notification of the FAA by the City of Redlands regarding any types of actions which have the potential to affect or be affected by Redlands Municipal Airport operations:

- Any proposal for construction or alteration of an object which would be located within 20,000 feet of the Redlands Municipal Airport runway and which would require notice to the Federal Aviation Administration in accordance with Federal Aviation Regulations Part 77, Paragraph 77.13.

3. EXISTING AIRPORT CHARACTERISTICS

THIS SECTION OF THE BUSINESS PLAN DISCUSSES the existing characteristics of Redlands Municipal Airport, including its facilities, services, aeronautical activity, surface access features, market area, competitiveness, and planned development. The information collected in this inventory effort will be used throughout the remaining portions of the plan to develop business strategies for the Airport.

3.1 Airport Location

Redlands Municipal Airport (*FAA identifier* REI) is located 2 miles northeast of the city center of Redlands, California, and approximately 62 miles east of Los Angeles. REI occupies 194 contiguous acres and is bordered to the north by the Santa Ana Wash, which is mostly arid with little water actually flowing through the sparse terrain. The lack of vegetation in the Wash leads to periodic flash flooding, effectively rendering approximately 40 acres of north side Airport property off limits for traditional development. The Airport may be accessed via Sessums Drive which transits east to west along the Airport's southern perimeter. Wabash Avenue and Judson Street connect to Sessums Drive from the south. The Airport is approximately 4 miles by ground to SR 210 to the west, and 4.5 miles to Interstate 10 to the southwest.

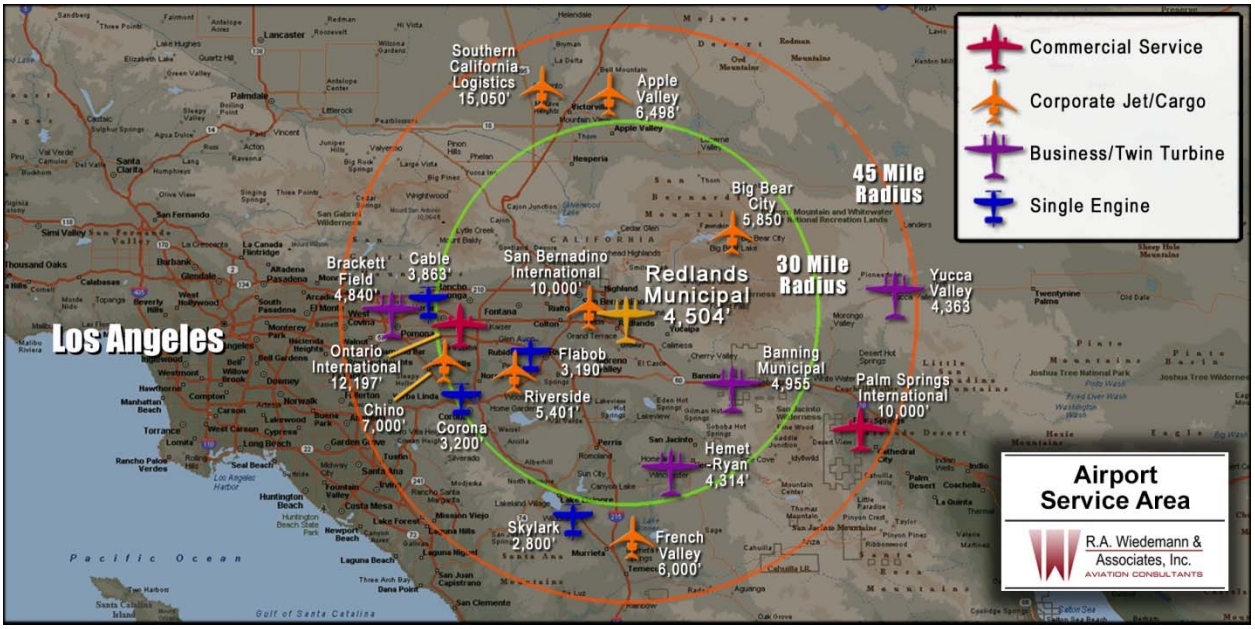


Figure 3-1 – ***Airport Location and Service Area***

The role of Redlands Municipal Airport is that of a publicly-owned, public-use general aviation facility, and is included in the FAA's National Plan of Integrated Airport Systems (NPIAS). In California, the NPIAS reports that there are 123 general aviation airports, 37 reliever airports, 5 non-primary commercial service airports, and 26 primary airports that meet its eligibility criteria. Redlands Municipal Airport accommodates general aviation activity including small to medium propeller aircraft and small jet powered aircraft. The FAA classifies general aviation airports into one of five categories: national, regional, local, basic, and unclassified based

upon their impact. Redlands Municipal Airport is included in the "regional" category described as fulfilling the following characteristics, *"Supports regional economies by connecting communities to statewide and interstate markets."*

3.2 Demographic Characteristics

There are several demographic factors within Redlands and San Bernardino County that drive general aviation demand for Redlands Municipal Airport. In numerous studies accepted by the FAA, population growth has been related to the need for more air transportation facilities and services. Table 3-1 presents the historical population trends for San Bernardino County compared to the State, and national figures. As shown, San Bernardino County has experienced an increase in population growth since 2000, with an overall gain of 23.0 percent for the period 2000-2014. This growth has substantially outperformed the comparative areas. The State of California experienced an increase of 14.2 percent over the same period, and the national population increased a total of 13.0 percent.

Table 3-1 - Historical Population Trends

Year	San Bernardino	State of California	United States
2000	1,718,037	33,987,977	282,162,411
2005	1,943,924	35,827,943	295,516,599
2010	2,041,689	37,336,011	309,347,057
2014	2,112,619	38,802,500	318,857,056
Percent Change	**23.0%**	**14.2%**	**13.0%**

Source: Regional Economic Information System (REIS), Bureau of Economic Analysis, U.S. Department of Commerce

Per Capita Personal Income (PCPI) also has an impact on the demand for aviation facilities in the service area. Intuitively, the higher the level of economic activity in a region, the more that aviation facilities and services will be demanded because of increased air travel. Table 3-2 shows the historical PCPI for San Bernardino County compared to the State, and national figures.

Table 3-2 - Historical Per Capita Personal Income Trends

Year	San Bernardino	State of California	United States
2000	22,643	33,391	30,602
2005	27,579	39,046	35,904
2010	29,314	42,411	40,277
2014	32,892	49,985	46,049
Percent Change	**45.3%**	**49.7%**	**50.5%**

Source: Regional Economic Information System (REIS), Bureau of Economic Analysis, U.S. Department of Commerce

As shown, San Bernardino County displayed a PCPI increase totaling 45.3 percent from 2000 to 2014. Comparatively, this is lower than the California State PCPI increase of 49.7 percent over the same period, as well as the national PCPI increase of 50.5 percent. This lag is slight, and may only impact the rate of growth in the aviation sector locally.

3.3 Airport Facilities

Redlands Municipal Airport is situated upon 194 acres in northeast Redlands, California. Airport facilities are generally classified into two categories: airside and landside. Airside facilities include those directly involved with aircraft operations, whereas landside facilities provide a safe transition from surface to air transportation and support aircraft servicing, storage, maintenance, and operational safety.

Airside Facilities

Airside facilities include runways, taxiways, airfield lighting, and navigational aids. These facilities are depicted in Figure 3-2 below, and described as follows:

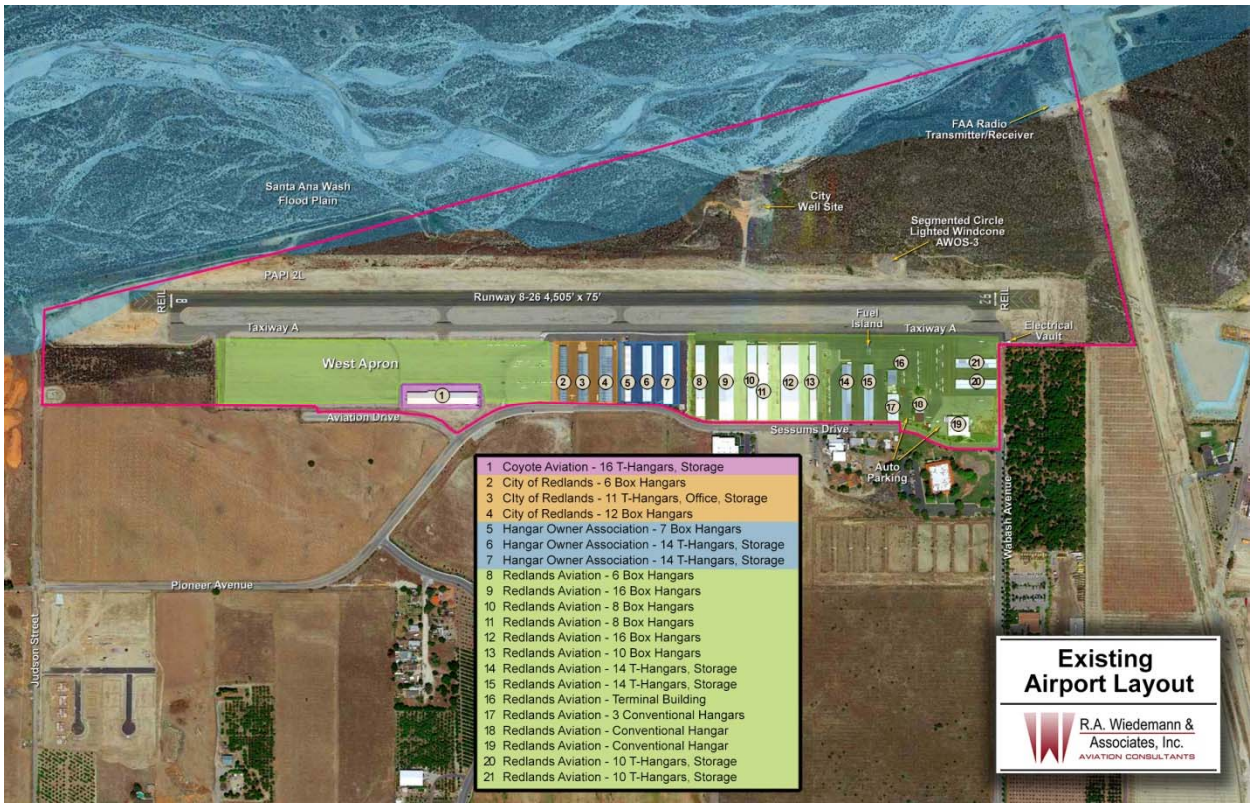


Figure 3-2 – *Existing Airport Layout*

Runway Information

Redlands Municipal Airport has one runway (Runway 8-26) which is 4,505 feet in length by 75 feet in width. The runway was reconstructed in 2003 and is equipped with medium intensity runway edge lights. Both runway ends are equipped with a two-light Precision Approach Path Indicator (PAPI) system to provide pilots with visual vertical guidance on the approaches. Runway 8-26 is ideally suited for light propeller aircraft, with a pavement strength or 12,500 pounds per single wheel, although it has served a number of larger twin turbine propeller aircraft, and light to medium sized business jet aircraft. Table 3-3 identifies the existing runway data.

Table 3-3 - Redlands Municipal Airport Runway Data		
Item	Runway 8-26	
	8	**26**
Runway Length	4,505’	
Runway Width	75’	
ARC	B-I	
Pavement	Asphalt	
Weight Bearing Capacity	12,500 lbs Single Wheel	
Markings	Non-Precision	Non-Precision
Runway Lighting	Medium Intensity	
Approach Lighting	Yes	None
Visual Aids	2-light PAPI	
Traffic Pattern	Left	Right
Approaches	RNAV (GPS)	RNAV (GPS)

The existing design standards for the Airport are listed on the Airport’s current Airport Layout Plan (ALP) as Airport Reference Code (ARC) B-I. By way of explanation, an ARC is used to relate airport design criteria to the operational and physical characteristics of the airplanes intended to operate at the airport. The coding system has two components: the aircraft approach category and the airplane design group. The first component is depicted by a letter (A, B, C, D, or E) and is related to the aircraft approach speed with A being the slowest and E being the fastest. The second component is depicted by a Roman numeral and is related to the airplane wingspan. Thus, Airport’s design aircraft are light single engine, light twin, light turboprop, and small business jets (B-I). That design aircraft has a wingspan of up to 49 feet or less, a tail height less than 20 feet, and an approach speed of between 91 and 121 knots.

These design standards will ultimately limit the role of the Airport by defining its function. Unless the runway can be extended and the taxiway separation increased, the Airport will be limited to smaller general aviation aircraft. This limitation will constrain corporate aviation and focus the activity on pilot training, personal flying, and business aviation which uses mostly propeller aircraft.

Taxiways

Runway 8-26 is served by a full-length parallel Taxiway A, which provides primary access to all landside facilities, as illustrated in Figure 3-2. Taxiway A is 40 feet wide and is separated from Runway 8-26 by 150 feet to the south (centerline to centerline). Taxiway A was reconstructed in 2003.

Four exit taxiways connect Parallel Taxiway A to Runway 8-26. The connecting taxiway at the Runway 26 end is 116 feet wide which is used for departure engine run-ups and holding. The connecting taxiway at the Runway 8 end is 54 feet wide. The remaining two connecting

taxiways are 40 feet wide. A holding apron is available at each runway end to allow for departure run-ups.

Airfield Lighting and Other Facilities

Various lighting systems are installed at REI to increase safety and allow operations during nighttime or periods of poor visibility:

- ***Rotating Beacon:*** The location of the Airport at night is universally identified by a rotating beacon south of Runway 8-26 along Sessums Drive.
- ***Pavement Edge Lighting:*** Runway 8-26 is equipped with medium intensity runway lighting (MIRL). Taxiway A is equipped with medium intensity taxiway lighting (MITL) on the north side of the taxiway only. The south side is equipped with reflective markings.
- ***Threshold Lighting:*** Each runway end is equipped with threshold lighting to identify the runway ends.
- ***Visual Approach Lighting:*** A precision approach path indicator (PAPI- 2L) is installed on the north side of Runway 8.
- ***Runway End Identification Lighting:*** Runway end identifier lights (REILs) are installed on both Runway ends.
- ***Pilot-Controlled Lighting:*** Runway 8-26 MIRL, Runway 8 PAPI-2, and REILs can be controlled by PCL (pilot-controlled lighting) system.
- ***Airfield Signs:*** Lighted signs are installed at all taxiway and runway intersections.
- ***Distance Remaining Signs:*** Lighted distance remaining signs are installed at 1,000-foot intervals on Runway 8- 26.
- ***Pavement Markings****:* The basic markings on Runway 8-26 identify the runway designation and runway centerline. Taxiway and apron centerline markings are provided to assist aircraft using these airport surfaces. Pavement edge markings also identify aircraft parking and aircraft holding positions.
- ***Compass Rose:*** A compass rose was marked on the west apron in 2008.
- ***Weather Facilities:*** The Airport is equipped with an Automated Weather Observation System III (AWOS-III), a lighted wind cone and wind tee.
- ***Segmented Circle:*** A segmented circle providing traffic pattern information to pilots is located on the north side of the runway.

Landside Facilities

Landside facilities are important in terms of revenue production at most general aviation airports. As such, a thorough inventory of these facilities is important to the Business Plan. All landside facilities at Redlands Municipal Airport are currently located south of Runway 8-26 and are primarily accessible via Sessums Drive which transits east to west along the Airport's south border. They include the Airport terminal building, FBO facilities, box hangars, and T-hangars. (Figure 3-3 and Table 3-4).

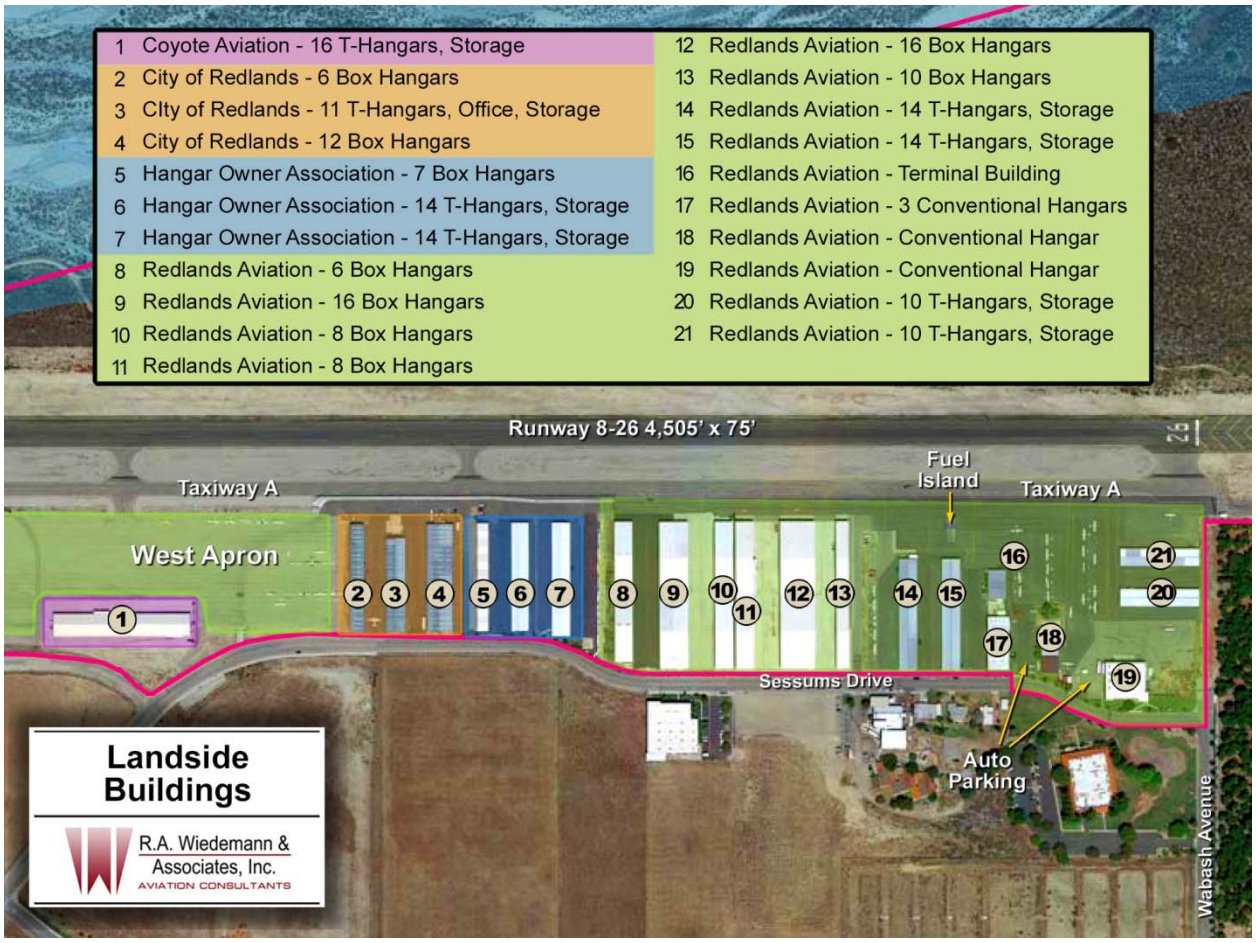


Figure 3-3 – *Landside Buildings*

Table 3-4 - REI Landside Building Inventory		
Building #	**Structure Description**	**Size (SF)**
1	Coyote Aviation - 16 T-Hangars	24,800
2	City of Redlands - 6 Box Hangars	12,000
3	City of Redlands - 11 T-Hangars, Office, Storage	14,700
4	City of Redlands - 12 Box Hangars	21,800
5	Hangar Owner Association - 7 Box Hangars	9,800
6	Hangar Owner Association - 14 T-Hangars	14,900
7	Hangar Owner Association - 14 T-Hangars	16,700
8	Redlands Aviation - 6 Box Hangars	20,200
9	Redlands Aviation - 16 Box Hangars	33,400
10	Redlands Aviation - 8 Box Hangars	21,200
11	Redlands Aviation - 8 Box Hangars	21,200
12	Redlands Aviation - 16 Box Hangars	40,000
13	Redlands Aviation - 10 Box Hangars	15,000
14	Redlands Aviation - 14 T-Hangars	16,100
15	Redlands Aviation - 14 T-Hangars	16,100
16	Redlands Aviation - Terminal Building	4,100
17	Redlands Aviation - 3 Conventional Hangars	9,600
18	Redlands Aviation - 1 Conventional Hangar	6,600

Table 3-4 - REI Landside Building Inventory		
Building #	**Structure Description**	**Size (SF)**
19	Redlands Aviation - 1 Conventional Hangar	12,000
20	Redlands Aviation - 10 T-Hangars	10,900
21	Redlands Aviation - 10 T-Hangars	10,900

All square footage estimates are based upon data derived from Google Earth. Actual sizes may vary.

Terminal Building

The general aviation terminal building is located on the east apron and is accessed from Sessums Drive. The terminal building is approximately 4,100 square feet and provides a pilot lounge, public waiting area, restrooms, vending machines, and offices for the fixed base operator (FBO). The City leases the terminal building to Redlands Aviation, but has access to the lobby and public areas.

Aircraft Hangars

Aircraft storage facilities as identified in Figure 3-3, include 103 T-hangars, 89 box hangars, and five conventional hangars, totaling approximately 347,900 square feet of aircraft storage space.

Aircraft Parking

There are several paved areas available for aircraft parking at Redlands Municipal Airport. The east end apron nearest the terminal building is approximately 31,900 square yards with space for up to 70 aircraft tie-downs. The west-end apron is approximately 64,300 square yards with space for up to 145 aircraft tie-downs. Additional aircraft parking is available on a variety of unpaved areas on the Airport.

Fuel Storage

Redlands Aviation operates a 12,000-gallon underground tank for self-service 100LL Avgas. The Fuel Island is located on the East Apron area north of the Terminal Building. At one time, there was a fuel island associated with the City's hangars that has since been removed. Should the City desire to reestablish a fueling capability, it may be possible to use this original location for new facilities.

Automobile Parking

Public automobile parking is available on several areas at the Airport. The main parking lot located adjacent to the terminal building totals approximately 13,300 square feet. An additional 8,900 square-foot lot is located farther north along Sessums Drive. Approximately 45 spaces are available in these two lots. For large events, a parking area adjacent to the Airport and to Hangar 24 Craft Brewery is available. If needed, a portion of the west apron area could be used for parking as well.

Airport Rescue and Fire Fighting Equipment and Emergency Response

The City of Redlands owns a chemical and water fire extinguisher that can be towed to the runway for on-airport emergencies and fire protection. This is primarily intended as a first response until firefighting and rescue services provided by the City of Redlands arrive.

Security Fence

The Airport is equipped with six-foot chain link fencing with three-strands of barbed wire on the top. Several automated access-controlled gates are located along Sessums Drive to allow vehicle access to hangar facilities for airport tenants. (It has been reported that this perimeter fence is not difficult to breach, and could be improved.)

Utilities

Essential utilities such as water, sanitary sewer, natural gas, and electrical utilities are readily available at the Airport for new businesses and expansion of existing tenant facilities. Electrical services are provided by Southern California Edison. Natural gas service is provided by Southern California Gas Company, while the City of Redlands provides water and sanitary sewer services.

3.4 Competitive Market Assessment

As previously shown in Figure 3-1, a graphic depiction of the general aviation service area includes a 30-mile radius and a 45-mile radius from Redlands Municipal Airport. As shown, these airports are relevant to any comparison of facilities, prices, and services available at REI. This database of airports provides a good basis for comparing regional pricing, the impact of fleet mix on facilities and services, etc. For this reason, they are included in the competitive market assessment. There were ten airports within the designated service area of REI, including the following:

- Redlands Municipal Airport
- San Bernardino International
- Banning Municipal Airport
- Flabob Airport
- Riverside Municipal Airport
- Big Bear City Airport
- Hemet-Ryan Airport
- Ontario International
- Chino Airport
- Corona Municipal
- Apple Valley Airport

Facilities

Table 3-5 provides a comparison of service area and greater area airport facilities. Of the listed airports, six have runways of 5,000 feet or greater, which makes them the best candidates for business jet activity. Ontario International has the longest runway in the service area (12,197 feet by 150 feet). Redlands Municipal Airport has the eighth longest airport runway in the service area with dimensions of 4,504 feet by 75 feet. In addition to this, REI's airport property, which

includes 194 acres, is the eighth largest of the service area airports. Every airport in the service area has instrument approach procedures of some type. Four airports in the service area have air traffic control towers: San Bernardino International, Riverside Municipal, Ontario International, and Chino Airport.

Based Aircraft

There are a total of 1,680 based aircraft within the Redlands service area. The majority of based aircraft (83.9 percent) are single engine aircraft. Jet aircraft make up 3.2 percent of based aircraft, multi-engine represent 8.8 percent, helicopters represent 3.2 percent, and aircraft designated as "other" represent the remaining 0.9 percent. Of the 53 jet aircraft in the service area, 2 (3.8 percent) are listed as being located at Redlands Municipal (these have since moved off the Airport). Ontario International maintained the highest number of jet aircraft in the service area, with 20 based on the field. In January, 2016, Redlands Municipal had a total of 154 aircraft on the field including 2 jets, 138 single engine, 7 multi-engine, 4 helicopters, and 3 ultra-light aircraft.

Aviation Services

Table 3-6 presents the availability of various aviation services at each of the area airports. All airports but Banning Municipal offer major aircraft frame and power repairs. Eight airports offer some level of flight instruction, eight offer charter service, seven offer aircraft sales, five offer avionics, and seven offer aircraft rentals. REI's services include major frame and power repairs, flight instruction, charter service, aircraft sales, and aircraft rentals. With these service offerings, the airport is in the mid-range of maintaining comparable services to the other service area general aviation airports.

Hangars and Tie-downs

Monthly tie-down spaces are available at every service area airport that responded to a telephoned survey. As shown in Table 3-7, the prices for monthly tie-down spaces range from $40 at Big Bear City Airport, to $52 at Hemet-Ryan Airport. Nine airports in the service area have T-hangars on the field, however only Hemet-Ryan and Banning Municipal Airports have space currently available. Monthly T-Hangar rates ranged from $230 per month at Big Bear City Airport to $400 at San Bernardino International. Monthly rates at some airports depend on age and condition of the T-hangars and can vary widely between airports and even on the same airport.

Redlands Municipal is in the mid-range to lower end of the spectrum for prices on T-Hangars in the service area, ranging from $275 to $350 per month. Six airports in the service area have conventional hangar space on the field available, however only Hemet-Ryan Airport has space currently available. Redlands Municipal's box hangar prices range between $510 and $650 per month, while San Bernardino International had the highest rates for conventional hangar space, starting at $750 per month.

Fuel Prices

It should be noted that all fuel prices change frequently, therefore the following narrative and associated table were compiled on the same day – January 29, 2016 - for the most accurate snapshot. There was no Mogas found at any of the area airports. All information regarding fuel prices was compiled from www.airnav.com.

Self-serve Avgas is available at 10 of the airports within the service area. The highest per gallon price was found at Flabob Airport ($4.20). The lowest self-serve Avgas price was found at Big Bear City Airport at $3.63 per gallon. The average price per gallon for self-serve Avgas was $3.81. Full-serve Avgas was available at seven airports within the service area, with an average price of $4.02 per gallon. Chino Airport offered the lowest price per gallon ($3.65), and San Bernardino International had the highest price per gallon ($4.39). Self-serve Jet Fuel is available at three of the service area airports, with the lowest price of $2.71 at Big Bear City Airport, and the highest price of $3.38 at Hemet-Ryan Airport. Full-serve Jet Fuel is available at seven airports in the service area, with an average price of $3.03 per gallon. The lowest price was found at Chino Airport ($2.61) and the highest price was found at Hemet-Ryan Airport ($3.67). Overall, Redlands Municipal's fuel price was slightly higher than the average fuel prices for 100 LL within the service area. The limited fuel offerings also puts REI at the lower end of the spectrum for fuel availability within the service area.

Table 3-5 - Facility Comparison

Service Area Airports	Airport Code	Ownership	Acres	Number of Based Aircraft						Runway		Navaids	Tower
				Jet	Multi	Single	Heli	Other	Total	First L x W	Second L x W	Highest	
Redlands Municipal	REI	Public	194	2	7	138	4	3	154	4,504 x 75	--	GPS	No
San Bernardino International	SBD	Public	1,329	4	2	10	1	0	17	10,000 x 200	--	ILS	Yes
Banning Municipal	BNG	Public	295	0	0	38	0	0	38	4,955 x 100	--	GPS	No
Flabob Airport	RIR	Private	80	0	12	190	0	0	202	3,190 x 50	--	GPS	No
Riverside Municipal	RAL	Public	525	2	26	140	7	0	175	5,401 x 100	2,850 x 50	ILS	Yes
Big Bear City Airport	L35	Public	117	1	5	100	3	4	113	5,850 x 75	--	GPS	No
Hemet-Ryan Airport	HMT	Public	428	2	2	57	5	5	71	4,314 x 100	2,045 x 25	GPS	No
Ontario International	ONT	Public	1,741	20	1	4	4	0	29	12,197 x 150	10,200 x 150	ILS	Yes
Chino Airport	CNO	Public	1,097	19	58	392	24	1	494	7,000 x 150	4,919 x 150	ILS	Yes
Corona Municipal	AJO	Public	98	0	26	222	5	0	253	3,200 x 60	--	GPS	No
Apple Valley Airport	APV	Public	800	3	9	119	1	2	134	6,498 x 150	4,099 x 60	GPS	No

Source: Airport Master Record as Published January 2016 (www.gcr1.com/5010WEB & www.airnav.com).

Table 3-6 - Services Comparison

Service Area Airports	*Frame Repairs*	*Power Repairs*	*Flight Instruction*	*Charter Service*	*Avionics*	*Aircraft Sales*	*Aircraft Rentals*	*Other*
Redlands Municipal	Major	Major	Yes	Yes	No	Yes	Yes	
San Bernardino International	Major	Major	No	No	Yes	No	No	Air Freight Services, Cargo Handling
Banning Municipal	None	None	Yes	No	No	No	No	
Flabob Airport	Major	Major	Yes	Yes	Yes	Yes	Yes	
Riverside Municipal	Major	Major	Yes	Yes	No	Yes	Yes	Air Freight Services, Aerial Surveying
Big Bear City Airport	Major	Major	No	Yes	No	No	No	
Hemet-Ryan Airport	Major	Major	Yes	Yes	No	Yes	Yes	Glider Services
Ontario International	Major	Major	No	Yes	Yes	Yes	No	Air Freight Services, Cargo Handling
Chino Airport	Major	Major	Yes	Yes	Yes	Yes	Yes	Air Freight Services, Air Ambulance, Cargo Handling, Glider Services
Corona Municipal	Major	Major	Yes	No	No	Yes	Yes	
Apple Valley Airport	Major	Major	Yes	Yes	Yes	No	Yes	

Source: Airport Master Record as Published January 2016 (www.gcr1.com/5010WEB & www.skyvector.com).

Table 3-7 - Rates and Charges Comparison

Service Area Airports	*Tie-Down*		*Conventional Hangars*		*T-Hangars*		*Fuel Price/Gallon*				*Hangar Waiting List*
	$/month	Avail	$/month	Avail	$/ month	Avail	100 LL SS	100 LL FS/AS	Jet A SS	Jet A FS/AS	
Redlands Municipal	$45	Yes	$650	No	$350	No	$3.99	--	--	--	Yes
San Bernardino International	$50	Yes	$750	No	$400	No	$3.69	$4.39	--	$2.98	Yes
Banning Municipal	$45	Yes	--	No	$350	Yes	$4.02	--	--	--	No
Flabob Airport	--	--	$295-$695	--	$375	--	$4.20	--	--	--	--
Riverside Municipal	N/A	--	N/A	No	N/A	No	$3.75	$4.19	--	$2.89	Yes
Big Bear City Airport	$40	Yes	N/A	No	$230	No	$3.63	--	$2.71	$2.71	Yes
Hemet-Ryan Airport	$52	Yes	$500-$1,800	Yes	$350	Yes	$3.79	$4.19	$3.38	$3.67	No
Ontario International	--	--	--	--	--	--	$3.69	$3.86	--	$2.77	--
Chino Airport	$50	Yes	--	No	$290-$420	No	$3.80	$3.65	--	$2.61	Yes
Corona Municipal	--	--	--	--	--	--	--	$3.80	--	--	--
Apple Valley Airport	$50	Yes	$420		$280-420	No	$3.78	$4.03	$3.35	$3.60	Yes

Source: RA Wiedemann & Associates Inc. Telephone Survey 03-29-16 & www.airnav.com
Legend: LL = Low Lead; SS = Self Serve; FS = Full Serve; AS = Assisted Serve sf = Square Feet; NC = No Charge; N/A = Not Available

Appendix 3A:
SWOT Analysis

Appendix 3-A
Redlands Municipal Airport SWOT

TWO SWOT (STRENGTHS/WEAKNESSES/OPPORTUNITIES/THREATS) WORKSHOPS were held at the Redlands City Hall on January 27, 2016. A total of 39 participants representing a range of Airport, City, business and private interests attended the sessions. Also present were representatives of R.A. Wiedemann & Associates and the City of Redlands. The purpose of the SWOT Workshop was to provide an opportunity to better identify and understand the Airport operating environment. In this regard, the SWOT was not a strategy session. Rather, it was the preparatory step in developing a comprehensive profile of the Airport and its service area. Thus, the information generated in the SWOT about the Airport's position in its environment can be used to develop follow-on strategies for achieving the Airport's mission. This Business Plan will serve as the vehicle to define these strategies and focus resources on the implementation process which will take place over the next ten years.

The SWOT for Redlands Municipal Airport involved the following categories as defined below:

- ***Strengths:*** Internal attributes of the Airport. These can include Location, Physical Layout/Infrastructure, Managerial, Financial, Political, Brand, Competition, and "Other."
- ***Weaknesses:*** Internal attributes of the Airport. These also can include Location, Physical/Infrastructure, Managerial, Financial, Political, Brand, Competition (SBIA), and "Other."
- ***Opportunities:*** External conditions that may be available to the Airport, including Local and Regional Business, On-Airport Business, Funding, Brand, Aviation Trends, Charter Service, and "Other."
- ***Threats:*** External conditions that may threaten the Airport's viability. These conditions may include Funding, Operational Activity, Local Surface Access, Infrastructure, Brand, Competition, Neighbors and "Other."

There were five simple rules for the SWOT Workshops:

1) It is okay to disagree.
2) All ideas are potentially good ideas.
3) We will honor time limits unless the entire group desires longer sessions.
4) What is said at the meeting will not be attributed to a specific person (confidentiality).
5) Cell phones should be in the "off" position.

The City Staff Workshop began at 3:00 pm and ended at 5:00 pm. The Airport Advisory Board Workshop began at 6:00 pm and ended at 8:00 pm. Discussion topics included a wide range

of issues including, but not limited to:

- Airport Branding, Marketing, and Public Relations
- Financial Sustainability
- Preservation/Improvement of Existing Airport Infrastructure
- Airport Development/Aviation and Non-Aviation Land
- Airports in the surrounding Service Area
- Potential Attractions to the Area
- Regional Aerial Fire Fighting
- Present and Future Client Base
- Airport Amenities and Services
- Ground Access to Major Highways
- Economic Development Goals

The following sections summarize the discussions held at the Workshops concerning Airport Strengths, Weaknesses, Opportunities, and Threats. Participants in the afternoon Workshop were asked to rank their top three items of importance within each category. Due to time constraints and other considerations, participants in the evening Workshop did not rank items of importance within each category, however, key comments from that Workshop are also included below.

1. AIRPORT STRENGTHS

AIRPORT STRENGTHS ARE CONSIDERED INTERNAL OR INHERENT attributes of the Airport. The following Strengths were identified during the Workshops by participants. They are ranked in order of importance (as evaluated by the first Workshop group):

- ***Geographic Location:*** The Airport's location, approximately 2.5 miles northeast of the Redlands city center, is considered to be a strength in several ways.
  - The Airport is just close enough to town to be convenient, and far enough away from downtown to mitigate any significant noise or safety issues.
  - There is geographic proximity to the mountains, beaches, desert, and Los Angeles. All can be reached in less than a 2-hour drive.
  - The Airport has good proximity to significant light industry, warehousing, and other business activity in the region.
  - Highway access is good, with the Airport situated approximately 4 miles north of Interstate 10, and approximately 4 miles east of California Highway 210.
  - Hangar 24 Craft Brewery and the Redlands Sports Complex adjacent to the Airport, attract visitors to the Airport area.
  - The location of a popular brewery near the airport increases the feasibility of a successful restaurant on or near the Airport.
  - Although there are issues with residential encroachment, there remain areas of undeveloped property near the airport which will provide a reasonable buffer if adequate zoning is put in place.

  - The Airport benefits from its position within a mountainous bowl which reduces strong crosswinds, providing an ideal location for flight training. In addition, the Airport has an excellent airspace environment for flight training and private operations.
  - The Airport's Southern California location provides 330 clear flying days per year.
  - The Airport's location near the San Bernardino National Forest allows the Airport to serve as a vital staging area for combating forest fires.
- ***Airport Infrastructure:*** The Airport has adequate infrastructure in place. Most is in good condition, although many areas of pavement are in need of maintenance to prolong the useful lifespan. Many exterior negatives have been cleaned up, improving overall appearances. Water and electric utility services are readily available. There may be a potential to extend the Runway to 5,000 feet which would provide for increased business jet activity. There is a good mix of hangars, most of which are in good condition. The terminal building is in good condition, and provides adequate space and amenities for current users.
- ***Economic Development Opportunities:*** Redlands Airport serves as a competitive advantage with surrounding cities for pursuing economic development. It is reported there are more than 350 licensed pilots in the immediate area.
- ***Hangar 24 Airshow:*** The Hangar 24 Airshow has improved the awareness and overall image of the Airport by attracting over 15,000 spectators to the event. The donation of proceeds to charity has also generated positive public relations.
- ***Airport Services and Activities:*** The Airport is fortunate to have a number of hangar operators, a fuel seller, and some aircraft maintenance activity on the field, as well as flight instruction for both fixed wing and rotary wing aircraft. Rental aircraft are also available.
- ***Local Political Access and Support:*** The Airport enjoys solid local political support. Community leaders are willing to pull together to develop a common vision. Airport tenants and users generally agree that the current access to City staff is much improved over that available in years past.
- ***Passionate Aviation Community:*** As a general rule, the Airport's community of tenants and users is very cohesive and passionate about the Airport's vitality, success, and preservation.
- ***Land Development:*** The Airport is situated on approximately 194 total acres of land, with electric and water readily available. There are many acres available for development to support aviation and other commercial or light industrial uses. There is ample room at the Airport for hangar and other development. There is an overall perception that development on and around the Airport would provide many financial benefits. There is excellent potential to develop the large ramp/tie-down area on the southwest side of the Airport with T-hangars and corporate hangars.
- ***Airport Brand:*** The Airport is viewed primarily as a recreational facility populated by passionate and loyal tenants and customers. Although business aviation does occur on the Airport, it is a less significant percentage of current Airport activity.
- ***Unique Features:*** It was reported that the Airport has the only FAA authorized aerobatics box within L.A. Airspace. This could be a significant drawing card if properly marketed. The Airport's established traffic pattern protects the City from excess noise.
- ***General Optimism:*** There is a prevailing sense of optimism among Airport stakeholders that the facility is a "diamond in the rough" with tremendous potential to provide a base for

planned development, which will help to increase the quality of life in that area of Redlands.

- ***Hangar Waiting List:*** The City reports a current hangar waiting list of 6 to 7 potential tenants. There is steady interest from outside aviators to move aircraft into the area and base on the airport.

2. AIRPORT WEAKNESSES

AIRPORT WEAKNESSES WERE IDENTIFIED DURING THE SWOT workshops process. These are considered internal attributes of the Airport and are listed below in rank order of importance by the first Workshop SWOT participants:

- ***Management:*** The Airport does not have an on-site manager from the City. There is concern with the lack of aviation specific management experience on the City level.
- ***Encroachment:*** Potential residential development encroachment could be a limitation to future Airport growth and development, as well as a certain source of ongoing noise and safety complaints. There is a belief in the aviation community that zoning practices in the past have permitted non-compatible encroachment. However, all zoning activities have conformed to the approved Redlands Airport Land Use Compatibility Plan.
- ***Limitations for Growth:*** If it is not possible to extend the runway length to 5,000 feet, it would limit the Airport's ability to serve certain types of business jets. These larger aircraft generate a higher-than-average level of revenue for airports that can accommodate them. The current length of 4,504 feet is below the 5,000-foot minimum required by most insurance providers for jet powered operations (without a waiver).
- ***Branding/Marketing:*** There is no cohesive brand for the Airport and its facilities are in need of a facelift. The Airport currently does not have a stand-alone website, or a significant social media presence.
- ***Slow to Meet Competition:*** The Airport does not currently offer Jet A fuel, which limits the potential to attract business jet aircraft.
- ***Financial Limitations:*** There is no reserve fund to offset financial losses or to provide for disaster or emergency issues. The Airport owes money to the City that it pays roughly $120,000 per year. This keeps funding for other improvements low.
- ***Need for Additional FBO:*** There is a perception that a second FBO (fuel seller) on the field would provide a higher standard of service and more competitive pricing. It was reported that the current FBO does not offer basic essentials such as engine oils and lubricants, which would be a great benefit to Airport tenants.
- ***Tight Entrances:*** It was reported that at least one of the access roads into the Airport is too narrow and too sharply angled for large fuel trucks to easily access the field. There is a need to develop an entrance with larger radius turns.
- ***Severe Congestion:*** It was reported that at certain times there is severe congestion as a result of traffic into and out of the Hangar 24 Craft Brewery.
- ***Safety Issues:*** There is a large, wide, deep drainage ditch which runs parallel to the runway, which should be covered. In addition, there is a need for increased safety protocols limiting the potential for Airport and runway incursions, and improved lighting. It was suggested that weed abatement on the west ramp should become a mandatory component of standard

maintenance. There is still great concern for a large pile of dirt off the runway end which is now reported to have small trees growing atop it.

- ***Lack of Essential Facilities:*** There was an expressed need for additional facilities such as a wash rack for aircraft, and a facility to wash aircraft engines.

Other Weaknesses:

- ***Ground Transportation Services:*** There is a need for improved taxi, limo, and rental car options.
- ***Lack of Hangars:*** The six or seven individuals on the City's waiting list indicate that there may be a need for additional hangar space at the Airport.
- ***Lack of Public Attractions:*** The Airport does not have on-airport attractions such as restaurants, an aviation museum, or other features that would serve to draw the public to the Airport.
- ***Insurance/Safety Risk:*** Airport security is weak in many places around its perimeter and unauthorized access to the airfield has been a problem.
- ***Lack of Public Awareness:*** There are too few people in the community who know what goes on at the Airport and what its value is to the community.
- ***Minimum Standards:*** The Airport does not have a set of adopted minimum standards for commercial aviation activities.

3. AIRPORT OPPORTUNITIES

OPPORTUNITIES THAT EXIST ARE CONSIDERED EXTERNAL CONDITIONS that may be available to the Airport. Generally, these opportunities will require strategies and efforts to achieve. Most opportunities involve the market place or additional services or facilities at the Airport. Participants in the SWOT Workshops identified a number of opportunities available to the Airport in the following rank order of importance:

- ***Potential to Develop a Compatible Restaurant:*** Hangar 24 has developed a solid clientele for its brewery, as well as for its Airshow. An opportunity exists to develop a viable restaurant nearby in partnership with Hangar 24, or as a benefit of Hangar 24's traffic. A sports themed "family friendly" restaurant would attract participants and visitors to the Sports complex.
- ***Airport Branding:*** The Airport can improve its brand. It was suggested that the City and the Airport partner more effectively with the Chamber of Commerce to promote the City and the Airport. As infrastructure and services are improved, efforts must be made to expand the brand.
- ***Development Opportunities:*** The Airport has ample acreage and infrastructure to accommodate both aviation and non-aviation related development. Increased developments on and around the Airport will make it more advantageous for customers to fly in staff, vendors, and partners. There are several acres of land available outside the Airport fence for low density, non-aviation development adjacent the Airport such as light industry, warehousing, or parks. There is land on the Airport that could be developed for compatible non-aviation use.

- ***Opportunities Related to Airports Closing in the Service Area:*** Rialto Airport closed in September 2014, removing one 5,000-foot runway from the service area, along with numerous hangars and facilities for based aircraft. Banning Airport with its 4,955-foot runway is reported to be near closure. The Airport gleaned a few new tenants from the Rialto closure, but may have missed some due to lack of a more aggressive outreach. The Airport also missed out on obtaining disassembled hangar materials, because of a short notification timeframe. If Banning is closing, an opportunity exists to attract their former clientele.

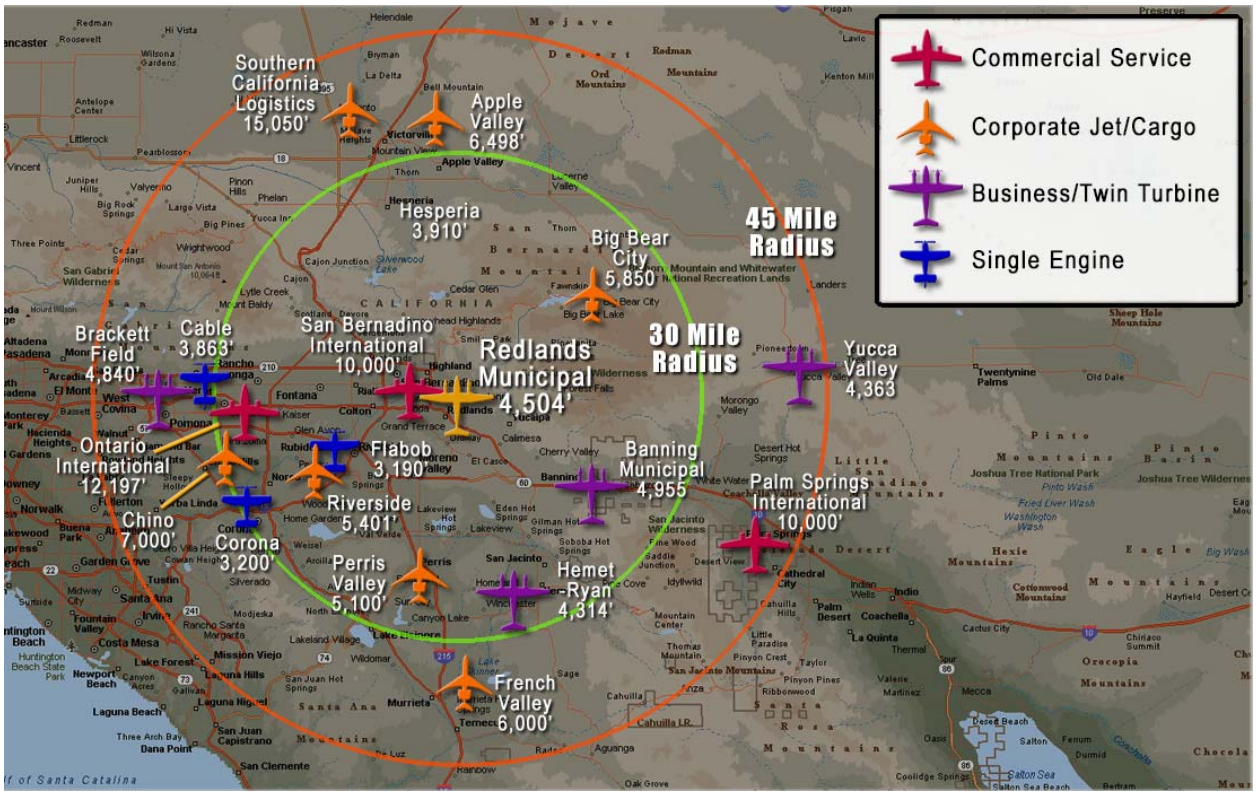


Figure 3A- 1 – ***Redlands Municipal Airport Greater Service Area***

- ***Opportunity to Renegotiate Leases:*** A number of leases are up for renegotiation, which could work greatly in the Airport's favor and provide increased revenues.
- ***Opportunity to Improve FBO Services:*** It was suggested that adding Jet fuel and improved line crew services for aircraft would be a strong attraction for increased activity.
- ***Opportunity to Partner with Emergency Service Providers:*** The Airport serves as a base of operations and staging area for local law enforcement, fire protection, and other emergency services.
- ***Potential Increase in Visitors to the Area Around the Airport:*** The Sports Park has attracted some aviation visitors to the Airport for events at the Sports Park. Expansion of sports activities at the Park could increase sports related aviation activities on the Airport.
- ***Opportunity to Gain New Tenants:*** It was reported that San Bernardino is not friendly to small general aviation operators. It may be possible for the Airport to attract some of these

users.

- ***New Technologies:*** It was suggested that there may be compatible openings in the realm of drone piloting and instruction.
- ***Need for New Terminal:*** It was suggested that a new terminal building would be a huge asset in the development and growth of the Airport.
- ***Need for Compatible Zoning:*** There is a distinct need for aviation compatible zoning around the Airport. Some suggestions included agricultural uses such as citrus orchards and locally grown produce, open spaces, parks, trails, recreation centers, and other community use areas.
- ***Opportunity to Improve Safety:*** There is a need and an opportunity to improve fencing, gates, and overall safety.
- ***Opportunity to Improve Communications:*** There is a distinct opportunity to improve communications between the City, the Airport Board, and the tenants and users of the Airport. This option was expressed by more than one speaker, and strongly endorsed by many. It was acknowledged by many that recent changes in City staff and policy have resulted in improved communications, which are greatly appreciated.

Other Opportunities

- ***Flight Training and MRO Development:*** Opportunities exist to increase Flight Training with potential partners and educational institutions. It is believed that area universities, colleges, and technical schools could support a flight school and possibly an aircraft maintenance program. It was suggested that a paint and interior MRO would be a strong addition to the Airport.
- ***Business Aviation Growth:*** Business aviation is forecast to grow faster than any other aviation segment in the United States. Business aircraft constitute a stable growth segment of general aviation that would be ideal marketing objectives for the Airport. The Airport has an opportunity to increase based and transient customers, especially if the Airport can add another 500 feet of runway.
- ***Hangar Development:*** There appears to be a demand for the development of additional conventional and T-hangars.
- ***Ground Transportation:*** There is adequate space to improve ground transportation at the Airport:
  - Satellite Location for Rental Cars
  - Courtesy Cars
  - Taxi & Limousine Services
- ***Airport Events:*** The Airport could easily host special events in addition to the Hanger 24 Airshow to attract non-aviators to the Airport. Events such as car shows, 5K runs, radio controlled aircraft events, school and scouting group outings, etc., are used by other airports to attract public participation and promote good community relations.
- ***Attraction of Specialty Aviation Service Operators (SASOs):*** The Airport would benefit financially by the attraction of additional SASOs which could perform maintenance, repair, overhaul, aircraft painting, or avionics installation/repair. Airport users would benefit because of the convenience of these services.

4. THREATS TO THE AIRPORT

IN THIS CONTEXT, THREATS TO THE AIRPORT refer primarily to factors that would hinder its potential growth, development, and viability. Threats are generally external conditions to which the Airport is exposed. In some cases, unsolved weaknesses may develop into threats. Threats to Airport viability were generated by participants in the SWOT Workshops. Ranking of the issues was provided in the first Workshop as follows:

- ***Limited Ground Access:*** The Airport has limited ground access to and from major highways.
- ***Misused Hangars:*** Non-conforming use hangars are taking away from aviation related development and aviation activity on the Airport.
- ***Increased Airstrike Potential:*** A new reservoir located less than a mile from the Airport has the potential to attract waterfowl, hawks, and other birds to the vicinity, increasing the risk of airstrikes between aircraft and birds.
- ***Security Weaknesses:*** Porous security has permitted unauthorized access to the airfield, and has led to one non-aviation related fatality on Airport property.
- ***Residential and Height Encroachments:*** The aviation community is concerned that continued residential development could result in restricted use of the Airport. In addition, potential height encroachments near the Airport are causing safety related concerns, and could contribute to greater safety related issues. These include the dirt pile and privately owned structures near the runway.
- ***Access to Funding:*** Given that the Airport must rely upon the City to supplement income, it is important for the Airport to maintain financial support, generate new revenues, and operate as efficiently as possible. Without this support, future projects and development at the Airport could be jeopardized. The FAA grant funding process demands that the Airport be sustained via matching funds at the state and local level.
- ***Decreasing Pool of Pilots:*** The total number of pilots is decreasing nationwide. This could create issues in the future resulting in reduced activity and revenues.
- ***Changing Political Environment:*** The political environment could shift from ideal, to less than ideal, or blatantly negative.
- ***National Economy and Fuel Prices:*** General aviation activity is dependent upon a good national economy. It is unpredictable, and as such may pose a threat to future private and corporate activity if there are economic downturns. Fuel prices could have an adverse effect on Airport operations.

Other Threats

- ***Facilities Maintenance:*** Airport maintenance from lighting to mowing to the upkeep of various structures is a constant demand.
- ***Competitive Pressure:*** Within a 45-mile radius, competition from jet capable airports such as San Bernardino, Riverside, Big Bear City, and Ontario International place competitive pressure on Redlands Municipal Airport for the lucrative business jet segment.

5. SUMMARY

REDLANDS MUNICIPAL AIRPORT IS IN AN IDEAL position to take advantage of its strengths and the opportunities made available by the active aviation community of pilots, aviation businesses, and good economic climate in the Inland Empire Region. This SWOT has identified numerous opportunities that can be translated into additional financial production, if they are implemented. These include the need for new hangar space, the attraction of aviation businesses to the Airport, and better branding and marketing activities.

On the other side of the ledger, there are a number of weaknesses and threats that work to constrain activity at Airport and reduce its potential financial production. These items mostly involve the perceived encroachment of residential development, the possible need for more runway length, the lack of adequate ground access for commercial or light industrial development, and secondary impacts from the health of the overall national economy.

Overall, the SWOT Workshops highlighted the key issues for the Airport and its operating environment. The Business Plan will use the results to develop strategies for building on strengths, overcoming weaknesses, taking advantages of opportunities, while minimizing threats to the Airport's future operation.

Appendix 3B:
Airport Lease Analysis

Appendix 3-B: Lease Analysis

THIS APPENDIX SUMMARIZES OUR ANALYSIS OF SAMPLE lease agreements between Redlands Municipal Airport and their corresponding airport tenants. Because disputes often arise where ambiguity persists in lease language, leases should be standardized to lower the deviation from lease to lease. There are a number of lease strategies, best practices, and general areas of advice discussed in this analysis. It is important to note that this analysis was not performed by an attorney and should ***not*** be used in place of legal advice. Before modifications to any existing leases from Redlands Municipal Airport are pursued, these recommendations should be reviewed with and by the Airport sponsor's legal counsel. This analysis is organized as follows:

- Inventory of Sample Lease Agreements
- Lease Structure Modifications
- Strategies for Correcting Lease Issues
- Sample Lease for City Hangars

B-1 Inventory of Sample Lease Agreements

This analysis is based on lease samples from major tenants on the airport (Redlands Aviation, Redlands Hangar Association, and Coyote Aviation), as well as a sample T-Hangar agreement that the city uses for municipally-owned hangars. These leasehold agreements cover a wide range of issues relevant to aviation lease policy. A checklist was utilized to verify the use of important sections elements in each lease. This checklist does not evaluate the specific conditions of each lease section, but only verifies that it has been used in the lease.

Lessee: **Redlands Aviation**					
Lease Type: Aviation, Commercial Business Type: Ground Lease, FBO Lease Expiration: December 31, 2058					
Lease Element Checklist					
Rent	√	Premises	√	Non-Exclusivity	√
Lease Term	√	Lease Rent	√	Escalation Clause	√
Land Use	√	Taxes and Fees	√	Damage to Facilities	√
Operation & Maintenance	√	Liens	√	Insurance Obligations	√
Construction of Improvements	√	Defaults	√	Environmental	X
Reversion Clause	√	Assignments and Subletting	√	Living Clauses	√
Lessor Rights, Reservations, and Obligations	√	Regulatory Compliance	√	Force Majeure	√

Lessee: **Redlands Aviation**					
Lessee Rights, Reservations, and Obligations	√	Hold Harmless Provision	√	Holdover	√
Security Requirements	√	Nondiscrimination	√	Term Extension Options	√
Checklist Score: 26/27					

Lessee: **Redlands Hangar Association**					
Lease Type: Aviation, Commercial Business Type: Ground Lease, FBO Lease Expiration: April 30, 2057					
Lease Element Checklist					
Rent	√	Premises	√	Non-Exclusivity	√
Lease Term	√	Lease Rent	√	Escalation Clause	√
Land Use	√	Taxes and Fees	√	Damage to Facilities	√
Operation & Maintenance	√	Liens	√	Insurance Obligations	√
Construction of Improvements	√	Defaults	√	Environmental	X
Reversion Clause	√	Assignments and Subletting	√	Living Clauses	√
Lessor Rights, Reservations, and Obligations	√	Regulatory Compliance	√	Force Majeure	√
Lessee Rights, Reservations, and Obligations	√	Hold Harmless Provision	√	Holdover	√
Security Requirements	√	Nondiscrimination	√	Term Extension Options	√
Checklist Score: 26/27					

Lessee: **Coyote Aviation**					
Lease Type: Aviation, Commercial Business Type: Ground Lease, SASO Lease Expiration: April 4, 2050					
Lease Element Checklist					
Rent	√	Premises	√	Non-Exclusivity	X
Lease Term	√	Lease Rent	√	Escalation Clause	√
Land Use	√	Taxes and Fees	√	Damage to Facilities	√

Lessee: **Coyote Aviation**					
Operation & Maintenance	√	Liens	√	Insurance Obligations	√
Construction of Improvements	√	Defaults	√	Environmental	√
Reversion Clause	√	Assignments and Subletting	√	Living Clauses	√
Lessor Rights, Reservations, and Obligations	√	Regulatory Compliance	√	Force Majeure	X
Lessee Rights, Reservations, and Obligations	√	Hold Harmless Provision	√	Holdover	√
Security Requirements	X	Nondiscrimination	√	Term Extension Options	√
Checklist Score: 24/27					

Lessee: **City of Redlands T-Hangar Sample**					
Lease Type: Aviation, Commercial Business Type: T-Hangar Lease Lease Expiration: Month to Month Premises: T-Hangar					
Lease Element Checklist					
Lease Term	√	Lease Rent	√	Escalation Clause	√
Use of Premises	X	Taxes and Fees	√	Damage to Facilities	√
Operation & Maintenance	√	Liens	√	Insurance Obligations	√
Construction of Improvements	√	Defaults	√	Environmental	√
Reversion Clause	√	Assignments and Subletting	√	Living Clauses	√
Lessor Rights, Reservations, and Obligations	√	Regulatory Compliance	√	Force Majeure	X
Lessee Rights, Reservations, and Obligations	√	Hold Harmless Provision	√	Holdover	√
Security Requirements	X	Nondiscrimination	√	Term Extension Options	√
Checklist Score: 21/24					

B-2 Lease Structure Modifications

A number of lease issues have been identified with the sample leases at Redlands Municipal Airport that should be corrected in the future. It is important to note that during lease negotiations a tenant could make additions to these policies to protect their own interests. Such additions should be left up to the discretion of the Airport sponsor, keeping in mind that no lease can give a single tenant an advantage over its on-airport competition, and that exclusive rights are a violation of federal grant assurances. Some of these issues cannot be corrected until the current lease expires. Others may be subject to correction strategies and incentives offered by the Airport in the near term. The following areas identified from the sample leases should be added/corrected:

- ***Use of Premises:*** As identified in the SWOT, it is believed that ambiguity in the hangar leases has contributed to the inappropriate use of hangar space for non-aviation purposes. An example hangar lease, with edited language reflecting the requirement that hangars be used for the storage of aircraft only, is included in this appendix.
- ***Reversion Clause:*** The reversion clauses for both Redlands Aviation and Redlands Hangar Association should be adjusted in the future to reflect the sentiment that all permanent improvements shall revert back to the Airport upon termination of a lease, while smaller items that can easily be removed will not. Currently, these leases stipulate that the City pay fair market value for all permanent structures and improvements upon termination of the lease agreement.
- ***Non-Exclusivity Clause:*** Coyote Aviation, while competing as a hangar operator, does not include a non-exclusivity clause in its lease similar to the ones found in the leases for Redlands Aviation and Redlands Hangar Association. To avoid any ambiguity in instances where any competition exists among airport tenants, it is suggested that the City include language within the leasehold agreements that clarify that no advantage can be given to any single tenant by the airport over its competition. This will ensure that the airport stay in compliance of Federal Grant Assurances 22 and 23 that address economic nondiscrimination and the granting of exclusive rights.
- ***Environmental Considerations:*** A baseline of expectations needs to be established in each lease regarding the usage of fuels, solvents, and other contaminants. Lease agreements for Redlands Aviation and Redlands Hangar Association currently do not address such considerations. It is suggested that a section be added, with wording similar to that found in the Coyote Aviation lease agreement that takes into consideration federal, state, and local laws and regulations.
- ***Security Requirements:*** At a minimum, Airport leases should reference controlling all entry points of the Airport that provides access to the Air Operations Area (AOA) on the leased premises in order to prevent unauthorized access of persons and vehicles. All security measures must comply with any regulations stipulated by the TSA and Homeland Security.
- ***Force Majeure:*** This clause frees both the Airport and tenant from liability or obligation when an extraordinary event or circumstance beyond the control of the parties, such as a war, strike, riot, crime, or an act of God.

B-3 Strategies for Correcting Lease Issues

The lease structure changes outlined in this document can be easily implemented into new lease agreements. For the current lease agreements that do not adhere to the practices outlined in this document, there are limited options to change. To adjust the terms in current leases, the Airport will need to utilize one of the following methods:

- ***Renegotiation of Lease Terms:*** This could be initiated by either the tenant or the Airport, seeking to add an amendment to the current lease. If the Airport is initiating the renegotiation, an incentive will need to be offered to the tenant in exchange for adhering to the new lease policy. That incentive may be a lease extension that is not already included in the current lease.
- ***Upon Assignment or Subletting of Current Lease:*** A tenant cannot assign or sublet the lease terms without the express approval of the Airport. A scenario involving a negotiation for an assignment of a lease agreement, the Airport would have the opportunity to update the lease terms to the new Airport lease policy.
- ***Default of Current Lease:*** If a tenant does not adhere to the obligations of their specific leasehold agreement, either through non-payment of rent or violations of the Airport's Rules and Regulations, the Airport can institute the standard leasing policy for future agreements.
- ***Expiration of Current Lease Term:*** When the term of any lease expires, and the tenant is unable to utilize an extension option, that particular lease can be discarded if it does not conform to the new leasing policy of the Airport.

Under the worst case scenario, the Airport could attempt to buy out the tenant lease through a negotiated process or through eminent domain. Typically, these arrangements are costly and as such are seldom used.

B-4 Sample Lease Agreement

For City-owned hangars, the following sample lease can be used. New rates have been estimated as a part of this Business Plan and can be included.

AIRPORT HANGAR RENTAL AGREEMENT

This airport hangar rental agreement ("Agreement") is made and entered into this ____ day of _____, 20xx ("Effective Date") by and between the City of Redlands, a municipal corporation ("City"), and _____ ("Tenant"). City and Tenant are sometimes individually referred to herein as a "Party" and, together, as the "Parties."

1. PREMISES. City hereby rents to Tenant, and Tenant hereby rents from City, that certain hangar designated as Hangar No. _____(the "Premises"), located at the Redlands Municipal Airport ("Airport"), and more particularly described in Exhibit "A" attached hereto. This Agreement for rental of the Premises is for the principle purpose of the storage of Tenant's aircraft which is identified as year _____make _____ model _____, Registration No.4_____ for commercial aviation related business, and any incidental aviation related uses associated therewith.

2. TERM. The term of this Agreement shall be [month-to-month] or [other] commencing On _____, and in no event shall exceed three (3) years.

3. CONSIDERATION.

3.1 Monthly Rental Payments. Tenant shall pay to City on or before the 15th day of each month during the term of this Agreement as monthly rent, without deduction, setoff or demand, the sum of _____ dollars ($). A late fee shall be levied in the amount of ten percent (10%) of the amount due for any amount not received by the date such rent is due. Upon providing Tenant thirty (30) days' prior written notice of the same, the rent may be increased by the City, every two (2) years, by the percentage increase in the Consumer Price Index, all urban consumers, Los Angeles-Riverside-Orange Counties, during the term of this Agreement, on the anniversary date of the Effective Date of the Agreement.

3.2 Manner of Payment of Rent. Monthly rent for any partial month shall be prorated at the rate of I130,h of the monthly rent per day. The monthly rent and any applicable late charges payable by Tenant hereunder shall be paid by Tenant without notice, demand or offset at the office of the Airport Manager at the Airport, or at such other place as may from time to time be designated by City.

3.3 Taxes and Assessments.

3.3.1 Obligation to Pay. Tenant is responsible for and shall pay all real and personal property taxes (including any tax levied on a possessory interest, as defined in California Revenue and Taxation Code Section 107 or successor statute, if applicable), general and special assessments, and other charges of every description, levied on or assessed against the Premises, personal property located on the land or improvements, the leasehold estate, or any subleasehold estate, falling due during the term of this Agreement. It shall be conclusively presumed that any aircraft stored at the Premises pursuant to this Agreement shall be considered "habitually situated" therein as that term is defined at Revenue and Taxation Code section 5362. Tenant shall make all such payments directly to the assessing authority, before delinquency and before any fine, interest or penalty shall become due or be imposed by operation of law for their nonpayment.

3.3.2 Proration for Partial Year. Any imposition of taxes referred to in Section 3.3.1 above relating to a fiscal period of a taxing authority, a part of which period is included within the term of this Agreement and a part of which is included in a period of time before the Effective Date or after the termination of this Agreement, shall be paid by Tenant as above but shall be prorated with City.

3.3.3 Tenant's Right to Contest. Tenant may contest the legal validity or amount of any taxes, assessments or charges for which Tenant is responsible under this Agreement, and may institute such proceedings as Tenant considers necessary. If Tenant contests any such tax, assessment or charge, Tenant may withhold or defer payment, or pay under protest, but shall protect City and the Premises from any lien by adequate surety bond or other appropriate security.

3.3.4 Proof of Compliance. Upon the request of City, Tenant shall furnish to City receipts or other appropriate evidence establishing payment or any applicable tax, assessment or charge. Tenant may comply with this requirement by retaining a tax service to notify City whether the taxes have been paid.

4. USE OF PREMISES.

4.1 Use of Hangar. The Premises shall be used and occupied by Tenant principally for the storage of aircraft and related business or other aviation uses. There must be at least one airworthy aircraft in each hangar. No other commercial activity of any kind whatsoever shall be conducted by Tenant in or around the Premises. Tenants of hangars without airworthy aircraft are subject to lease cancellation and eviction.

Tenant shall not use the Premises for sleeping or temporary living quarters. Tenant shall keep the Premises clean and free of debris at all times and shall not do anything on the Premises that will cause damage to the Premises or unreasonable annoyance to owners or occupants of adjacent properties.

Upon termination of this Agreement, Tenant shall immediately surrender possession of the Premises and shall remove the Aircraft and all other property therefrom, leaving the Premises in the same condition as when received, ordinary wear and tear and improvements made by Tenant excepted. Tenant shall be liable for any and all damage to the Premises caused by Tenant's use, including, without limitation, bent or broken interior walls, damage to unsealed floors due to fuel oil spillage, or doors damaged due to Tenant's improper or negligent operation.

4.2 Compliance with Laws. In utilizing the Premises during the term of this Agreement, Tenant shall comply with all applicable statutes, ordinances, rules and regulations established by any federal, state, county or local government agency.

4.3 Waste Disposal. Tenant shall dispose of all sewage and industrial waste in accordance with all applicable regulations and laws of those governmental agencies having jurisdiction or authority thereover. Tenant shall ensure that all solid waste materials are placed in appropriate covered containers designed for use with the type of waste involved, which shall remain covered, and locked, and that such containers remain located on the Premises and not moved from their location for any reason. Tenant shall cooperate with City to provide for the proper separation of waste to maximize recycling.

4.4 Hazardous Materials.
(a) Any Hazardous Materials (as hereinafter defined) brought upon, kept or used in or about the Premises or the Airport by Tenant, its agents, employees, contractors or invitees, shall be necessary or useful to Tenant's business and shall be used, kept and stored in a manner that complies with all laws, statutes, ordinances, rules, regulations, orders, requirements, and policies of any and all governmental agencies and authorities applicable to any such Hazardous Materials ("Hazardous Materials Laws").
(b) If Tenant breaches the obligations stated in subparagraph (a) of this Section 4.4, or if the presence of Hazardous Materials on the Premises after the Effective Date results in contamination of the Premises or the Airport, or if Hazardous Materials are otherwise discharged or released from the Premises after the Effective Date, then Tenant shall indemnify, defend and hold City harmless from and against any and all claims, judgments, damages, penalties, fines, costs, liabilities and losses (including, without limitation, diminution in value of the Airport, damages for the loss or restriction on use of rentable or usable space or of any amenity of the Airport, damages arising from any adverse impact on marketing of space in the Airport, and sums paid in settlement of claims, attorneys' fees, consultant fees and expert fees) which arise during or after the term of this Agreement as a result of such breach, contamination, discharge or release. This indemnification of City by Tenant includes, without limitation, costs incurred in connection with any investigation of site conditions or any cleanup, remedial, removal or restoration work required by any federal, state or local governmental agency or political subdivision because of Hazardous Materials present in, on or under the Premises. Without limiting the foregoing, if the presence of any Hazardous Materials on the Premises after the Commencement Date results in any contamination of the Airport, or otherwise results in the release or discharge on, under or from the Premises of Hazardous Materials, Tenant shall promptly take all actions at its sole expense as are necessary to return the Airport to the condition existing prior to the introduction of any such Hazardous Materials to the Airport or to otherwise remove and/or abate the release or discharged Hazardous Materials; provided that City's approval of such actions shall first be obtained, which approval shall not be unreasonably withheld so long as such actions would not potentially have any material adverse long-term or short-term effect on the Airport, will not unreasonably interfere with the use and enjoyment of other portions of the Airport, and will be performed in accordance with all Hazardous Materials Laws. Upon the termination of this Agreement, Tenant shall surrender the Premises to City free of any and all Hazardous Materials and in compliance with all Hazardous Materials Laws. This indemnification shall survive the termination or expiration of this Agreement.
(c) For the purpose of this Section 4.4, the term "Hazardous Materials" includes, without limitation, any flammable explosives, radioactive materials, hazardous materials, hazardous wastes, hazardous or toxic substances, or related materials defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 U.S.C. §9601 et seq.), the Hazardous Materials Transportation Act, as amended (49 U.S.C. § 180 I et seq.), the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. §9601 et seq.), Section 25117 of the California Health & Safety Code, Section 25316 of the California Health & Safety Code, and in the regulations adopted and publications promulgated pursuant to them, or any other federal, state or local environmental laws, ordinances, rules or regulations concerning the environment, industrial hygiene or public health or safety now in effect or enacted after the Effective Date.

4.5 Billboards and Signs. Tenant shall not construct, install or maintain, nor allow upon the Premises any billboards, signs, banners or like displays which may be placed in or upon any building or structure in such manner as to be visible from the outside thereof, except with the prior written consent of City.

4.6 Waste: Nuisance. Tenant shall not use the Premises in any manner that will constitute waste, nuisance or unreasonable annoyance to owners or occupants of adjacent properties. Tenant shall not use the Premises for sleeping, washing clothes, cooking or the preparation, manufacture or mixing of anything that might emit any odor or objectionable noises or lights onto adjacent properties. Tenant shall not do anything on the Premises that will cause damage to the Premises.

4.7 Access: Locks: Keys: Combinations: Tenant shall comply with all reasonable regulations and directives of City regarding access to the Premises. City may enter the Premises without permission of, or supervision by, Tenant for inspection or emergency purposes (i.e. lire, burglary, flooding, criminal activity, or other catastrophe) determined reasonably necessary by City or required by law, including but not limited to five-year fire sprinkler inspections, maintenance work that requires entrance by City, or any other to lawfully enter the Premises. City shall subsequently notify Tenant of any entry for emergency purposes and the reason for the entry if the Tenant was unable to supervise such entry. City reserves the right to limit Tenant's access to the Airport or the Premises, or both, due to any terrorist threat, civil unrest, any unsafe condition, of for the safety and protection of persons and property. City shall not be responsible for Tenant's inability to access the Airport or the Premises due to events or acts beyond the control of City. Tenant shall, at its own expense, furnish City's Airport Manager with a duplicate set of keys or lock combination for the locks securing the Premises. City shall secure keys and lock combinations from access or exposure by unauthorized individuals and will notify Tenant immediately in the event of any compromise of keys and lock combinations. City shall only be liable to Tenant for damage resulting from gross negligence in accessing Premises.

4.8 Requests from Airport Manager. Tenant shall cooperate with any reasonable request from City's Airport Manager regarding use or operations at the Airport.

5. MAINTENANCE, ALTERATIONS.

5.1 As-Is Condition. Tenant hereby acknowledges that neither City nor anyone acting for or on behalf of City, has made any representation, warranty or promise to Tenant concerning the physical aspects or condition of the Premises or improvements, the feasibility, desirability or convertibility of the Premises into any particular use, the conditions of the soil, ground water, or surface waters or the presence or absence of any toxic waste or hazardous substances or material, and that by entering into this Agreement has not relied on any representation, statement or warranty of City, or anyone acting for or on behalf of City, and that all matters concerning the Premises shall be independently verified by Tenant, and that Tenant shall rent the Premises on Tenant's own examination thereof, AND THAT TENANT IS LEASING THE PREMISES IN "AS IS" PHYSICAL CONDITION AND "AS IS" STATE OF REPAIR. Tenant hereby waives and City hereby disclaims all warranties of any or kind of description, including, without limitation, those of fitness for particular purpose, tenantability, habitability and use. Tenant hereby expressly waives any and all claims for damages or for rescission or cancellation of the Agreement because of any representations made by City or by any agent of City. Tenant acknowledges that it has had sufficient time to conduct all inspections, reviews and studies of the Premises that Tenant may deem necessary. Tenant hereby expressly assumes the risk that adverse physical conditions and the full extent thereof, may not be revealed by Tenant's inspections, reviews and studies of the Premises.

5.2 Maintenance of Premises. Throughout the term of this Agreement, Tenant shall, at Tenant's sole cost and expense, maintain the Premises in first class condition and repair, provided; however, that City shall maintain the structural components of the hangar, including doors and door mechanisms.

Tenant hereby waives the provisions of California Civil Code Sections 1941 and 1942 with respect to City's obligations for tenantability of the Premises and Tenant's right to make repairs.

5.3 Alterations. Tenant shall not make any alternations to the Premises without City's prior written consent. Any alterations made shall remain on and be surrendered at the expiration or sooner termination of the term; provided, however, that City may, at City's sole election, demand the removal from the Premises of all fixtures and improvements or of certain fixtures or improvements or both as specified in the notice provided for below. A demand to take effect at the normal expiration of the term shall be effected by notice given at least thirty (30) days before the expiration date. A demand to take effect on any other termination of the Agreement shall be effected by notice given in or concurrently with notice of such termination or within sixty (60) days after such termination. Tenant shall comply with the notice before the expiration date for normal termination, and within thirty (30) days after the notice for other terminations.

5.4 Utilities. Except for electrical services which shall be provided by City, Tenant shall be responsible for the payment of all costs for utility services to the Premises. City shall not be liable for the failure to provide electrical services if it is prohibited from doing so by events or actions beyond its control.

6. PROHIBITION AGAINST ASSIGNMENT AND SUBLETIING. Tenant shall not assign or transfer, whether voluntarily, involuntarily or by operation of law, its interest in this Agreement or any part hereof. No such assignment or transfer shall be valid or binding. An attempted assignment or transfer shall be grounds for City's termination of this Agreement. As used in this Article 6, the term "assignment" shall include a "more than 25% change in ownership of Tenant." A "more than 25% change in ownership of Tenant" shall mean, if Tenant is a corporation, the transfer of more than 25% of the voting stock of Tenant, or if Tenant is a general partnership, the transfer of the right to share in more than 25% of the profits of such partnership; or, if Tenant is a limited partnership a transfer of more than 25% of the voting rights of the general partner thereof to individuals or entities which were not theretofore general partners of Tenant. In addition, the parking of aircraft not owned or under exclusively lease by Tenant in the Premises shall constitute a sublease for purpose of this Article.

7. INDEMNITY.

7.1 Indemnity. Tenant shall indemnify, hold harmless and defend City, its elected officials, officers and employees, from and against any and all actions, claims, damages, disabilities or expenses including, without limitation, attorneys' fees (including fees for use of in-house counsel by a Party), witness costs and court costs that may be asserted by any person or entity, including Tenant, arising out of or in connection with any of the following circumstances:

7.1.1 Use of Premises. Use of the Premises or Airport in any manner by Tenant, its agents, employees, invitees, subtenants, licenses and contractors, and the agents, employees, patrons, contractors and invitees of Tenants and subtenants, including any use of the Premises or the Airport not allowed under this Agreement.

7.1.2 Breach by Tenant. Any breach by Tenant of the terms, covenants or conditions herein contained.

7.1.3 Other Activities. Any other activities of Tenant, its agents, employees and subtenants whether or not there is concurrent negligence on the part of City, but excluding liability due to the sole active negligence or sole willful misconduct of City. This indemnification obligation is not limited in any

way by any limitation on the amount or type of damages or compensation payable by or for Tenant or its agents under workers' compensation acts, disability benefit acts or other employee benefit acts.

8. TERMINATION AND EXPIRATION.

8.1 Termination for Tenant's Default. If Tenant fails to pay rent or any other sums to be paid by Tenant hereunder, Tenant shall have thirty (30) days after written notice is given Tenant to cure the default. If any default by Tenant shall continue uncured following notice of default as required by this Agreement, City shall have the right to immediately terminate this Agreement in addition to all other rights and remedies provided by law or equity to which City may resort cumulatively or in the alternative.

8.2 Tenant's Duty to Surrender. At the expiration or earlier termination of the term of The Agreement, Tenant shall surrender to City in as good condition and repair as of the Effective Date, the possession of the Premises. If Tenant fails to surrender the Premises at the expiration or sooner termination of this Agreement, Tenant shall defend and indemnify City from all liability and expense resulting from the delay or failure to surrender, including, without limitation, claims made by any succeeding tenant or Tenant or resulting from Tenant's failure to surrender.

8.3 Holding Over. If Tenant shall continue to occupy or possess the Premises after the termination of this Agreement without the consent of City, then unless City and Tenant have otherwise agreed in writing, Tenant shall be a tenant on a month-to-month basis. All the terms, provision and conditions of this Agreement shall apply to this month-to-month tenancy except those terms, provisions and conditions pertaining to the term, and except that the monthly rent shall be immediately adjusted upward upon the expiration or termination of this Agreement to equal three hundred percent (300%) of the monthly rent for the Premises in effect under this Agreement during the month which includes the day immediately prior to the date of the expiration or termination of this Agreement. This month-to-month tenancy may be terminated by City or Tenant upon thirty (30) days' prior notice to the non-terminating Party. In the event Tenant fails to surrender the Premises upon such termination or expiration, Tenant shall defend, indemnify and hold City harmless against all loss, liability, cost or expense resulting from or arising out of Tenant's failure to surrender the Premises, including, without limitation, any amounts required to be paid to any lessee or prospective lessee who was to have occupied the Premises after said termination or expiration and any related attorneys' fees and brokerage commissions. Notwithstanding the foregoing, no termination of this Agreement shall release Tenant from any liability or obligation hereunder, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination, or date of surrender if it be later.

9. NOTICES. Any notice required or permitted to be given under this Agreement shall be in writing. Delivery of such written notice shall be conclusively taken and sufficiently given after deposit in the United States Mail, addressed as follows:

City: Airport Manager
City of Redlands
35 Cajon Street, Suite 222
P.O. Box 3005 (mailing address)
Redlands, CA 92373

Tenant:

Any Party may at any time change its address for notice by giving written notice of such change to the other Party in the manner provided in this paragraph.

10. INSURANCE. Upon the Effective Date of this Agreement, Tenant shall provide City with a copy of Tenant's aircraft insurance policy for the specific aircraft that is stored in the Premises. In the event Tenant replaces such aircraft with a replacement aircraft during the term of this Agreement, Tenant shall provide City with a copy of the Tenant's aircraft insurance policy for such replacement aircraft within ten (10) days of the same.

11. SECURITY REQUIREMENTS. Lessee shall take measures to ensure security on the Lease Premises in compliance with FAA regulations, Transportation Security Administration regulations and Airport Rules and Regulations, if any.

12. MISCELLANEOUS PROVISIONS.

12.1 Joint and Several Obligations. If Tenant consists of more than one person, the obligation of all such persons is joint and several.

12.2 Captions. The captions of this Agreement are for convenience and case of reference only and do not define, limit, augment or describe the scope, content or intent of this Agreement.

12.3 Successors. Subject to the provisions of this Agreement on assignment and subletting, each and all of the covenants and conditions of this Agreement shall be binding on and shall inure to the benefit of the heirs, successors, executors, administrators, assigns and personal representatives of the respective Parties.

12.4 Broker's Commissions. Expenses. Tenant and City mutually covenant that no brokers have been or will be used with respect to this Agreement. In the event any broker or finder perfects a claim for a commission or finder's fee based upon any such contract, dealings or communications, the Party through whom the broker or finder makes a successful claim shall be responsible for said commission or fee and all costs and any expenses (including reasonable attorneys' fees) incurred by the other Party in defending against the same.

12.5 Applicable Law and Forum. This Agreement shall be construed and interpreted according to California law and any action to enforce the terms of this Agreement or for the breach thereof shall be brought and tried in the County of San Bernardino.

12.6 Covenants and Conditions. All provisions of this Agreement whether covenants or conditions, on the part of Tenant shall be deemed to be both covenants and conditions and such covenants shall survive termination.

12.7 Time of Essence. Time is and shall be of the essence of this Agreement and of each and every provision contained in this Agreement.

12.8 No Discrimination. Tenant shall comply with all applicable federal, state and local laws, rules and regulations relating to non-discrimination in employment and services because of race, color, ancestry, national origin, religion, sex, marital status, age, medical condition and handicap.

12.9 No Third Party Beneficiaries. Nothing contained in this Agreement shall be construed to create and the parties do not intend to create any rights in third parties.

12. 10 Construction of Lease: Severability. To the extent allowed by law, the terms, covenants, conditions, provisions and Leases in this Agreement shall be construed and given effect in a manner that avoids any violation of statute, regulation or law. City and Tenant covenant and agree that in the event any term, covenant, condition, provision or Lease in this Agreement is held to be invalid or void by court of competent jurisdiction, the invalidity of any such term, covenant condition, provision or Lease shall in no way affect any other term covenant, condition provision or Lease in this Agreement.

12.11 Relationship. The Parties intend by this Agreement to establish the relationship of City and Tenant only, and do not intend to create a partnership, joint venture, joint enterprise, or any business relationship other than that of City and Tenant.

12.12 Force Majeure: Neither the Lessor nor Lessee shall be deemed in violation of this Agreement if it is prevented from performing any of the obligations hereunder by reason of embargoes, shortages of material, acts of God, acts of the public enemy, acts of superior governmental authority, weather conditions, floods, riots, rebellions, sabotage, or any other circumstances for which it is not responsible or which are not within its control, and the time for performance automatically shall be extended by the period the party is prevented from performing its obligations hereunder. During time of war or national emergency, Lessor shall have the right to lease the landing area or any part thereof to the United States Government for military use, and if such lease is executed, the provisions of this Agreement insofar as they are inconsistent with the provisions of the lease to the United States Government, shall be suspended.

IN WITNESS WHEREOF, the parties to this Agreement have duly executed this Agreement on the date set forth above.

CITY OF REDLANDS TENANT

Appendix 3C:
Survey of Airport Users & Businesses

Appendix 3-C
Survey of Airport Users and Businesses

In February, 2016, Redlands Municipal Airport users, businesses, and stakeholders were surveyed for purposes of evaluating local area business use and economic impact of REI. The Airport User Survey was developed and emailed to based aircraft owners and frequent users of the Airport. A total of 187 Airport User Surveys were mailed. In addition to this mailing effort, advertisements for the survey effort were placed in the terminal for Airport users.

In addition, an Airport Employer/Business Survey was developed and mailed to 10 businesses that either use the Airport or have owners that base their aircraft at the Airport. Prior to sending these out, the Airport User, Business, and Stakeholder Surveys were launched via Surveymonkey.com, and a separate airport survey website was developed so that respondents could complete them online. The surveys were on-line at RedlandsAirportPlan.com. A copy of the Airport User Survey is included on the following page.

The direct mail effort was used for 177 tenants, and asked respondents to return completed surveys by March 8th, 2016. By that date, a total of 38 Airport User surveys were completed either online or mailed in. For the Business Surveys, four out of ten surveys were completed and included in the results. In addition to this, four Stakeholder Surveys were completed online. The final response rate was 21.5 percent for the Airport User Survey and 40 percent for the Airport Business Survey. For a surveying effort of this kind, the normal response range is between 18 percent and 28 percent. Thus, an average response was recorded for Airport User Survey, and an above average response was recorded for the Airport Business Survey.

AIRPORT USER SURVEY

1. Please indicate how many of the following types of aircraft you operate, or simply list the N Number for your aircraft:

All 38 Airport users included a response to this question. Aircraft types included 55 single-engine aircraft, one multi-engine aircraft, five helicopters, and two gliders, for a total of 63 aircraft (many respondents owned multiple aircraft).

2. Home Airport for your aircraft:

Every respondent listed Redlands Municipal Airport as their home airport, with the exception of one that listed Flabob.

3. Please estimate the total annual level of spending associated with your aircraft at Redlands Municipal Airport:

Thirty-seven respondents, accounting for 61 based aircraft at Redlands Municipal Airport spent a total of $886,393 on their aircraft for fuel, maintenance, storage, and taxes. Spending by aircraft type was calculated if respondents indicated one type of aircraft only. If users indicated

multiple types of aircraft, their responses were not broken down by spending by type because specific spending per aircraft could not be determined. Total spending by aircraft type:

- 47 Single-Engine Aircraft spent an average of $12,698 per year for a total of $596,805
- 3 Helicopters spent an average of $22,553 per year for a total of $67,658

Redlands Municipal Airport (REI)
Airport Business Plan
AIRPORT USER SURVEY

Name_____ Phone_____

Address_____ Email:_____

City_____ State_____ ZIP_____

Aircraft Economic Information

1. Aircraft type or N Number (Please list all aircraft):_____

   _____

2. Home Airport for your aircraft: _____

3. Please estimate the total annual level of spending associated with your aircraft at Redlands Municipal Airport:

   Fuel: $_____
   Maintenance: $_____
   Storage $_____
   Other $_____
   TOTAL $_____

Aircraft Activity Information

4. Please estimate the **number of take offs or landings** per year at REI:_____
5. From the above question, please estimate the **percentage of training flights** that you conduct each year:
   _____%
6. Please estimate the **average trip length** on flights other than training flights: _____ miles.
7. What new facilities or services would cause you to use Redlands Municipal Airport more frequently?

   _____

   _____

Business/Aviation Relationships

8. Please estimate the percentage use of your aircraft:

   Business: _____%
   Personal: _____%
   Other: _____%
   Total 100%

4. Please indicate your total number of take-offs or landings per year at REI:

All 38 users responded to this question, accounting for 63 aircraft (55 single-engine, one multi-engine, 5 helicopters, and 2 ultra-light aircraft). These users reported an estimated 18,346 annual operations (9,173 takeoffs) for an average of 482 operations per aircraft or 291 operations per user. From these numbers, spending metrics can be developed as follows:

Average spending on fuel per takeoff at Redlands Municipal Airport:

- Single-Engine (52): Spent an average of $31.43 in fuel per takeoff (5,416 takeoffs)
- Helicopter (3): Spent an average of $283 in fuel per takeoff (150 takeoffs)

Total average spending per takeoff for the users that answered the question:

- Single-Engine (52): spent an average of $161 per takeoff (5,416 takeoffs)
- Helicopter (3): Spent an average of $850 per takeoff (150 takeoffs)

5. From the above question, please estimate the percentage of training flights that you conduct each year:

Of the 18,346 annual operations reported by respondents at Redlands Municipal Airport, 11,055 (60.3 percent) were training flights. The following shows the number of training flights by aircraft type (note: this does not include some operations as some aircraft owners owned multiple types of aircraft and could not be separated into each category):

- Single-engine (52): 3,980 Operations
- Helicopter (3): 29 Operations

6. Please estimate the average trip length on flights other than training flights:

Of the 18,346 annual operations reported by respondents at Redlands Municipal Airport, 7,290 were for purposes other than training flights. Breakdown by aircraft type:

- Single engine (52): 100 miles average trip length
- Helicopter (3): 60 miles average trip length

Some Respondents gave trip time instead of miles. The four respondents that responded with hours instead of miles traveled an average of 2.2 hours per takeoff.

7. What new facilities or services would cause you to use Redlands Municipal Airport more frequently?

There were 35 responses to this question. Twenty-four of these respondents indicated the need for a restaurant or food service. Seven respondents indicated the need for additional fueling options/fuel availability. Seven indicated the need for pilot supply shop. Six indicated the need for an aircraft wash facility. Six indicated the need for better/nicer facilities. Two wanted more choice in FBO's on the field. Two indicated a need for more aircraft hangar storage.

Other needed facilities and services mentioned were: fire support, fully certified mechanics, radio shop, more T-hangars or tie-downs, internet availability, property development, runway and taxiway sweeping, VASI lighting, and less people using hangars for non-aviation use. One respondent indicated satisfaction with the current levels of service offerings.

8. Please estimate the percentage use of your aircraft (Total should equal 100%):

All 38 users responded to this question. They indicated that in terms of the percentage of flights flown, 53.3 percent of flights flown were for business reasons, 43.4 percent of flights flown were for personal reasons, and 3.3 percent of flights flown were for other reasons. In terms of the number of operations flown, respondents indicated that 9,774 operations were for business, 7,958 operations were for personal reasons and 612 operations were for other purposes.

9. Comments: (If applicable, please explain the importance of the business use of your aircraft to you or your business)

The following are summarized comments of Airport users:

- Regulations for aircraft storage need to be enforced
- Business is dependent on timely response to customer needs
- Intend to use Airport more if there are improvements
- Business is located on the Airport
- Redlands can become destination with Airport as a portal
- More involvement by the City would be beneficial
- Flexibility is important

Summary of Airport User Survey Results

In summary, there were several key points expressed by respondents to the Redlands Municipal Airport User Survey:

- A total of $886,393 was spent by 37 Redlands Municipal Airport users on their aircraft in 2015.
- Thirty-eight Airport users reported an estimated 18,346 annual operations at Redlands Municipal Airport in 2015.
- In 2015, 53.3 percent of flights flown were for business reasons (9,774 operations), 43.4 percent of flights flown were for personal reasons (7,958 operations) and 3.3 percent of flights flown were for other reasons (612 operations).
- The three main issues/comments that Airport Users reported on the survey were the need for a restaurant on the Airport, a pilot supply shop, and an aircraft wash facility.

AIRPORT EMPLOYER/BUSINESS SURVEY

The Airport Employer/Business Survey (shown on the following page) generated four responses from employers that have a location at Redlands Municipal Airport.

Redlands Municipal Airport (REI)
Airport Business Plan
EMPLOYER/BUSINESS SURVEY

Name_____Phone_____

Address_____ Email:_____

City_____ State_____ ZIP_____

Company Information

1. Type of Business Product or Service_____
2. This Business is: _____ Aviation Related _____ Non-Aviation Related _____ Partial
3. Total number of employees at this location in 2015: Full Time_____ Part Time _____

Business Aviation Activity

4. Please estimate what percent, if any, of your company's employment and sales is related to the availability of Redlands Municipal Airport:

   Employment _____% Sales _____%

5. Please describe the nature of your business dependence upon Redlands Municipal Airport, if any:

_____

_____

_____

6. If your company uses Redlands Municipal Airport, please estimate the number of aircraft flights per month: _____
7. Do any of your clients or vendors use Redlands Municipal Airport? _____ Yes _____ No
   If yes, please estimate the number of flights per month: _____
8. What new facilities or services would cause you or your clients to use the Airport more frequently? _____

_____

_____

_____

1. Type of Business Product or Service

The following businesses responded to this question:

- Flight Training School
- Flying Club
- Type Club
- Aircraft Storage/Hangar Rental

2. Is this business Aviation-related?

All four respondents to this question considered themselves to be aviation related

3. Total number of employees at this location in 2015:

Three respondents answered this question, and contribute the following employment at the Airport:

- Full-time Employees: 5
- Part-time Employees: 3

4. Please estimate what percent, if any, of your company's employment and sales is related to the availability of Redlands Municipal Airport:

Employers that were asked to attribute jobs and sales to the availability of Redlands Municipal Airport responded as follows: Three employers indicated a total of 4 full-time and 3 part-time employee positions were generated by the availability of Redlands Municipal Airport. One employer stated that 100 percent of sales were generated by the availability of the Airport.

5. Please describe the nature of your business dependence upon Redlands Municipal Airport, if any:

Airport employers indicated that they rely on the use of the Redlands Municipal Airport for:

- Intermittently basing aircraft in support of operations
- Without the Airport their business would cease
- Customers who look for flying clubs and aircraft rental

6. If your company uses Redlands Municipal Airport, please estimate the number of aircraft flights per month:

One respondent indicated that their company utilize the Airport at a rate of 90 flights per month. Another chose to give a response in the form of flight hours, indicating 70 hours per month. One respondent indicated that only two flights per month are a result of business-related activities.

7A. Do any of your clients or vendors use Redlands Municipal Airport?

Three respondents indicated that their clients or vendors use Redlands Municipal Airport, and one indicated that their clients did not.

7B. If yes, please estimate the number of flights per month:

One respondent indicated that their clients utilize the Airport at a rate of 70 hours per month. Another indicated that their clients were responsible for 100 flights per month at the Airport. One respondent indicated that only three flights per month are a result of their clients or vendors.

8/9. What new facilities or services would cause you to use the Airport more frequently? / Comments:

The following are summarized comments of Airport Employers/Businesses:

- A restaurant and pilot shop would result in more Airport use
- The Airport is in need of a more capable maintenance facility/self-maintenance covered space
- Already completely reliant on the Airport for business

AIRPORT STAKEHOLDER SURVEY

The Airport Stakeholder Survey (shown on the following page) was intended for anyone in the local community with an interest in the success of Redlands Municipal Airport, and generated four responses.

1. Suggested Airport Improvements:

The following are the summarized suggested improvements from Airport stakeholders:

- The Airport is in need of a restaurant
- A supply store would be beneficial
- Improve lobby and facilities
- Enhanced security
- Non-aviation use of aircraft hangars makes the Airport look bad
- People should have to own a plane to purchase hangar space
- Navigation equipment could use maintenance
- More hangars
- Resurface west tarmac
- General upkeep
- Better areas for flight planning, seminars, and meetings

Redlands Municipal Airport (REI)
Airport Business Plan
STAKEHOLDER SURVEY

Name_____Phone_____

Address_____ Email:_____

City_____ State_____ ZIP_____

Affiliation with the Airport: _____

Comments/Suggestions

1. Suggested Airport Improvements: _____

2. Other Comments: _____

2. Other Comments:

The following are the summarized comments from Airport stakeholders:

- Doesn't believe the City has the Airport as a priority
- Zoning issues are a concern
- Residential encroachment on Airport operations is a concern
- Fees are too high and the City is too difficult to work with
- Airport could use a plane wash rack
- The Airport needs a manager
- More maintenance staff needed
- A restaurant is long overdue

4. BASELINE FINANCIAL PROJECTIONS

THIS SECTION IDENTIFIES HISTORICAL REVENUES AND EXPENSES at Redlands Municipal Airport and projects those revenues and expenses to 2025. This projection only considers a baseline scenario with no new revenue enhancements included. This projection of financial performance is designed to answer the question, "How will the Airport perform if no significant changes are made?" However, in a later section, alternative projections of financial performance will be presented based upon Business Plan recommendations and marketing pro-formas. To address baseline projections, this section is organized as follows:

- Historical Revenues
- Historical Expenses
- Baseline Forecast of Revenues and Expenses

4.1 Historical Revenues

Redlands Municipal Airport is owned by the City of Redlands and is operated by the Quality of Life Department. Department staff oversee the administration, operation, development, improvement, and maintenance of the Redlands Municipal Airport. The Aviation Fund is a proprietary fund used to account for the operation of Redlands Municipal Airport in the City budget. As a proprietary fund of the City, the Airport reimburses the City's General Fund for use of City resources (such as information technology, payroll, purchasing, human resources etc.). In addition, the Airport also operates as an enterprise fund, where revenues generated from use are dedicated by federal, state, and local law to fund the Airport's operations, maintenance, and capital costs.

Information concerning historical revenues and expenses for the Airport was provided by the Quality of Life Department staff for fiscal years 2011 through 2015. For purposes of this analysis, the most recent five year data history was used because it represents the relevant historical financial performance of the Airport. In addition, this data is most applicable for financial forecasting because it gives some indication of the recent trends. Table 4-1 shows the historical revenue as documented in the income and revenue spreadsheets provided by the Airport. Revenues from Airport operations are derived from the following:

- ***Rental Income***: This includes revenue from three ground leases and hangar rent from 29 hangars owned and operated by the City.
- ***Fuel Flowage Fee:*** The Airport charges a fuel flowage fee of $0.02 per gallon.
- ***Tie-Down Fees***: Revenue derived from City operated Tie-downs. The Airport charges tie-down fees of $43.50 per month or an annual fee of $478.50.
- ***Gate Access Fees***: The Airport charges a $25 gate card registration fee with a $15 annual renewal.
- ***Investment Revenue:*** Revenue earned on Airport investments.
- ***Current Unsecured Taxes***: Revenue from taxes on aircraft based at the Airport.
- ***Miscellaneous Receipts***: This category captures all revenue that is not attributable to the other categories.

Table 4-1 - Historical Revenues					
Operating Revenues	**FY 2011**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**
Rental Income	$266,912	$246,966	$262,018	$199,058	$265,301
Fuel Flowage Fee	$2,233	$1,593	$1,446	$1,641	$1,711
Tie-Down Fees	$14,157	$4,931	$11,689	$9,329	$9,179
Gate Access Fees	$6,788	$6,755	$6,903	$7,375	$7,293
Investment Income	$4,633	$3,005	-$73	$2,662	$1,705
Current Unsecured Taxes	$68,098	$37,808	$41,673	$34,597	$35,225
Miscellaneous Receipts	$936	$8,036	$60	$15	$39
Total Operating Revenue	***$363,758***	***$309,093***	***$323,716***	***$254,676***	***$320,452***
Non-Operating Revenue	**FY 2011**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**
State Grants	$73,178	$0	$11,813	$20,000	$0
Federal Grants	$5,304	$307,622	$523,566	$0	$10,000
Total Non-Operating Revenues	***$78,482***	***$307,622***	***$535,379***	***$20,000***	***$10,000***
Total Revenues	**$442,240**	**$616,715**	**$859,095**	**$274,676**	**$330,452**

Also included in Table 4-1 are the non-operating revenues associated with the Airport. These revenues include capital development grants from the State and the FAA. It should be noted that non-operating revenues costs are just that – they are not generated from Airport operations. As such, in order to determine what the Airport itself is generating, the analysis will focus on and compare operating revenues with operating expenses.

In this analysis Investment Income is considered an operating revenue because funds available for investment depend on the amount of reserves the Airport can generate. With $177,214 in the Airport Fund (as of FY 2015 end) it is highly dependent on Airport operations. Current Unsecured Taxes are also included in operating revenues because those revenues are directly related to Airport operations (yearly number of based aircraft).

For purposes of the Business Plan, the ability of the Airport to generate revenues and cover operating costs is the primary concern. In this regard, surplus operating revenues can be used to pay the local share of capital development or other non-operating costs. Even if shifts or increases to the revenue base can be made, there still may be forecast shortfalls for capital improvement needs. Therefore, it is important for this Plan to anticipate the scope of financial need and present that to the City as far in advance as possible.

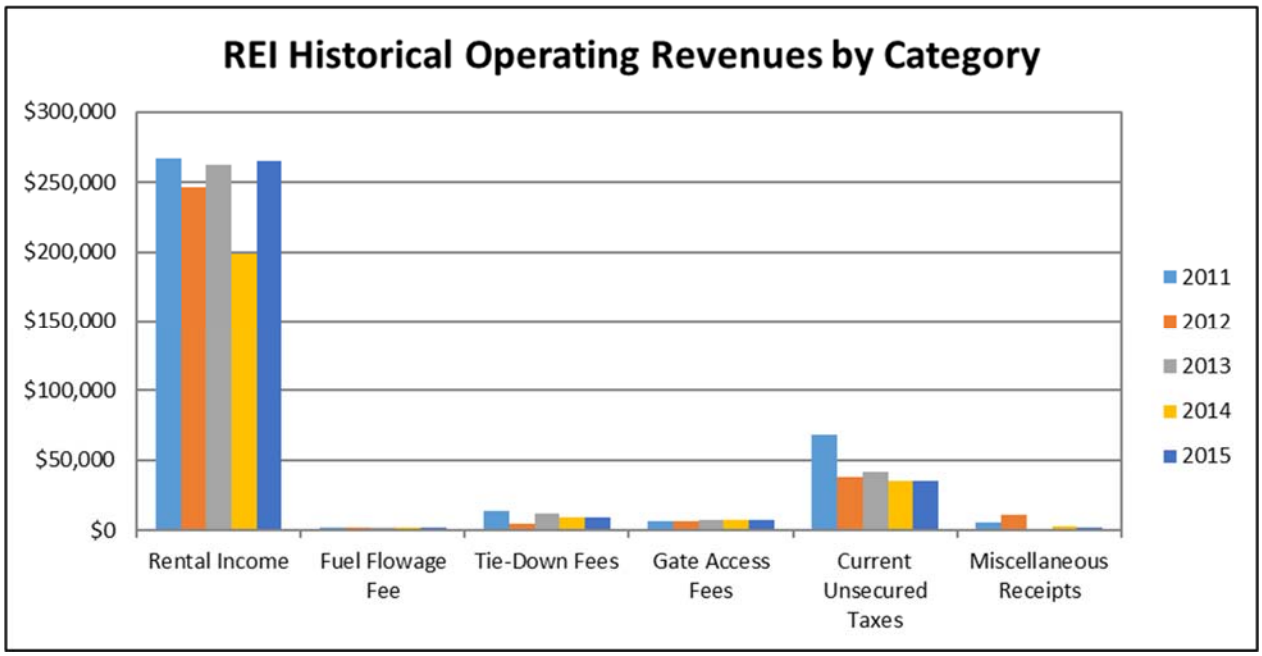


Figure 4-1 - ***Historical Operating Revenues by Category***

Rental Income is the largest source of income at the Airport and accounted for 82.8 percent of operating revenues in 2015. Current Unsecured Taxes and Tie-Down Fees are the second and third largest sources of income at 11 and 2.9 percent of operating revenues.

Charges for rent from three ground leases and hangar rent from the 29 hangars owned and operated by the City grew from $253,255 in 2011 to $265,712 in 2015 - a total increase of 4.9 percent (1.2 percent annual growth rate). When adding bad debt (non-payment) and finance charges (fees and back payment on rents), the real income related to rents at the Airport can be calculated. Table 4-2 shows the rental income breakdown at the Airport.

Table 4-2 -Rental Income: 2011-2015

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Rent	$253,255	$266,782	$249,533	$257,660	$265,712
Bad Debt	($790)	($62,573)	($19,399)	($62,832)	($1,463)
Finance Charges	$14,448	$42,758	$31,883	$4,230	$1,053
Total Rental Income	$266,912	$246,966	$262,018	$199,058	$265,301

As shown in Table 4-2, total rental income ranged from a high of $266,912 in 2011 to a low of $199,058 in 2014. Overall, Rental Income declined slightly from $266,912 in 2011 to $265,301 in 2015 - a total decrease of 0.6 percent (-0.15 percent annual growth rate). Rental Income in 2015 was 6.95 percent above the five-year of average $248,051 per year.

Current Unsecured Taxes are generated from taxes on based aircraft at the Airport. Current Unsecured Taxes declined from $68,098 in 2011 to $35,225 in 2015 - a total decrease of 48.3 percent (-15.2 percent annual growth rate). The largest one-year decrease was in 2012, with a

decrease of $30,291, or by 44.5 percent. It is believed that the relocation of two business jets caused this decrease. Current Unsecured Taxes revenues in 2015 were 18.99 percent below the five-year average.

Tie-Down Fees have fluctuated from year-to-year, ranging from a high of $14,157 in 2011 to a low of $4,931 in 2012. Tie-Down Fees declined from $14,157 in 2011 to $9,179 in 2015 - a total decrease of -35.2 percent (-10.3 percent annual growth rate). Tie-Down Fees in 2015 were 6.88 percent below the five-year average. Currently, the Airport has 11 aircraft that pay for tie-downs.

Gate Access Fees grew from $6,788 in 2011 to $7,293 in 2015- a total increase of 7.4 percent (1.8 percent annual growth rate). Gate Access Fees in 2015 were 3.85 percent above the five-year average in this category. The Airport charges a $25 gate card registration fee with a $15 annual renewal. In 2015, if all revenue were from renewals, there would be 486 renewals. Currently 901 names are on the list of gate card holders. Thus, not all gate card holders on the list renewed their cards.

From the historical financial information, operating revenues have fluctuated, ranging from a high of $363,758 in 2011 to a low of $254,676 in 2014. Overall operating revenues declined from $363,758 in 2011 to $320,452 in 2015- a total decrease of 11.9 percent (-3.1 percent annual growth rate). The five-year average of operating revenues from 2011 to 2015 was $314,339 per year. Operating revenues in 2015 were 1.94 percent above that average. Figure 4-2 shows the operating revenues category splits.

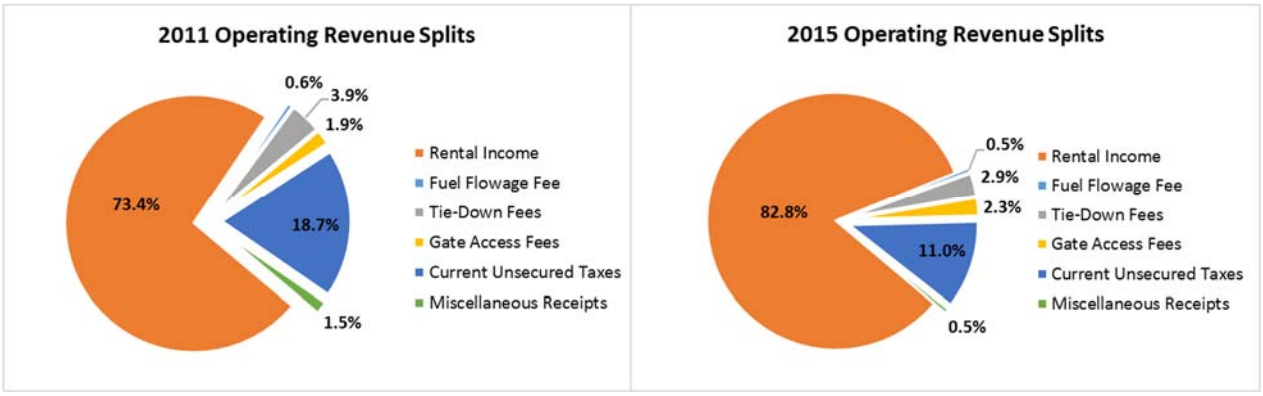


Figure 4-2 - ***Comparison of Historical Operating Revenue Category Splits***

4.2 Historical Expenses

Table 4-3 shows the historical Airport Operating Expenses for Redlands Municipal Airport from 2011 through 2015. These expenses were made up of the following cost items:

- ***Salaries and Benefits:*** This includes salaries and benefits of Airport workers.
- ***Building/Grounds Maintenance:*** Services or supplies purchased to operate, repair, maintain property owned or used by the Airport.

- ***Phone and Utilities:*** Costs for telecommunications and utilities.
- ***General Govt Service Charge***: Charges for services provided by the City.
- ***Services***: This category includes legal and accounting fees, other insurance, license & permits, info technology service charges, marketing and consultant costs.
- ***Supplies:*** This category includes such things as office supplies, repair/maintenance supplies, janitorial supplies, building supplies, small tools & equipment.

Table 4-3 - Historical Expenses

Operating Expenses	**FY 2011**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**
Salaries & Benefits	$49,980	$91,163	$81,570	$94,249	$76,972
Building/Grounds Maintenance	$19,763	$15,587	$15,978	$17,940	$6,495
Phone and Utilities	$28,483	$26,170	$28,018	$29,959	$32,983
General Govt Service Charge	$4,405	$4,429	$55,536	$56,258	$56,989
Services	$48,575	$33,242	$38,491	$37,696	$25,057
Supplies	$1,306	$419	$1,056	$2,689	$8,675
Total Operating Expenses	***$152,512***	***$171,010***	***$220,649***	***$238,791***	***$207,172***
Non-Operating Expenses	**FY 2011**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**
Capital Expenditures	$43,627	$328,477	$582,558	$0	$53,697
Interest	$7,368	$5,198	$3,717	$2,777	$2,634
Principle	$117,632	$119,802	$121,283	$122,223	$61,866
Total Non-Operating Expenses	***$168,627***	***$453,477***	***$707,558***	***$125,000***	***$118,197***
Total Expenses	**$321,139**	**$624,487**	**$928,207**	**$363,791**	**$325,369**

From the historical financial information, Operating Expenses increased from a low of $152,512 in 2011 to a high of $238,791 in 2014. In 2015, Operating Expenses decreased by $31,619 (13 percent). Overall, Operating Expenses grew from $152,515 in 2011 to $207,172 in 2015 - a total increase of 35.8 percent (8.0 percent annual growth rate). Operating Expenses in 2015 were 4.6 percent above the five-year average of $198,027.

In 2015, Salaries & Benefits was the largest expense at the Airport and accounted for 37.2 percent of operating expenses followed by general government service charges at 27.5 percent, and phone and utilities at 15.9 percent. Salaries & Benefits and General Government Service Charges have shown the largest increases over the five-year period. In 2012, the Salaries & Benefits increase of $41,182 (82.4 percent), was due to Quality of Life personnel time charged to the Airport Fund. The General Government Service Charge increase of $51,107 (1,154 percent) in 2013 was due to a Cost Allocation Study in 2011 and was adjusted for CPI in 2012 and 2013.

Total Operating Expenses have grown an average of 16 percent per year from 2011 to 2014. Operating Expenses decreased in 2015 from the previous year by (13 percent). This was mainly due to a decreases in spending levels for salaries and benefits ($17,277), services ($12,638), and ($11,445) less on building & grounds maintenance. Figure 4-4 graphically illustrates the percentage shift in operational expenses by type for comparison years 2011 and 2015.

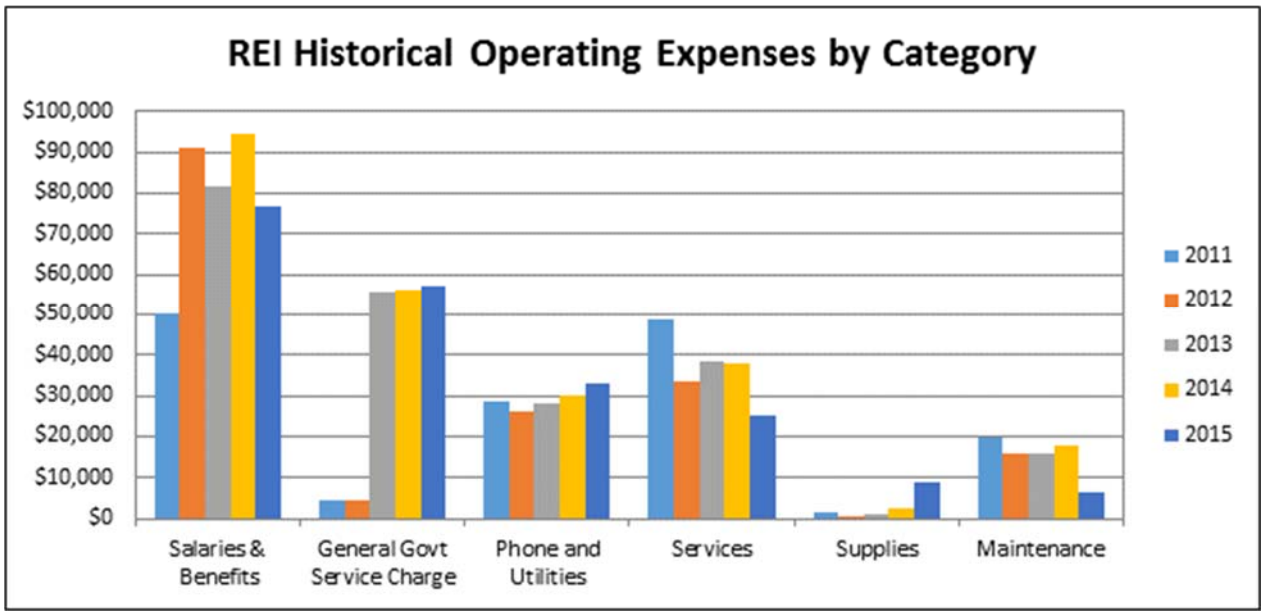


Figure 4-3 - Historical Operating Expenses by Category.

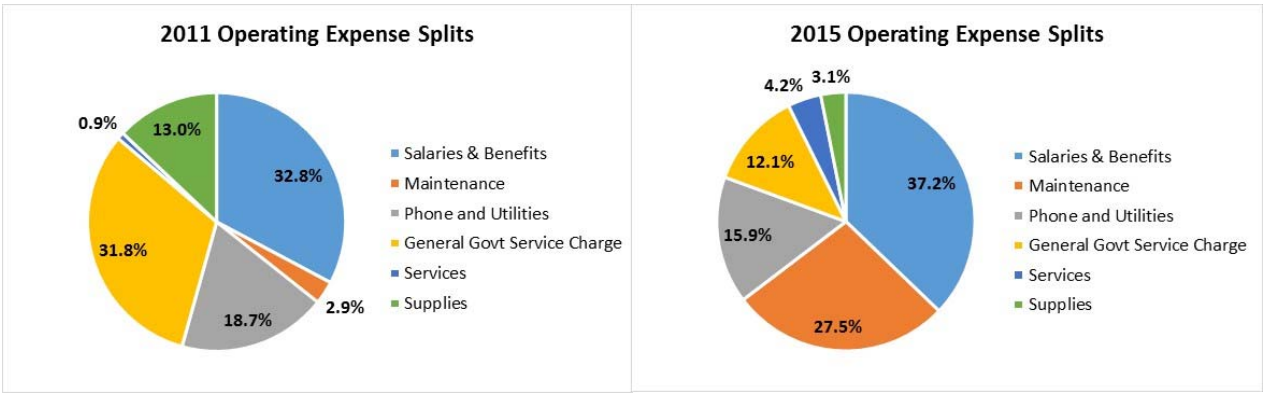


Figure 4-4 - ***Percentage Shifts in Operating Expenses***

Table 4-4 presents a summary and comparison of operating revenues and expenses. As shown, the Airport has had positive net revenues over the historical five-year period. However, net operating revenues have been decreasing. In 2015, net operating revenues were 46.4 percent lower than in 2011 - a decrease of $97,965.

Table 4-4 – Comparison of Operating Revenues & Expenses

FY Year	Operating Revenues	Operating Expenses	Operating Net Gain/(Loss)
2011	$363,758	$152,512	$211,246
2012	$309,093	$171,010	$138,083
2013	$323,716	$220,649	$103,067
2014	$254,676	$238,791	$15,886
2015	$320,452	$207,172	$113,280

Table 4-4 – Comparison of Operating Revenues & Expenses			
FY Year	Operating Revenues	Operating Expenses	Operating Net Gain/(Loss)
% Change	(11.9 %)	35.8%	(46.4%)

It is against this historical backdrop that the Baseline Forecast of revenues and expenses for Redlands Municipal Airport is developed. It should be noted that most public-use general aviation airports in the United States do not cover expenses with revenues and must be subsidized by their owners/sponsors.

4.3 Baseline Forecast of Operating Revenues and Expenses

The Baseline Forecast presents a status quo look at revenues and expenses, influenced primarily by historical activity. The projection does not consider all of the potential changes at the Airport that might occur through the implementation of this Business Plan or in the City's economy that might change the historical trend. Assumptions used in developing the Baseline Forecast included the following:

- ***Rate of Inflation/Consumer Price Index (CPI):*** Historically, the rate of inflation/CPI has been used to escalate prices when making forecasts of revenues and expenses. For this Baseline Forecast, a rate of 1.5 percent was used to forecast tie-down fees, gate access fees, investment income, and unsecured taxes.

- ***Rental Revenues:*** The Baseline Forecast utilized existing rental rates for tenant leases. These rents then were increased by individual lease escalations and escalation histories. This projection did not assume the filling of vacant hangars, and as such, serves as a true baseline or benchmark against which the revenue enhancement actions can be measured.

- ***Fuel Flowage Fee:*** It is assumed that aircraft activity and fuel sales are directly related. Thus, revenues were projected to increase by 2 percent per year throughout the period.

- ***2016 Airport Budget Input:*** The Baseline Forecast utilized the FY 2016 Airport Budget as input for General Government Service Charges and Service categories. The General Government Service Charge category was then increased by CPI for remainder of the period. For the Services category, the budget allocates $161,950 to special projects in FY2016. In order to keep this large expense from skewing the forecast, the three-year average (2013-2015) was taken and increased by CPI for 2015 and 2016 to calculate FY 2017 expense level.

- ***Extrapolation:*** Six months of current expenses for salaries & benefits, supplies, and building/grounds maintenance categories were used to extrapolate FY 2016 spending levels. Salaries & benefits were then increased by 2 x CPI throughout the period to reflect historical growth. Supplies and maintenance categories were increased by CPI throughout the period.

- ***Phone and Utilities***: Phone and Unities expense was increased at 2 x CPI throughout the

period to reflect the history.

Table 4-5 presents the Baseline Forecasts of revenues and expenses for Redlands Municipal Airport. As shown, baseline operating revenues are anticipated to grow from $320,452 in 2015 to $349,347 by 2025 - an average yearly increase of 0.87 percent and an overall increase of 9 percent for the period. Baseline operating expenses are expected to increase from $207,172 in 2015 to $287,174 in 2025 - an overall growth of 38.6 percent or 3.3 percent per year.

Table 4-5 - Baseline Forecast of Operating Revenues and Expenses												
	Historical	**Forecast**										
Operating Revenues	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**AAGR**
Rental Income	$265,301	$266,895	$272,474	$275,492	$275,554	$275,554	$275,873	$281,989	$284,893	$285,222	$285,288	0.73%
Fuel Flowage Fee	$1,711	$1,745	$1,780	$1,816	$1,852	$1,889	$1,927	$1,965	$2,004	$2,045	$2,085	2.0%
Tie-Down Fees	$9,179	$9,316	$9,456	$9,598	$9,742	$9,888	$10,036	$10,187	$10,340	$10,495	$10,652	1.5%
Gate Access Fees	$7,293	$7,402	$7,513	$7,626	$7,741	$7,857	$7,974	$8,094	$8,216	$8,339	$8,464	1.5%
Investment Income	$1,705	$1,730	$1,756	$1,783	$1,809	$1,836	$1,864	$1,892	$1,920	$1,949	$1,978	1.5%
Current Unsecured Taxes	$35,225	$35,753	$36,289	$36,834	$37,386	$37,947	$38,516	$39,094	$39,680	$40,275	$40,880	1.5%
Miscellaneous Receipts	$39	$0	0	$0	$0	$0	$0	$0	$0	$0	$0	
Total Operating Revenues	***$320,452***	***$322,842***	***$329,269***	***$333,147***	***$334,083***	***$334,970***	***$336,190***	***$343,221***	***$347,053***	***$348,325***	***$349,347***	***0.87%***
Operating Expenses	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**AAGR**
Salaries & Benefits	$76,972	$84,864	$87,410	$90,032	$92,733	$95,515	$98,381	$101,332	$104,372	$107,503	$110,728	3.7%
Building/Grounds Maintenance	$6,495	$17,210	$17,468	$17,730	$17,996	$18,266	$18,540	$18,818	$19,101	$19,387	$19,678	11.7%
Phone and Utilities	$32,983	$33,972	$34,992	$36,041	$37,123	$38,236	$39,383	$40,565	$41,782	$43,035	$44,326	3.0%
General Govt Service Charge	$56,989	$57,274	$58,133	$59,005	$59,890	$60,789	$61,700	$62,626	$63,565	$64,519	$65,487	1.4%
Services	$25,057	$196,204	$34,768	$35,290	$35,819	$36,356	$36,901	$37,455	$38,017	$38,587	$39,166	4.6%
Supplies	$8,675	$6,813	$6,915	$7,018	$7,124	$7,231	$7,339	$7,449	$7,561	$7,674	$7,789	-1.1%
Total Operating Expenses	***$207,172***	***$396,337***	***$239,686***	***$245,117***	***$250,685***	***$256,393***	***$262,245***	***$268,245***	***$274,397***	***$280,706***	***$287,174***	***3.32%***
Net Operating Revenues (Loss)	**$113,280**	**($73,495)**	**$89,583**	**$88,030**	**$83,398**	**$78,577**	**$73,945**	**$74,976**	**$72,656**	**$67,619**	**$62,173**	**-5.8%**

4.4 Non-Operating Expenses

Non-operating expenses are those costs not generated by the operation of the Airport. These costs include capital expenditures and debt service payments (Table 4-6). Capital spending is based primarily on the Airport's infrastructure development needs and its ability to secure grants and program improvements. These funds vary widely from year to year and will be forecast using the historical five-year average of spending in this category.

Table 4-6 - Grants and Capital Spending

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Federal and State Grants	**$78,482**	**$307,622**	**$535,379**	**$20,000**	**$10,000**
Capital Expenditures	($43,627)	($328,477)	($582,558)	$0	($53,697)
Net	**$34,855**	**($20,855)**	**($47,179)**	**$20,000**	**($43,697)**

Over the five-year period, the Airport averaged $11,300 per year in capital expenses that were not immediately reimbursed by federal and state grants. For the future, the local share of the Airport Capital Improvement Program (ACIP) are anticipated to average $16,700 annually (Table 4-10).

Also included in non-operating expenses is the debt service for a loan obtained in 2003 from the City's Solid Waste Enterprise (Table 4-7). The current debt balance is $960,930 (end of FY 2015). The Airport has made average annual payments of approximately $119,000 since 2007 and is scheduled to pay an average of $89,000 over the life of the loan. In 2015, the Airport only paid half of its usual payment.

Table 4-7 - Airport Historical Debt Payments

Fiscal Year	LAIF Interest Rate	New Principal	Interest	Payment	Total Outstanding
2003	2.17	$685,128	$0	$0	$685,128
2004	1.53	$44,818	$10,448.20	$41,234	$699,160
2005	2.18	$156,387	$15,259	$15,390	$855,416
2006	3.84	$935,300	$32,848	$28,380	$1,795,184
2007	5.11	$0	$91,734	$128,000	$1,758,918
2008	4.37	$0	$76,909	$130,000	$1,705,827
2009	2.18	$0	$37,230	$125,000	$1,618,057
2010	0.66	$0	$10,598	$125,000	$1,503,655
2011	0.49	$0	$7,368	$125,000	$1,386,023
2012	0.38	$0	$5,198	$125,000	$1,266,220
2013	0.30	$0	$3,799	$125,000	$1,145,019
2014	0.24	$0	$2,777	$125,000	$1,022,796
2015	0.26	$0	$2,634	$64,500	$960,930

When the non-operating expenses are added to the Baseline Forecast of operating revenues and expenses, the total or net deficit that must be made up by sources other than Airport-generated revenues is quantified. Table 4-8 presents the net deficits projected for each of the forecast years for the Baseline Forecast of Airport financial performance.

Table 4-8 - Baseline Net Deficit				
Year	Operating Revenues	Operating Expenses	Non-Operating Expenses	Net Gain (Deficit)
2015	$320,452	$207,172	$108,197	$5,084
2016	$322,842	$396,337	$157,900	($231,395)
2017	$329,269	$239,686	$129,600	($40,017)
2018	$333,147	$245,117	$129,600	($41,570)
2019	$334,083	$250,685	$129,600	($46,202)
2020	$334,970	$256,393	$122,900	($44,323)
2021	$336,190	$262,245	$129,600	($55,655)
2022	$343,221	$268,245	$129,600	($54,624)
2023	$347,053	$274,397	$129,600	($56,944)
2024	$348,325	$280,706	$94,945	($27,326)
2025	$349,347	$287,174	$16,700	$45,473

* * * * * * *

The results of this Baseline Forecast indicate that under the status quo scenario, where no new revenue-generating strategies are undertaken and no negative economic impacts are considered, Redlands Municipal Airport will have positive operating revenues from 2017-2025. When debt service and capital expenditures are included, the Airport will only be able to cover half of previous debt payment levels (Table 4-9). In the next section of this Business Plan, a set of strategic initiatives will be examined that are anticipated to increase aviation activity and improve the financial performance of the Airport.

Table 4-9 - Airport Net Revenues at Lower Debt Payment[1].						
FY	Operating Revenue	Operating Expenses	Non-Operating Expenses	Net Gain (Deficit)	Debt Outstanding	Airport Fund
2015	$320,452	$207,172	$108,197	$5,084	$960,930	$177,214
2016	$322,842	$396,337	$95,793	($169,288)	$913,821	$7,926
2017	$329,269	$239,686	$67,493	$22,090	$866,707	$30,016
2018	$333,147	$245,117	$67,493	$20,538	$819,577	$50,554
2019	$334,083	$250,685	$67,493	$15,906	$772,422	$66,460
2020	$334,970	$256,393	$60,793	$17,785	$725,228	$84,244
2021	$336,190	$262,245	$67,493	$6,452	$677,984	$90,697
2022	$343,221	$268,245	$67,493	$7,483	$630,674	$98,180
2023	$347,053	$274,397	$67,493	$5,163	$583,283	$103,343
2024	$348,325	$280,706	$67,493	$127	$535,794	$103,470
2025	$349,347	$287,174	$67,493	($5,320)	$488,187	$98,150

[1]Assumes the Airport will pay off the loan by 2035- $50,800 debt payment per year.

Table 4-10 – Redlands Municipal Airport ACIP

Redlands Municipal Airport
Capital Improvement Project Summary
Fiscal Year(s) 2016-2020

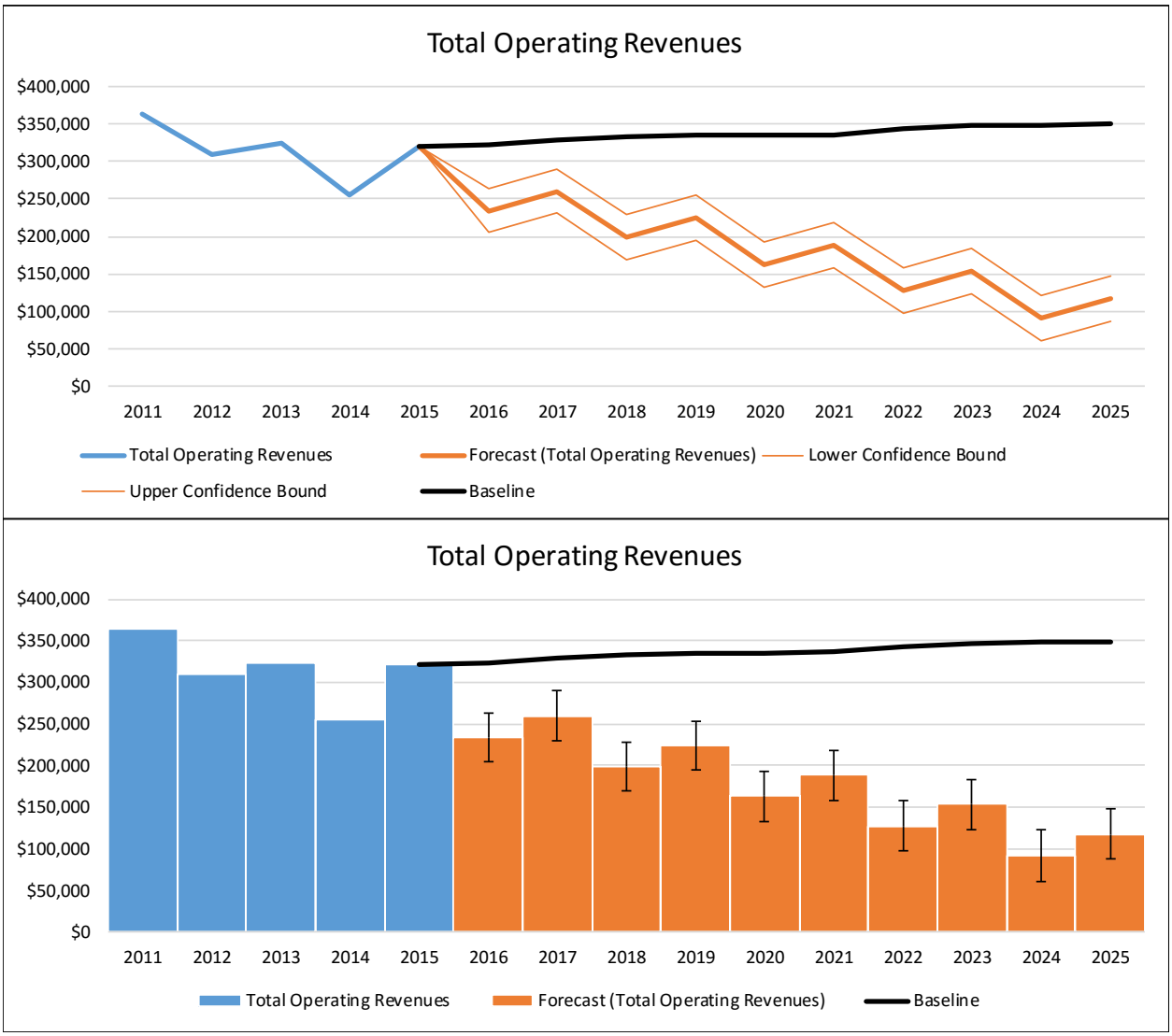
	Project	Funding Source	FY2016	FY2017	FY2018	FY2019	FY2020	Total
1	Lighting and Signage Plan	REI(F)	$45,000					$45,000
	-Phase 1	FAA(E)	$400,000					$400,000
		FAA(D)						$0
		State						$0
		Other						$0
		Total	$445,000	$0	$0	$0	$0	$445,000
2	Lighting and Signage Plan	REI(F)		$16,700				$16,700
	-Phase 2	FAA(E)		$150,000				$150,000
		FAA(D)						$0
		State						$0
		Other						$0
		Total	$0	$166,700	$0	$0	$0	$166,700
3	Lighting and Signage Plan	REI(F)			$16,700			$16,700
	-Phase 3	FAA(E)			$150,000			$150,000
		FAA(D)						$0
		State						$0
		Other						$0
		Total	$0	$0	$166,700	$0	$0	$166,700
4	Lighting and Signage Plan	REI(F)				$16,700		$16,700
	-Phase 4	FAA(E)				$150,000		$150,000
		FAA(D)						$0
		State						$0
		Other						$0
		Total	$0	$0	$0	$166,700	$0	$166,700
5	Taxiway A2 CA TW C)	REI(F)					$16,700	$16,700
	-Design	FAA(E)					$150,000	$150,000
		FAA(D)						$0
		State						$0
		Other						$0
		Total	$0	$0	$0	$0	$166,700	$166,700
	TOTAL CIP		$445,000	$166,700	$166,700	$166,700	$166,700	$1,111,800
	FUNDING SOURCE	REI(F)	$45,000	$16,700	$16,700	$16,700	$16,700	$111,800
		FAA(E)	$400,000	$150,000	$150,000	$150,000	$150,000	$1,000,000
		FAA(D)	$0	$0	$0	$0	$0	$0
		State	$0	$0	$0	$0	$0	$0
		Other	$0	$0	$0	$0	$0	$0
		Total	$445,000	$166,700	$166,700	$166,700	$166,700	$1,111,800

FUNDING SOURCES DEFINED:

REI(F) -Redlands Airport Fund
FAA(E) -GRANT-IN-AID- Entitlement Funds
FAA(D) -GRANT-IN-AID- Discretionary Funds
State
Other

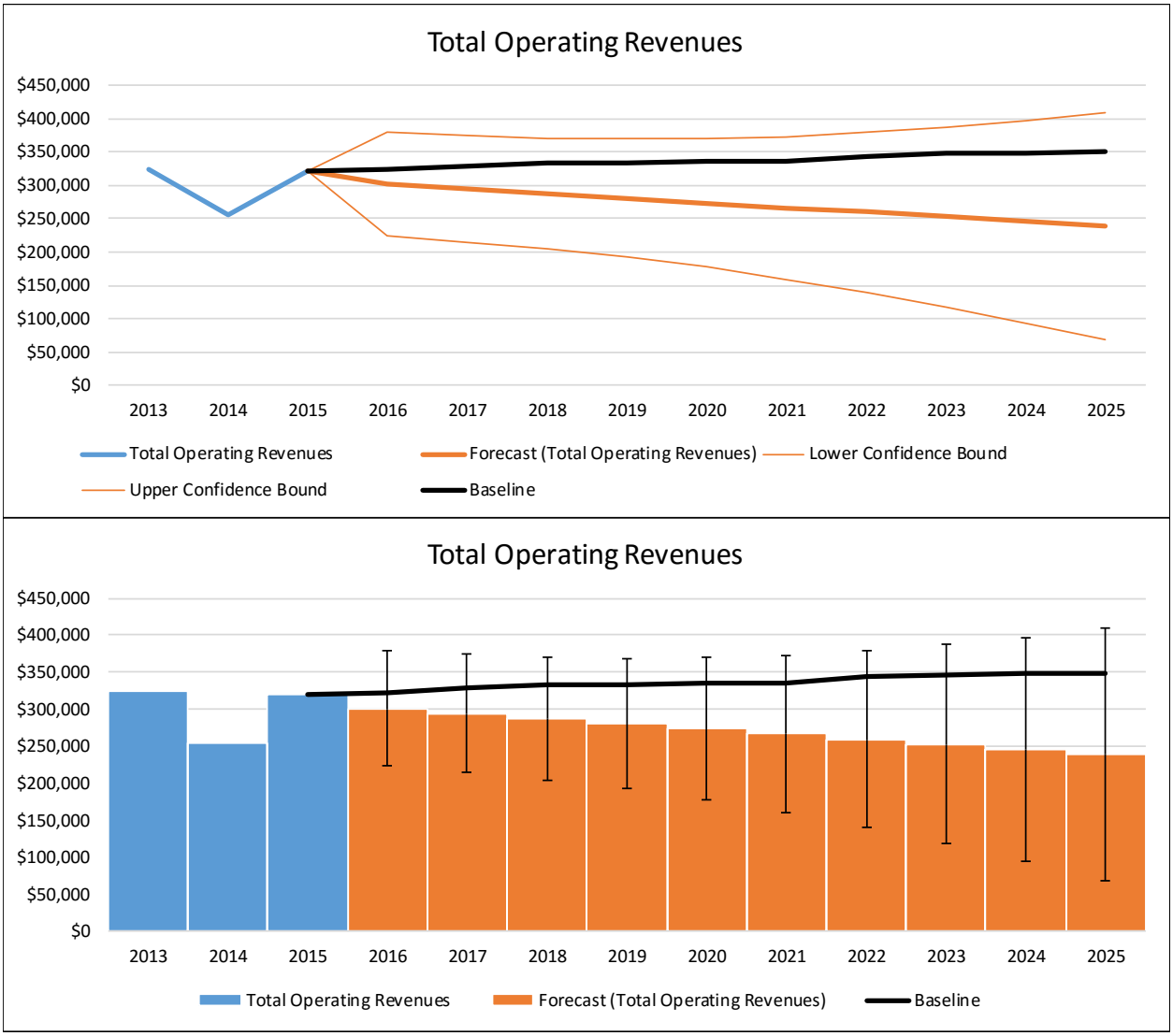
Appendix 4A:
Trend Lines vs. Baselines

Five Year History



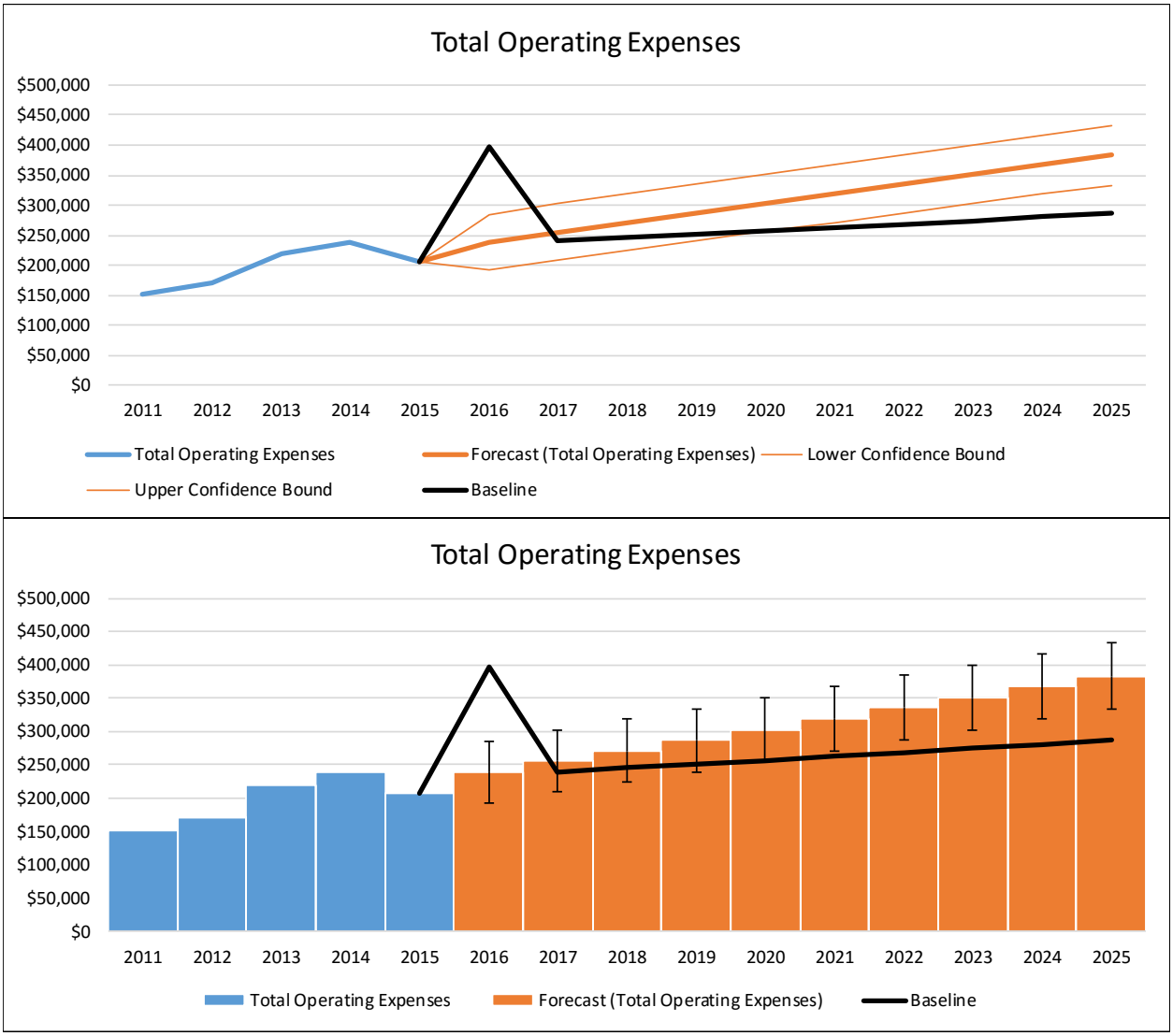
Trend Forecast based off of 5 years of historical data: Trend versus Baseline

Three-Year History



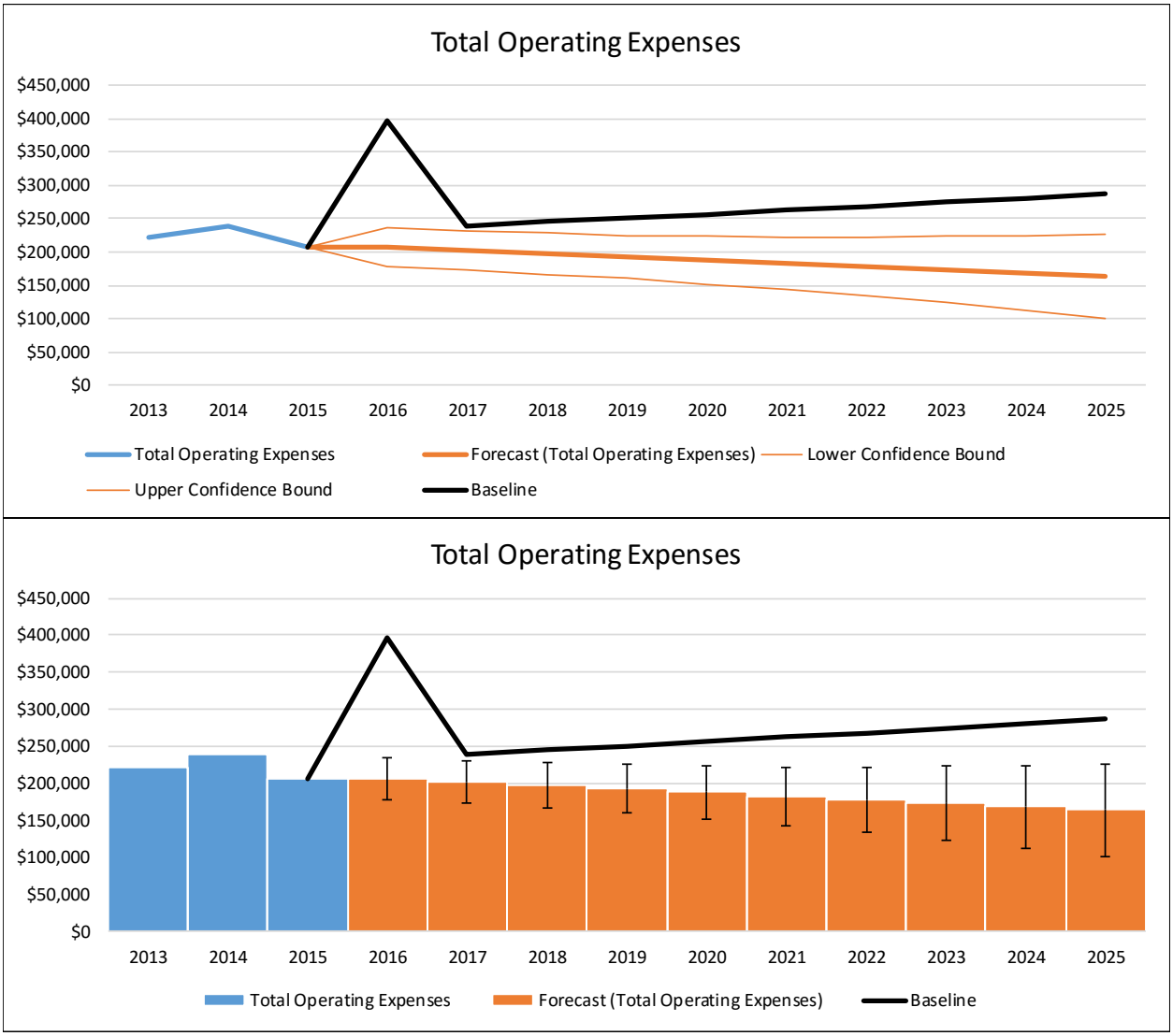
Trend Forecast based off of 3 years of historical data: Trend versus Baseline

Five-Year History



Trend Forecast based off of 5 years of historical data: Trend versus Baseline

Three-Year History



Trend Forecast based off of 3 years of historical data: Trend versus Baseline

5. BUSINESS PLAN ALTERNATIVES

THIS SECTION OUTLINES VARIOUS ALTERNATIVES THAT ADDRESS specific issues and needs of Redlands Municipal Airport (REI) that may be implemented to ultimately increase aviation activity and financial performance for the Airport. Through a collaborative SWOT Analysis and industry research, the planning effort identified eight initial options, or alternatives, that should be considered in order to improve the Airport's position from a business perspective. This initial task focused on a number of different segments:

- Airport Branding
- Flight School/Partnering with Educational Institutions
- Hangar Development
- Airport Events
- Attraction of SASOs and Aviation Support Businesses
- Increased Business Aviation Use
- Non-Aviation Land Development
- Rates and Charges Adjustments
- Fuel Sales by City

5.1 Airport Branding

In developing a unique identity for Redlands Municipal Airport within its market area, any branding process should take into account the existing brand equity. Currently, the Airport's brand sends a mixed message to Airport users and stakeholders. When considering the strengths of the Airport and its natural brand, several factors come to mind:

- An Airport Community that is very much like a family.
- Extensive Aircraft Training activity that characterizes the Airport
- An Airport that has the only FAA authorized aerobatics box within the greater Los Angeles Airspace.
- A growing and popular activity center in the Airport area – Hangar 24 Craft Brewery, Athletic Complex, and Industrial property.

While the City is moving to increase its visibility within the Airport user community, there are still signs that the communication between the Airport Advisory Board and the City Council is not at the level desired by the Advisory Board.

From an appearance standpoint, the Airport is undergoing some cosmetic changes, with new paint at the terminal building and the intent to paint some of the hangar facilities. Of those, the City's T-hangars are in greatest need of new paint. In addition, inoperative aircraft should be moved off of the airport operations area. Thus, prior to initiating those changes, a comprehensive branding plan is needed, which will dictate color schemes, improvements to entrance facades, street access, and the overall "look" of the Airport.

Other branding issues involve the current Internet presence of the Airport, as a page within the City's website. While there are numerous links from the page to documents, Airport history,

flight information, gate access cards, etc., the links stay within the City's website and do not sufficiently demonstrate the Airport's unique character and personality that set it apart from other airports.

Potential Demand

Decisions to locate at the Airport by potential users are largely influenced by the Airport's brand perception. As new infrastructure and services are added, the need to expand efforts to increase the communication of the Airport brand also increase. In so doing, there is an opportunity for based aircraft and itinerant general aviation activity to increase, and non-aviation development to be augmented.

If the Airport were to expand its runway length to 5,000 feet, it would need to introduce a new brand for the facility. Such a brand would be directed toward business aviation and the Airport's new ability to accommodate more business jet aircraft. Sometimes this involves a name change such as dropping the "municipal" designation and incorporating "regional" or "executive" instead. Other options are to highlight the Airport's geographical advantages. If the runway were lengthened, options for a new Airport name include, but are not limited to, the following:

- Redlands Regional Airport
- Redlands Executive Airport
- Inland Empire Regional Airport

If the Airport does not expand, then the brand enhancement will focus on better defining the strengths of the Airport and the vision of its future interaction with the City of Redlands. This would include an emphasis on small general aviation aircraft, flight training, and itinerant aircraft operations in the Inland Empire region. No name change would be recommended if the Airport did not expand its facilities or services.

The greatest obstacle to expanding the length of the runway is the current runway-to-taxiway separation of only 150 feet. This is the least amount of separation allowed by FAA and is adequate for only the smallest general aviation aircraft (A-I). There really is no room to move this separation to 240 feet, which would allow for regular use by B-II aircraft (business jets). In addition, the most recent Airport Master Plan does not recommend a runway extension. Thus, in all likelihood, the current runway length will also be the future runway length. For this plan, branding efforts will assume no expansion to these existing facilities.

Online Presence

Competition among area airports includes digital marketing efforts. In this regard, an effective online presence can be used to promote brand awareness. Listed below are the branding efforts that airports within the service area of Redlands Municipal Airport have put into their online presence.

Redlands Municipal Airport

- Dedicated pages on City Website (10 pages)

- No airport-run social media

San Bernardino International

- Independent responsive website (over 55 pages)
- No airport-run social media

Flabob Airport

- Independent website (17 pages)
- Facebook: 1,266 likes, 219 reviews (4.4-star average)
- Twitter: 51 followers

Riverside Municipal

- Dedicated pages on City Website (17 pages)
- Facebook: 556 likes, 12 reviews (4.8-star average)
- Twitter: 1,603 followers

Big Bear City Airport

- Independent website (37 pages)
- Facebook: 833 likes, 10 reviews (4.7-star average)
- Twitter: 6 followers
- YouTube: 4 subscribers
- Pinterest: 18 followers
- Flickr: 5 followers

Hemet-Ryan Airport

- Independent website (17 pages)
- No airport-run social media

Ontario International

- Website dedicated to LAX, ONT, and VNY (100+ pages)
- Facebook: 2,633 likes, 76 reviews (4.4-star average)
- Twitter: 63 followers

Chino Airport

- Dedicated pages on County Website (12 pages)
- Facebook: 2,896 likes, 290 reviews (4.5-star average)

Corona Municipal

- One-page independent website
- No airport-run social media

Apple Valley Airport

- Dedicated pages on County Website (9 pages)
- No airport-run social media

Banning Municipal Airport

- One dedicated page on City Website
- No airport-run social media

Financial Factors

While branding may not add directly to the bottom line, it will influence it indirectly. Decisions to locate at or use the Airport will be made, based upon the Airport's perceptible brand. As such, the development of a unique selling point and identity in the market for Redlands Municipal Airport can be beneficial to the future growth of the Airport. From a financial

standpoint, enhancing branding efforts would incur upfront costs. A number of initiatives that can be funded including: an upgraded website, a new promotional brochure, and a marketing campaign including direct mail, printed materials, and video/multimedia.

5.2 Flight School/University or College Partnering

As one of the branding themes for Redlands Municipal, pilot training is one means of building activity at general aviation airports is the attraction of more flight school or flying club operations. The Airport has two flight schools; Aero Tech Academy and Airwest Helicopters. Another group on the Airport is the Redlands Flying Club, which permits members to use Club-approved Certified Flight Instructors for flight training.

Many flight schools team with area colleges and technical schools to provide flight training and/or aircraft mechanics training programs. In this regard, the best potential option for REI would be to team with San Bernardino Valley College (SBVC) to determine if a program could be initiated. Currently, the College offers a number of technical career programs including Aviation Maintenance Technician and Avionics Technology. In addition, the College is looking to offer Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) ground school training for those desiring to become pilots. Therefore, it is believed that these aviation-oriented programs could be complemented with a pilot training program at an airport such as Redlands Municipal.

Discussions with the Aeronautics Program representative from the College indicated some interest in the possibility of expanding their curriculum to include flight training. More discussions are needed. If these talks are not fruitful, it is possible that Chaffee College could serve as an alternative. This College is less likely to provide flight training because it currently does not have any aviation curriculum. Its technical strengths are in Business & Applied Technology and Health Sciences.

Potential Demand

An estimate of the potential number of student pilots was developed for San Bernardino County to determine the overall market. Using data from 2014/2015 for the number of student pilots in California (the latest available), along with the total population, an estimate of per capita student pilot activity was made. This per capita figure was multiplied by the population of San Bernardino County to yield an average number of student pilots for the County. This assumes there is no concentration of pilots in the Inland Empire region, relative to the rest of the State (which may be a conservative estimate).

- Student Pilots in California: 12,234
- Population of California: 37.25 million
- Population of San Bernardino County: 2,035,200

Using these numbers, it was estimated that San Bernardino County would currently generate an average of 679 student pilots. If more of those pilots could be captured at Redlands Municipal Airport, it could support an additional flight school or the expansion of the existing flight schools.

Facility Needs

There are already two flight schools established at the Airport. Thus, no additional facilities would be needed. If there was an influx of new students, then the flight schools may need to acquire more aircraft and more instructors for training purposes. However, those are decisions made by private enterprise and would not require any City resources.

Financial Factors

There are several financial factors associated with flight training at a general aviation airport, including:

- ***Funding of Flight Training:*** Student pilots from colleges have access to grants and loans that are not available to other potential pilots in the general population. Thus, any partnership with San Bernardino Valley College would serve to increase potential demand and allow for greater funding for student pilots.
- ***Additional Aircraft Hangar Fees:*** If more aircraft are needed to service training demand, those aircraft would rent hangar space on the Airport.
- ***Impact on Other Airport Business:*** Flight schools increase fuel sales, hangar rentals, and aircraft maintenance activities at airports. For example, a flight school with four aircraft could add 8,000-12,000 annual aircraft operations and 16,000 to 24,000 gallons of fuel sales. The City collects $0.02 per gallon, which is only $320 to $480 per year. However, if the City begins selling fuel, they may be able to collect between $0.50 and $1.00 per gallon margin on fuel, which could be as high as $24,000 if 100 percent of this new activity were captured by the City.

Typically, a medium-size flight school can keep an aircraft maintenance operator busy. Depending upon the lease arrangement, the Airport could earn revenue from increased activity or additional space rented by the aircraft maintenance operator.

5.3 Hangar Development

There is demand and space for the development of additional conventional and T-hangars on the Airport. The Airport has ample acreage, utilities, and infrastructure to accommodate this aviation development. Discussions with Redlands Aviation indicates that there are seven or eight hangars that have non-aviation tenants. These hangars are available to *bona fide* aircraft owners and pilots who will store aircraft in them. The City has about three such hangars as well. Thus, there is room for more based aircraft prior to the development of new hangar facilities.

However, as demand increases and existing hangar facilities are filled, the City will be on more competitive footing with the Redlands Aviation and the other hangar operators in either constructing new hangars or permitting private enterprise to construct hangars on land leased at the Airport. With proper leases, those leasehold improvements will revert to the Airport, significantly increasing revenues for the City.

Potential Demand

Since the most recent Airport Master Plan, based aircraft demand has dropped from 224 in 2006 to 151 in 2016. According to the most recent FAA Form 5010 data. That is one-third of the based aircraft in 10 years. The forecast of based aircraft in the Master Plan was to reach 360 by the year 2026 – a goal that seems far out of reach at the present. The FAA's Terminal Area Forecasts show no growth of based aircraft at Redlands through the year 2040. Because of this lack of growth, it would seem that only two strategies will increase the City's potential hangar demand.

One method would be to aggressively seek additional market share in the Inland Empire region. For example, when Rialto Airport closed, two airports in the Valley were quick to purchase hangar facilities and move them to their respective airports. The number of based aircraft at Redlands increased temporarily during this period, until the aircraft owners could find hangar space at other airports. This strategy requires a constant reading of the pulse of the general aviation community.

Future hangar storage demand at Redlands Municipal Airport was estimated to include 20 T-hangars and 15,000 square feet of conventional hangar space over the next 10 years. Confirmation of this demand would be required in the form of waiting lists and pre-construction deposits for new hangar space. It is possible that additional new based aircraft are could result from new branding and marketing efforts of the City for the Airport.

Needed Additional Facilities

New hangar demand can be accommodated through a variety of methods. The primary methods analyzed in this plan include the following:

- City Development of New Hangars
- Ground Lease with Private Hangar Developer
- Combination of City and Private Hangar Development

These methods will be discussed in detail in the Recommended Plan. They will be used in evaluating potential net revenues to the Airport, based upon demand forecasts through the year 2025. For the period, an estimated need of 35,000 square feet of additional hangar space is predicted. There is adequate space for this development in areas along the existing flight line, particularly on the large west side apron area.

Financial Factors

For this analysis, it was assumed that the site preparation for the hangar development, the construction of the hangars themselves, and the need for additional hangar apron or taxiways resulted in a total cost of near $100 per square foot of finished conventional hangar space. T-hangar space was slightly less expensive to construct, costing $75 per square foot. Some projects would be less expensive and some more. In total, an investment of roughly $3.0 million would be needed over the next 10 years to develop all of the hangar space projected by this analysis.

Analysis of potential hangar construction by the City, without grant assistance, indicated a difficult business model. Table 5-1 presents a pro forma showing the typical cost to develop conventional hangars and T-hangars at the Airport. The monthly costs assumed that the hangars were financed via debt - a 20-year payback at 3 percent. The Table shows how much would have to be charged just to repay the debt. As shown, the breakeven point for financing the construction over 20 years requires prices to begin at $416 per month per T-hangar unit and $6.66 per square foot per year for box hangar space. This amount does not include maintenance or any rate of return on the investment. Thus, these are the lowest rates that could be anticipated without grant funding.

Table 5-1 - County Hangar Development Model

Hangar Type	Construction Cost	Annual Debt Service	Debt Coverage
10-Unit T-hangar	$750,000	$49,914	$416/mo./unit
10,000 sf Conv. Hangars	$1,000,000	$66,552	$6.66/sf/yr.

The T-hangars would actually rent for roughly $500 to $600 per month with all utilities and other costs included. Current rates for T-hangars at Redlands Municipal Airport range between $275 and $350 per month. For the box hangars, rates would exceed $1,000 per month in order to pay off the debt service. Current rates for box hangar rentals range between $510 and $650 per month. Thus, without grant dollars to assist in the construction, the City would be hard pressed to attain market feasibility.

The other possibility would be to have private enterprise develop additional hangars. This type of development is standard at most general aviation airports and has been the method used by Redlands Municipal Airport. Table 5-2 presents the pro forma for private development of new hangars at REI.

Table 5-2 - Private Development of Hangars

	10 Unit T-Hangar	Conventional Hangar
Hangar Square Feet	10,000 s.f.	10,000 s.f.
Cost of Hangar (2/3 cost of City)	$500,000	$666,667
Term	20 years	20 years
Total Ground Lease @ $0.20/s.f. 3% annual escalation	$53,740	$53,740
Total Cost (hangar + ground lease)	$553,740	$720,407
Private Developer Breakeven	$230/Unit/month	$3.60/s.f.

5.4 Airport Events

Hangar 24 AirFest

The Airport currently is the site for Hangar 24 AirFest. This airshow event also features three bands, over 25 food vendors, and Hangar 24 craft beer. Now in its eight year, the AirFest is very popular, and is estimated to draw 15,000 or more. The 2016 event occurred May 14th. Aerial performers included:

- Patriot Jet Team – The largest civilian owned aerobatic jet team in the world.
- Vicky Benzing – Boeing Stearman
- Smoke-n-Thunder Jet Car – Piloted by Bill Braack
- Just In Time Skydivers – This team jumps with as many as 30 skydivers.
- Jon Melby – Pitts S-1-11B Muscle Bi-Plane
- Red Eagles Formation Team – Sponsored by Allegiant Air to promote safety through discipline, attention to detail, and constant striving to improve.

This event is becoming a tradition for the community and has significant public relations and goodwill value. The only downside for the Airport is that no revenue is generated directly in support of Airport operations. For example, parking is free. The admission charges go toward the Hangar 24 Charities funding – a 501(c)(3) organization.

Other Events

Other events at the Airport, such as car shows, 5K runs, radio controlled aircraft events, school and scouting group outings, etc. can be beneficial to the Airport and would not require the significant efforts that are needed to host an airshow. Educational outreach with schools should be implemented in order to draw youth to the Airport and into aviation related jobs and careers. Such an event could be coordinated with San Bernardino Valley College, if they decide to implement an aviation flight training program at the Airport.

Potential Demand

In 2015, it was estimated that there were 15,000 paying adults to Hangar 24 AirFest. For the future, this level of demand is more than adequate to ensure a successful program. Given the space on the west apron area ramp, additional spectators could be accommodated. A single-day event should be maintained until it can be proven that a two-day event is demanded by the public.

Facility Needs

The current ramp area used for Hangar 24 AirFest is significantly large and spread out so that it accommodates a crowd. With remote parking, the Airport can accommodate 15,000 to 20,000 spectators. No additional facilities are needed. However, shuttles to and from any remote parking areas would be needed for an event this size.

Financial Factors

Of the various events mentioned, AirFest is the only potential money-making operation. Because it relies upon public participation, any significant interest shown from the public can have a major impact on the financial feasibility of the event. However, ticket sales and the cost of the performers is handled by Hangar 24. Unless the Airport decided to start charging fees for auto parking and/or charged Hangar 24 a usage fee for the Airport event, there is no real financial gain for the City. For now, no fees are earned by the Airport directly from the Hangar 24 AirFest.

For the future, the City may desire to take an approach similar to a county fair, where

parking fees are charged by the owner of the property, but there is a separate ticketing process to enter the fair or ride the rides. Assuming that up to 5,000 cars show up for the event throughout the day, a $5 parking fee would generate $25,000 for the Airport. Another option would be to institute a permitting process, where a set fee for use of the Airport would be paid, similar to the renting of City Park areas for private events.

5.5 Attraction SASOs and Aviation Support Businesses

The Airport would benefit financially by the attraction of one or more Specialty Aviation Service Operators or aviation support businesses which could perform maintenance, repair, overhaul, aircraft painting, or avionics installation/repair. Aviation support businesses can also include on-airport car rental facilities, restaurants, and in some cases, even hotels. Airport users would benefit because of the convenience of these services.

Potential Demand

Currently, the Airport has an aircraft maintenance provider in Red Aero. Helicopter maintenance and service is provided by High Performance Helicopters. Aero Tech Academy provides flight training and aircraft rentals, while Airwest Helicopters provides pilot training for helicopters, along with charter, sales, and aerial crane services. Aircraft hangar and storage operators at the Airport include Redlands Aviation, Coyote Aviation, Redlands Hangar Owner Association, and the City of Redlands. Fuel service is provided by Redlands Aviation. Currently, only 100 Low Lead AvGas is available at the Airport. Jet fuel was offered at one time, however, the primary users of that fuel have moved from the Airport. As demand dwindled, it became uneconomical for Redlands Aviation to continue to offer Jet A fuel at the Airport.

From the above description, it can be seen that the Airport has almost all of the aviation amenities that most municipal airports offer to their customers. Several missing items include the availability of jet fuel, and support businesses such as a satellite rental car service, and an Airport restaurant.

Demand for jet fuel is dependent upon the customer base and a willing provider. Redlands Aviation is not interested in providing jet fuel at this time. At one time, the hangar property that the City now owns included a fueling island. It is possible that in the future, the City may desire to get into the fuel selling business. If so, the possibility of providing jet fuel could be examined by the City.

The need for a restaurant was voiced at every meeting that the consult team has held with the City and Airport stakeholders. Because the north side of the City, which includes the Airport area, is developing, a good restaurant has an excellent chance of success. As with many airport restaurants, the ability to draw people in from the community is essential to its profitability and lasting success. It is believed that the location of Hangar 24 Craft Brewery would benefit a restaurant at the Airport through dual use.

Rental cars or courtesy cars at a general aviation airport are important for business aviation customers and itinerant visitors. At this point, that portion of the business model at the Airport is not developed adequately to support more than two or three cars at a satellite site. It is questionable

as to whether or not a rental car company would entertain such a low volume operation. Currently, Enterprise Rental Car will deliver a car to the Airport from its offices, which are 4.5 miles away. As always, there are issues with hours of operation and convenience, which are improved with an on-airport location for the rental car facility.

Facility Needs

For the City to provide fuel, it would have to rehabilitate or reconstruct its island fueling station. This would likely involve the development of above-ground tanks for both Jet A and 100 Low Lead AvGas. The City would be competing against Redlands Aviation for sales, but the competition may lower prices, which would increase demand.

For aircraft maintenance, Red Aero Aircraft Maintenance and Repair SASO has enough space to adequately accommodate aircraft maintenance demand for non-turbine aircraft at the Airport over the next 10 years. Discussions with the owner indicate that current margins are low and cannot support more than a single aircraft mechanic, unless and until business jet aircraft begin to base at the Airport. Thus, no additional hangar space is needed to accommodate the forecast demand for maintenance.

To accommodate a restaurant at the Airport, there are several options. One is to use the existing terminal building which houses the Redlands Aviation offices. Another is to construct new facilities on the Airport, while a third option is to construct facilities adjacent to the Airport. Restaurant dimensions for a facility of this type can range from 750 square feet to 2,000 square feet, depending upon the number of seats desired (from 40 to 100).[1]

A satellite rental car facility would require between two and five parking spaces and would share the counter space with the FBO. In fact, the FBO would administer the paperwork for a commission on the car rentals. Thus, no additional space would be needed for that amenity.

Financial Factors

If the City desired to enter the aviation fueling business, it would require an investment in fuel storage and dispensing facilities. For two 12,000-gallon above ground tanks, the cost could range from $250,000 to $500,000 depending upon the site preparation and engineering costs. For a self-serve operation, there are minimal costs for personnel.

Financial factors associated with the location of a new restaurant on the Airport are dependent upon its location. If the City's terminal building is used, rent from that space may flow to the City (depending upon how the lease with Redlands Aviation is interpreted). If other non-aviation property on the Airport were leased for restaurant construction (much less likely), then those revenues could also flow to the City unless the property were under the control of Redlands Aviation. If a restaurant were developed on property already controlled by others, then the City would not participate in those revenues.

[1] Robin McClain, "How Much Room Do I Need for a Restaurant?" eHow.com; and Cyndi Perkins "What is the National Average Size of a Restaurant Kitchen?" AZCentral.com (Demand Media, Inc., 2016).

Most airport restaurants operate on the edges of profitability and don't contribute significant rental fees to their airports' sponsors. However, restaurants are considered a positive amenity and most airport sponsors are not looking for large profits. Therefore, a number of airports use a minimum fee plus a percentage of gross revenues for rental charges. This way, the restaurant only has to pay the minimum, unless revenue is being generated above those amounts. The City would share in both the risk and the reward. Sliding scales are generally used for the percent-of-gross types of leases.

For rental cars, financial factors for a satellite rental car service are insignificant at most small airports. However, court cases have permitted the collection of revenues from rental car agencies that service an airport, even if they are not based on the airport. This even has been applied to Uber drivers who pick up passengers at airports.

5.6 Increased Business Aviation Use

Business aviation is forecast to grow faster than any other aviation segment in the United States. Business aircraft constitute a stable growth segment of general aviation that would supplement marketing objectives for the Airport. In addition to natural growth based aircraft growth, there is an opportunity to attract small and very light jet operations and tenants from competing airports in the service area. Key selling points involve convenience or price factors at the Airport that may contribute to a decision to move to REI.

Potential Demand

There are 53 based jets in the service area surrounding Redlands Municipal Airport, representing 3.2 percent of the total based aircraft in the area. Two of these jets are listed as based aircraft at Redlands. Discussions with the Redlands Aviation indicate that both of these jets have recently moved off the Airport. Although business jets expend more money than other aircraft types, there is significant business activity among multi-engine, propeller aircraft. These aircraft are typically used for business purposes because of their high performance characteristics, relative to single engine aircraft. There are 148 multi-engine propeller aircraft based at service area airports (9 percent of the total), of which, seven are based at Redlands Municipal.

Because of the limited runway length at Redlands Municipal, it is believed that the primary increase in business aviation there would likely come from multi-engine propeller aircraft. The FAA's Terminal Area Forecasts indicate that the total number of based aircraft at these airports (currently 1,642 aircraft) will increase by 75 aircraft over the next five years and 148 aircraft over the next 10 years. Assuming that twin-engine aircraft will continue to make up 9 percent of aircraft in the service area, approximately seven multi-engine, propeller aircraft can be expected to be introduced within the next five years, and a total of 13 will be based in the service area within the next 10 years.

While one or two small business jets could be expected to base at REI in the future, it is possible that up to four additional multi-engine, propeller aircraft could be attracted to the Airport. For the future, it is assumed that two small business jets and four multi-engine aircraft will base at the Airport for a total of six new based business aircraft over the next 10 years.

Needed Additional Facilities

The current runway length can accommodate most propeller aircraft and some small sized jet aircraft. The primary facilities needed to accommodate more business aviation demand are hangars at the Airport. Typically, to accommodate additional multi-engine propeller aircraft and small sized jet aircraft, conventional hangar types between 2,000 and 5,000 square feet would be needed. Total new hangar space in five years would be roughly 7,000 square feet, with an additional 8,000 square feet in the five-to-ten-year phase.

Currently, the business aircraft service amenities at Redlands Municipal Airport are limited and do not include catering, lavatory services, ground power unit, or 24-hour operation availability.

Financial Factors

The attraction of business aviation will involve the ability to fund development of hangar space at the Airport. This can be through grants, low interest loans, or private enterprise development. Depending upon whether or not the City or private enterprise funds the construction of new hangars, the revenue streams will differ significantly.

- ***Privately Funded:*** For privately funded hangar development, airport revenue will increase based on a negotiated land lease. Currently, ground lease rates at the Airport amount to $0.12 per square foot. It is believed that these rates are low, relative to other ground lease rates at airports in the service area.
- ***City Funded:*** Hangar development projects funded by the City, while significantly increasing the direct costs for the Airport, also allow the Airport to charge significantly higher rental rates. Currently, the Airport charges $510-$650 per month for box hangars that the City owns.

The addition of more business aviation aircraft brings an increase in fuel sales for the Airport. While individual utilization rates will vary, we estimate the local fuel consumption for small business jet aircraft such as the Citation Mustang to range from 20,000 to 30,000 gallons annually. For multi-engine propeller aircraft, such as the King Air 200, local fuel consumption can be as high as 15,000 gallons per year. Fuel flowage fees to the Airport can be estimated from total projected fuel sales.

5.7 Non-Aviation Land Development

The Airport has very little excess acreage to accommodate non-aviation related industrial or commercial development. Thus, any potential use other than aviation must be passive in nature and must be able to fit on irregular shapes of available land. This would include agricultural uses and possible solar energy generation. Potential Airport property that could be used for non-aviation activity is located on the north and west sides of the Airport. It is believed that more than 30 acres of land could be available for passive uses.

Agricultural Uses

The City of Redlands owns and manages orange groves within the City limits. However in recent years, agricultural uses of airport property have been discouraged by FAA because of its attraction of wildlife.[2] The FAA recommends a 5,000-foot lateral separation of the Airport Operations Area from agricultural land uses (such as hay making) for propeller aircraft-capable airports. This cannot apply to property not controlled by the Airport, but it does apply to Airport-owned land. Thus, there are no recommended agricultural uses of non-aviation Airport property.

Solar Farm

One of the only potential non-aviation land uses that could produce revenue may be solar energy generation. In this regard, the California Solar Initiative (CSI) is the solar rebate program for California consumers that are customers of the investor-owned utilities - Pacific Gas and Electric (PG&E), Southern California Edison (SCE), San Diego Gas & Electric (SDG&E). Together with the rebate program for New Solar Homes and rebate programs offered through the dozens of publicly owned utilities in the state - the CSI program is a key component of the Go Solar California campaign for California. This program funds solar on existing homes, existing or new commercial, agricultural, government and non-profit buildings. This program funds both solar photovoltaics (PV), as well as other solar thermal generating technologies. This program is sometimes referred to as the CSI general market program.

The CSI program had a total budget of $2.167 billion between 2007 and 2016 and a goal to install approximately 1,940 MW of new solar generation capacity.[3] Unfortunately, all of these funds have been exhausted. However, because of its popularity, it is likely that future State budgets will include incentives for solar energy generation.

In addition to the capital incentives, there are operational incentives that come with net energy metering, or "NEM." NEM is a special billing arrangement that provides credit to customers with solar PV systems for the full retail value of the electricity their system generates. Under NEM, the customer's electric meter keeps track of how much electricity is consumed by the customer, and how much excess electricity is generated by the system and sent back into the electric utility grid. Over a 12-month period, the customer has to pay only for the net amount of electricity used from the utility over-and-above the amount of electricity generated by their solar system (in addition to monthly customer transmission, distribution, and meter service charges they incur). Customers that generate a net surplus of energy at the end of a twelve-month period can receive a payment for this energy under special utility tariffs, which may vary by utility company.

For 1 gigawatt hour per year, approximately 3.7 acres of solar farm is needed (actually 2.8 acres of panels, but the total area is 3.7 acres). If an energy company such as SCE would be willing to pay 12 cents/kilowatt hour, that translates into earning power of $32,400 per acre of solar farm per year, before costs. Some power companies in other states will actually construct the solar farm and pay $0.02 per kilowatt hour for a net of $5,400 per acre to the sponsor.

[2] See FAA Advisory Circular 150/5200-33B - **Hazardous Wildlife Attractants On or Near Airports**
[3] Source: http://www.gosolarcalifornia.ca.gov/about/csi.php

Figure 5-1 shows alternative locations for potential solar panel farms. If only the seven-acre tract on the west side is used, that could generate $226,800 annually. If the north side area (25 acres) is included, a total of $1.04 million could be generated annually. However, this income, plus any cash incentives available, must pay for the construction of the solar farm. These facilities can cost up to $500,000 per acre. Thus, the feasibility of constructing a solar panel farm is tied directly to the monetary incentives available for Redlands.

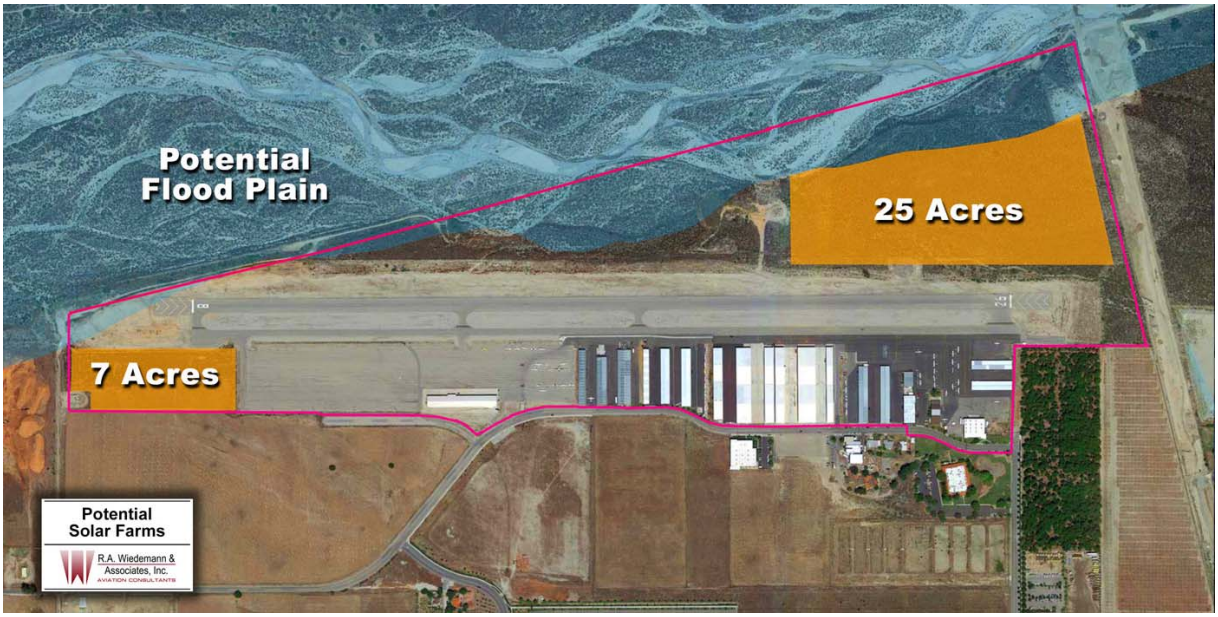


Figure 5-1 – ***Potential Solar Farm Locations***

Other Land Uses

Given the relatively tight operating environment at the Airport, there simply is not enough room for non-aviation land uses other than those already mentioned (including an Airport restaurant). Land uses adjacent and outside of Airport property are best suited to agricultural, light industrial, commercial, sports/recreational, or vacant. The approved Airport Land Use Compatibility Plan for Redlands dates from 2003. That plan shows Redlands Municipal Airport surrounded by industrial, commercial, residential, and open space. Given the changes over the years, that Plan should be updated.

5.8 Rates and Charges Adjustments

One method to potentially increase revenues is to examine rates and charges at the Airport and adjust those to be competitive with the regional market prices. There are two areas where the City could adjust prices and remain competitive:

- ***Fuel Flowage Fee:*** The Airport charges a fuel flowage fee of $0.02 per gallon. Average fuel flowage fees range from $0.07-$0.10 per gallon. In addition, all fuel used at the Airport should be subject to this fee, including tenants who have their own tanks.
- ***Land Lease Rates:*** Current land lease rates are $0.12 per square foot (with CPI adjustments) for the largest Airport tenant. Typical rates are closer to $0.20 per square foot.

Gate access fees of $25, with a $15 renewal are reasonable, as are tie-down fees of $43.50 per month. City-owned hangar fees for both the small are large hangars range from $275 to $650 per month. However, lease escalations have not been enforced, at least from 2010. With monthly lease terms, the concept of escalating lease rates should be visited once the tenant has occupied the premises for 12 consecutive months.

5.9 Fuel Sales by City

Another option to increase future revenues would be for the City to begin offering self-service fueling. Currently, Redlands Aviation is the only fuel provider at the Airport. Prior to the City acquiring their hangars, there was a fueling island attached to the property. Because of environmental and other issues, that fueling system was shut down.

Potential Demand

Based upon the current fuel flowage fees, about 85,000 gallons of Avgas are sold each year at Redlands Municipal Airport. It is believed that an aggressive pricing policy could increase that number to more than 100,000 gallons. Assuming that the City could attract at least half of the fuel sales at the Airport, it is possible that roughly 50,000 gallons could be sold each year. This does not account for increased activity that may occur if there is an increase in flight training operations.

Needed Additional Facilities

The needed additional facilities to provide the City with fuel sales capability include at least one 12,000-gallon above ground fuel tank, which could be installed for as little as $125,000 (depending upon how the installation is implemented). If jet fuel sales are needed, an additional 12,000-gallon tank is needed.

Discussions with fuel suppliers indicate that a dual wall, 12,000-gallon tank is the best economical size, because a full truckload of fuel (8,000 gallons) can be purchased at a discount. The tanks at Redlands Aviation are smaller and thus cannot hold a full truckload. Fuel prices are higher to the end users because the partial loads cost more per gallon than a full tanker truck.

Financial Considerations

A self-serve fuel tank does not require line employees to pump the fuel. This is a considerable savings for the fuel seller. As such, the price of the fuel can be lowered, because the margin does not have to pay for the line service personnel. From a financial perspective, most airport fueling operations generate roughly $1 per gallon in margin (wholesale to retail price differential).

For a self-serve operation, these margins can be cut to $0.75 or $0.50 per gallon and still be profitable. Assuming that the City makes $0.75 per gallon margin, the annual net earnings could be $37,500. Using that money to repay debt service on a $125,000 fueling facility would take less than five years to pay off. If margins were only $0.50 per gallon, it would still only take six years to pay off.

5.10 Summary Impact of Revenue Enhancement Strategies on Potential Demand

The first step in determining the impacts of the revenue enhancement strategies is to predict the change in aviation demand that would occur if each strategy were implemented. To summarize the material presented above, Table 5-3 shows a listing of the potential demand changes along with the assumptions used in estimating demand changes. As shown, if all activity-generating strategies are undertaken, aviation demand could be anticipated to grow by 20 based aircraft and 75 percent of current aircraft operations by the year 2025. However, aviation demand is only one component of the overall growth strategy for the Airport. There are a number of activities that are anticipated to increase financial production at the Airport that do not involve increased aviation demand.

Table 5-3 - Impact of Revenue Enhancement Strategies on Potential GA Demand

Component	Strategy	Based Aircraft	Operations
Current Activity		151	44,000
Airport Branding	This activity will aid in the attraction of new tenants to the Airport.	0	0%
College/SBVC Partnership	Proactively seek student base for Flight School	4	20%
Hangar Development	Develop new hangar space for rental purposes. Branding will help attract these new aircraft tenants.	20	15%
Airport Events	Hangar 24 AirFest and other events.	0	<1%
Aviation-Related Businesses	These specialized aviation service operators (SASO) could locate on the Airport and attract itinerant operations	0	<1%
Attraction of Business Aviation	Branding, marketing focus on growth of this component and increased market share in service area	5	10%
Non-Aviation Revenue Options	Potential solar panel farm may produce revenue but not add to the aviation activity.	0	0%
Rates and Charges	Adjusting rates and charges may increase revenues but not impact aviation activity.	0	0%
City Fuel Sales	Self-Serve Avgas Sold by City	0	0%
Additional Growth from Plan		**29**	**45%**
Total Activity - Year 2025		**180**	**63,800**

Some of the strategies listed in Table 5-3 work together and cannot be adequately separated, such as the effects of branding versus other marketing efforts for the attraction of business aviation or more hangar rentals. For this reason, some categories were cross-referenced in the demand estimation process. In addition, there are a number of activities that may impact revenues, but will not impact overall aviation activity levels. This would include strategies such as Non-Aviation Property Development, Rates and Charges adjustments, and Airport Events described in this Plan.

6. FINDINGS AND RECOMMENDATIONS

THE RECOMMENDED BUSINESS PLAN FOR REDLANDS MUNICIPAL Airport focuses on methods that the City of Redlands can use to chart the future course of the Airport and maximize future growth opportunities. As mentioned in Section 5 of this plan, the Airport has opportunities to develop future revenue and to improve its brand. This Business Plan outlines the possible steps the City can take to improve revenues by increasing aviation activity, encouraging a partnership with SBVC, or developing new revenue producing facilities at the Airport. This section of the Plan is organized to address the following topics:

- Recommended Administrative and Policy Actions
- Revenue Enhancement Recommendations
- Impact on Revenues and Expenses
- Summary Recommendations

6.1 Recommended Administrative and Policy Actions

Administrative and policy actions may have no immediate financial return, but instead, address the practical issues of operating Redlands Municipal Airport. Recommendations for this section deal with staffing, lease policy, potential fueling operation by the City, control of land surrounding the Airport, retention of existing clientele, and public outreach. Each of these action areas are discussed in the following subsections.

Airport Staffing

As discussed in Section 2, the City Manager has responsibility for all City Departments, including the Quality of Life Department, in which the Airport is classified. The Quality of Life Director has responsibility in the line of authority over his Senior Project Manager, who, in turn, has responsibility for the two full-time City staff that are assigned to the Airport on a part-time basis. It should be noted that there is currently a vacant Airport Manager position in the City's hierarchy.

While there is no Airport Manager from the City, the FBO serves as a *de facto* manager and contact point for the flying public. Because the City is not represented at the Airport on a day-to-day basis, the FBO and other businesses at the Airport represent the default brand of the facility. Any impression that a visitor has will be made by the interactions with these public businesses. That can be an asset or a liability to the brand, depending upon the quality of the FBOs involved.

While the Airport is open 24/7 and attended from 8:00 am to 5:00 pm throughout the week, no City staff are represented there. The two City staff personnel each work part-time on Airport matters, as needed for maintenance, administrative tasks, code enforcement issues, and meetings with stakeholders. Their overall responsibilities are to keep the Airport operating, groomed, secure, and administratively sound.

Future Staffing

For the future, the question is whether or not to fill the vacant Airport Manager position, and if so, when? From a business planning standpoint, that position would be filled when revenues increased and could pay for the added expense. Discussions with Airport patrons indicate a willingness to participate in the Airport operational management on a voluntary basis. At the same time, the City desires a single point of contact at the Airport that incorporates the views of both the Airport users and the taxpayer stakeholders. Both the City and the Airport patrons agree that any new Airport management position should not create deficits at the Airport.

Therefore, the options for Airport management discussed included the following:

- ***Status Quo:*** Continue to use City staff on a part-time basis to monitor Airport operations. Under this option, the primary staff resource could get training as an Airport manager and "grow" into the position.
- ***Rely on Volunteerism:*** Under this option, volunteers from the Airport tenant and user community would help to operate the Airport, apply for grants, and enforce Airport rules and regulations and report to the City.
- ***Third Party Management:*** This option would consider bringing in an Airport management firm to operate the Airport.
- ***Part-Time Manager:*** The fourth option is to designate a part-time Airport manager that would have office hours at the Airport. This person could be selected from in-house staff or brought in via a candidate search from the aviation industry.
- ***Full-Time Manager:*** This option would represent the natural evolution of Airport activity and revenue growth to the point of being able to afford full-time management.

It is the view of this plan that the Status Quo, while possible to continue, is not the optimum strategy for management of the Airport.

The second option, Volunteerism is not a legal option. The Airport is owned by the City and is ultimately the responsibility of the City Manager to administer through staff. While there is a place for volunteerism at the Airport, it cannot be in the legal management of it.

Third party management of airports is usually reserved for airports that make money and have significant revenue options. Because the City of Redlands has only a small number of the Airport's hangars and no fuel concession, there is very little revenue to entice a third party company to take over. In these cases, the airport owner must pay a substantial fee for management services if that option is invoked. A better fit occurs when the owner is also the FBO and has a significant amount of hangar and tie-down revenue. From our experience, this option can be ruled out because of a lack of feasibility.

The part-time manager option is a viable option for several reasons. First, it attempts to work within the budget constraints of the Airport. Second, it places a point of contact at the Airport to deal with problems or for those desiring to volunteer to help. Third, the manager can be either an existing City staff person or a person from the outside. Fourth, this person could function as a liaison from the City staff to those reporting to the City Council. In this regard, the City Council

would also have the benefit of input from the Airport Advisory Board if there was a difference of opinion on a particular issue.

The Airport is not yet ready for a full-time manager, nor is there sufficient funding for one. That need would occur once the financial activities of the City at the Airport increased to the point of being able to support this position without incurring deficits. That means the City would have to have more hangar rentals and some activity income, such as fuel sales to keep a full time manager busy. Therefore, it is recommended that:

The City should fill the vacant Airport Manager's position with City staff stationed at the Airport on a part-time basis.

To achieve a full-time Manager, this process may take several years, and could grow organically. For example, there could be a transition to a part-time manager located at the Airport, 20 hours per week (with posted hours). This employee could be an existing City staff member, who could undergo training to receive accreditation as an Accredited Airport Executive (AAE) within a certain period of time. Ultimately, this position would become full time when revenues permitted or when there were pressing reasons to do so.

Airport Manager Responsibilities

Typically, the day-to-day operation of the Airport would be the responsibility of the Airport Manager. The Airport Manager plans, directs, and coordinates the overall operations, maintenance, administration, and development of the Airport, including review of budget and fiscal matters, public infrastructure management, contract and lease review, compliance with federal, state and local policies, rules, and regulations, security, and operational safety. The Airport Manager would perform based aircraft counts and submit N-numbers to the FAA on a periodic basis. At many airports, the Airport Manager is responsible for overseeing planning and environmental processes. The Airport Manager helps to identify needed grants for capital projects, coordinates, matters related to financial assistance programs with the Federal Aviation Administration and Caltrans. The Airport Manager would oversee any staff assigned to the Airport by the City. In addition, the Airport Manager would perform other duties such as marketing and organizing and managing special events. The Airport Manager represents the Airport with internal and external stakeholders, tenants, federal and state agencies, and others. This position would report to the Quality of Life Director.

It is important to note that the Airport Manager needs to be a diplomat, with a sensitive ear toward the Airport community and the City Council. Many at the Airport believe that the existing management approach is working well and that the best path for the City would be a "hands off" policy. Thus, the defined duties of the Airport Manager should be focused on significant issues such as lease compliance, facility infrastructure, financial issues, and FAA requirements. Great communication will be the key to a successful transition for the Airport Manager position.

Lease Policy, Minimum Standards, and Rules and Regulations

Currently, there is no lease policy, minimum standards, or rules and regulations at the Airport. It is recommended that a comprehensive lease policy be developed in the future, along with a set of minimum standards and rules and regulations. In summary, the lease policy should address a number of topics including: ground leases, hangar reversions, renewals, lease terms, FBO provisions, and other issues. The new lease policy should place an emphasis on removing any existing lease provisions that grant exclusive rights. In addition, the development of minimum standards should reduce the amount of "boilerplate" language in the leases and should standardize practices for aeronautical businesses on the Airport.

The current procedure for granting a new lease to an existing lessee for a longer term should be revised significantly. One approach would be the development of a method whereby new leaseholders could purchase additional 5-year renewal options by paying additional fees at the beginning of their leases. With the institution of investment thresholds for lease term lengths, an investment which did not meet the threshold for a desired lease term could be augmented by purchasing additional terms. One method used at other airports involves the valuation of additional terms via net present values of future investment amounts. This would provide the Airport with more revenue and the leaseholder with a desired longer lease term.

Other lease policy improvements involve the standardization of lease language, insurance requirements, indemnification, and other topics. Given the needed improvements in lease policy provisions, it is recommended that:

The City should create a new Airport Lease Policy to clarify tenant-Airport lease responsibilities and future options.

In addition,

The City should create a new Minimum Standards document to clarify and standardize requirements for aeronautical business at the Airport.

Also,

The City should develop a set of Airport Rules and Regulations that emphasize safety and conformance to industry standards.

Airport Advisory Board

Existing tenants represent the largest part of Airport activities, as well as sources of revenues at Redlands Municipal Airport. Looking forward, it is important for the Airport to retain these based aircraft as a baseline to preserve current revenue streams. The retention of existing clientele requires care and communication, particularly in a competitive economic environment.

Airport management uses email communication to alert Airport users of issues, airfield work, NOTAMS, etc. This outreach practice should continue. Therefore, it is recommended that:

The City should continue to engage existing Airport Users (clients and tenants) to solicit feedback on Airport issues.

The existing Airport Advisory Board (AAB) was created by the City to advise City Council on issues that are important to the Airport users. The AAB is appointed by the Mayor with the approval of the City Council. The City's Municipal Code confers powers and duties on the AAB as follows:

> *"The airport advisory board shall have the power and duty to act in an advisory capacity to the city council in all matters pertaining to the administration, operation, development, improvement and maintenance of the Redlands municipal airport."*

Currently, this group meets every other month or sometimes in special session. There is a desire on the AAB to meet monthly to ensure timely input for issues at the Airport. It is believed that this would be a good initiative for the City to show the Airport community that it is committed to improving conditions at the Airport. It may also help garner support for implementation actions from this Business Plan. Therefore, it is recommended that:

The City should consider increasing the frequency of Airport Advisory Board meetings to at least one per month.

These meetings are not meant to be "gripe" sessions, but rather, sessions where issues can be discussed and resolution can be pursued. The empowerment of tenants is one way to keep them at the Airport. In addition, the part-time Airport Manager can function as a dedicated point of contact within the City government for Airport tenants, again, with an emphasis on better client relations. All of these practices are designed to better engage the tenant base and solve problems before they result in the loss of a tenant.

Maintenance of Unobstructed Approaches

There has been great concern about the dirt mound on the east side of the runway in the approach area. Studies by Caltrans have indicated there are no penetrations of FAR Part 77 imaginary surfaces. However, Airport users are still concerned that there may be a safety issue. One problem involves the location of this dirt mound on private property, which is not controlled by the City. However, the County does control the land use and has required mitigation and removal of the dirt by the owner. The owner is not in compliance with these requirements and the City of Redlands is currently working with the County to get this problem resolved. Therefore, it is recommended that:

The City should continue to work with San Bernardino County to have the responsible property owner reduce the size of the dirt hill, east of the Airport.

Helicopter Flight Operations

Another operational issue involves the designated flight paths for helicopter training operations. There is an ongoing study to resolve this issue, but one thing is clear; mixing helicopter training operations with fixed wing traffic on the Airport runway is not a good idea. From the standpoint of the Business Plan, this is primarily an operational issue. However, it must be resolved to the benefit and satisfaction of the helicopter operators, or loss of activity and future revenues could occur. Therefore, it is recommended that:

Recommendations from the study of helicopter activity and flight paths should be implemented to the benefit of helicopter operators at the Airport.

The City should monitor the study results to ensure that all parties are satisfied and that the helicopter operators will continue to base at the Airport.

Public Outreach

Given the future need for funding and capital development at the Airport, it is likely that subsidies of some sort will be needed from the City. For this reason, it is important to convey to the public the full value of the Airport to the community. Using the metric, Airport Community Value (ACV), the job production, asset value, and total economic output of the Airport can be described in understandable terms. Section 7 presents a summary of the ACV results for Redlands Municipal Airport. The economic impact assessment shows that the Airport sustains 41 jobs, produces $1.7 million in payrolls, and creates $4.7 million in overall economic impact annually.

A second measure of the value of the Airport involves the current asset value. In this regard, a method was used that first estimated the current replacement value of the facility and then reduced that value by the useful life remaining on each specific asset. This procedure resulted in a replacement value estimate of $103.4 million and a current value of $74.8 million. Taken as a snapshot in time, the total value of the Airport could be estimated to include its annual economic activity ($4.7 million) plus its current asset value ($74.8 million). Adding these two numbers, it can be shown that the overall value of the Airport to the community is $79.5 million.

It is important to broadcast the value of the Airport to the community at every appropriate venue and online through various website and social media connections. Stakeholders from the Redlands must understand the value of the Airport if they are to support it during budget negotiations each year. Not only is the return on investment significant, the Airport's role in supporting jobs should be communicated. Therefore, it is recommended that:

The City should coordinate with economic development agencies and through its online presence to publicize the Airport's Community Value.

Airport Brand

Airport Branding is both an administrative action and a foundation for revenue growth. As an administrative action, establishing the Airport Brand involves the look and "feel" of the Airport. Is it a place that gives users the sense that there is unity of management and attention to details? At any successfully branded attraction (Disneyland, Universal Studios, etc.), there is great attention to every detail, color scheme, and management action. The brand reinforces confidence and builds loyalty.

At Redlands Municipal Airport, the administrative or management aspect of branding involves the establishment of visible evidence of sound management. This includes a visible point of contact, a quick response to complaints or issues, and a notion that caring people are in charge. The brand should move people to think that there is a unifying set of principles at work. This unity will translate into an overall "look" of the Airport and can be evidenced by a common color scheme for buildings and vehicles, a professional Airport entranceway, and uniformed Airport workers.

In short, the management side of branding involves discipline. It requires that a vision of the future be carried out in daily actions and reliable management structure over time. If there is spending on Airport improvements, that spending should advance the brand. Improvements in customer service should be focused on conformity to the Airport brand. This approach requires Airport management to repeatedly ask the question, "Is this action in conformity with our vision for the future of the Airport?" Therefore, it is recommended that:

The City should adopt a future brand for the Airport and then weigh all spending and service actions against this vision.

Airport Area Land Use

The question was raised, "What type of land use is ideal for the property adjacent to the Airport?" While the City does not own that land, it can support and encourage compatible land uses and work with the land owners to zone or attract specific types of use. For airports in general, there is a hierarchy of preferred land uses that describe compatibility. Listed from most desirable to least desirable, this hierarchy can be understood as:

1) ***Undeveloped Land:*** Any areas of land yet vacant or undeveloped due to low levels of socioeconomic activity, and/or significant constraints to such activity such as protected scenic and recreational areas, or natural physical constraints that have made economic activity cost-prohibitive. For example, the Santa Ana Wash area plays this role at Redlands Municipal Airport to the north.

2) ***Rural/Agricultural Areas:*** Any areas that can be characterized as being sparsely settled with primary activities being related to agricultural use. Potential airport-related noise would have minimal impact on these areas. In addition, the rural nature of these areas poses little threat to life and property damage in the event of an aircraft emergency or incident.

3) ***Industrial Areas:*** Industrial areas are those where some degree of manufacturing, warehousing, distribution, assembly, or production activity occurs. Typically, industrial areas are characterized by private interests and enterprises that have organized for the purpose of making goods and/or services for sale. Industrial areas are more capable of absorbing noise impacts than other high density development. However, industrial areas are less desirable in the vicinity of airports than are agricultural areas due to the higher numbers of people that are attracted to these areas.

4) ***Commercial/Retail Areas:*** Commercial and retail areas are those that can be characterized as having office buildings and commerce parks, restaurants, franchise and specialty goods outlets, and the like. These areas are impacted more by airport-related noise than the three previous categories listed above due mostly to the human activities that occur there. Commercial and retail areas represent nodes of economic activity for most cities, towns, and suburbs, that attract larger numbers of people.

5) ***Residential Areas:*** Residential areas are those characterized by the predominance of single and multi-family dwelling units located there, along with the wide variety of public and quasi-public institutions that support these areas. In addition to homes, residential uses include schools, churches, community centers, daycare centers, nursing and assisted living facilities, and other uses that are generally enjoyed as quality-of-life-enhancing amenities. Residential areas are the least compatible with airport-related noise due to the fact that people live and sleep in these buildings. In addition, safety concerns for both property owners and airport users should limit the amount of residential land use in the near-airport approach areas.

From the descriptions above, developmental land uses around the Airport (those other than vacant and agricultural) that should be encouraged include industrial and commercial/retail. Industrial uses would include some degree of light manufacturing, warehousing, distribution, assembly, or production activity. Commercial and retail establishments would include office buildings and commerce parks, restaurants, franchise and specialty goods outlets, and the like. Therefore, it is recommended that:

If land around the Airport is to be developed by private interests, the City should encourage light industrial and commercial/retail land uses.

Of the above land uses, residential land use is most incompatible to the Airport. Fortunately, the City has taken proactive steps to ensure minimal negative impacts from the development of residential property in approved zoning areas in the Airport vicinity. This includes the attachment of avigation easements to all property sold in these areas. The easement states the following:

For valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Grantor for itself, its heirs, administrators, executors, successors and assigns, does hereby grant and convey to the City of Redlands, California (hereinafter "Grantee"), its successors, assigns, lessees, sublessees, licensees and invitees, for the use and benefit of the public, an avigation easement appurtenant to the Redlands Municipal Airport (hereinafter the "Dominant Tenement"), for the free and unobstructed passage of all aircraft ("aircraft" being defined for the purposes of this instrument as any contrivance now known or hereafter invented, used or designed for navigation of, or flight in, the air), by whomsoever owned and operated, in the airspace over, through, across, and adjacent to the Servient Tenement, together with the right to cause in such airspace noise, sound or shock waves, vibrations, odors, fumes, dust, fuel particles, smoke, light, thermal waves, air quality changes and other results transmitted from the operation of aircraft of all types now known or hereafter designed and used for navigation of, or flight in, the air, by reason of any use ancillary or incidental to the operation of the Dominant Tenement and by reason of any operational incidental effects thereof, including such as may occur in and from take-off, landing and approach patterns into and from the Dominant Tenement until the Dominant Tenement shall be abandoned and shall cease to be used for public airport purposes, it being understood and agreed that these covenants and agreements shall run with the land.

Grantor, for itself, its heirs, administrators, executors, successors and assigns, does hereby waive, and release any right or cause of action which it may now have or which it may have in the future against Grantee, its successors and assigns, due to such noise, sound or shock waves, vibrations, odors, fumes, dust, fuel particles, smoke, light, thermal waves, air quality changes and other results in said airspace that may be caused or may have been caused by the operation of aircraft of all types now known or hereafter designed and used for navigation of, or flight in, the air, by reason of any use ancillary or incidental to the operation of the Dominant Tenement and by reason of any operational incidental effects thereof including such as may occur in and from take-off, land and approach patterns into and from the Dominant Tenement. This waiver and release includes, but shall not be limited to, claims, known or unknown, for damages for physical or emotional injuries, discomfort, inconvenience, property damage, death, interference with use and enjoyment of property, diminution of property values, nuisance or inverse condemnation, or for injunctive or other extraordinary or equitable relief. Grantor, for itself, its heirs, administrators, executors, successors and assigns, agrees that Grantee shall have no duty to avoid or mitigate such damages by, without limitation, setting aside or condemning buffer lands, rerouting air traffic, erecting sound or other barriers, establishing curfews, noise or by enacting other regulations. Grantor acknowledges and agrees that this waiver applies to all claims for injuries, damages or losses to Grantor's person and property, real or personal, (whether those injuries, damages, or losses are known or unknown, foreseen or unforeseen, or patent or latent) that Grantor may have against Grantee, and Grantor hereby waives application of California Civil Code Section 1542. That Section reads:

> *"A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR."*

Grantor, for itself, its heirs, administrators, executors, successors and assigns, shall not construct or permit the construction or growth of any structure, tree or other object that obstructs or interferes with the use of the rights herein granted, or that creates electrical interference with radio communication between any installation within said airport and aircraft, or to cause difficulty for pilots to distinguish between airport lights and other lights, or to impair visibility in the vicinity of said airport, or to otherwise endanger the land, take-off or maneuvering of aircraft. Grantor, for itself, its heirs, administrators, executors, successors and

assigns, agrees that Grantee shall have the right to mark and light as obstructions to air navigation any such building, structure, tree or other object now upon, or that in the future may be upon the Servient Tenement, together with the right of ingress to, egress from and passage over and within the Servient Tenement for the purpose of accomplishing such marking and lighting.

This Avigation Easement constitutes an enforceable restriction pursuant to the provisions of California law, including, but not limited to, Section 21652 of the California Public Utilities Code, and shall bind Grantor, and the heirs, agents, successors and assigns of Grantor, and each and all of them, and shall be appurtenant to, and for the benefit of the Dominant, which is more particularly described in Exhibit "A", attached hereto.

In the event that any one or more covenant, condition, right or other provision contained in this Avigation Easement is held to be invalid, void or illegal by any court of competent jurisdictions, the same shall be deemed severable from the remainder of this Avigation Easement and shall in no way affect, impair, or invalidate any other covenant, condition, right or other provision contained in this Avigation Easement.

This avigation easement is important because it does not allow a buyer of property near the Airport to bring an action against the City or try to impose a curfew on Airport operations, claiming not to know of the potential noise impact on their property. In essence, the buyer is agreeing to purchase a home with full knowledge of the potential noise impacts and release the right to pursue legal or other action against the City. This effectively eliminates the consequences of potential incompatible land uses in the future. Therefore, it is important for the City to broadcast this easement to both the potential buyers of property around the Airport, as well as to Airport patrons themselves. Thus, it is recommended that:

The City should publicize the full nature of existing avigation easements that restrict noise complaints or litigation for new residential housing in the Airport environs.

The concern of Redland Municipal Airport users is the possible creation of noise sensitive areas by the City Council (acting as the Airport Land Use Commission) that then could result in fines to any aircraft owner who violated noise standards. These fines are $1,000 per infraction (California Public Utilities Code, Section 21669.4). Thus, if avigation easements relieve this possibility, most of the problem with residential housing would be solved. And Airport patrons need to receive this information.

The approved Airport Land Use Compatibility Plan for Redlands dates from 2003. That plan shows Redlands Municipal Airport surrounded by industrial, commercial, residential, and open space. Given the changes over the years, that Plan must be updated as funding for it becomes available. Therefore it is recommended that:

The City should review and update its Airport Land Use Compatibility Plan to ensure that it conforms to the 2011 California Airport Land Use Plan.

6.2 Revenue Enhancement Recommendations

Revenue enhancement options for Redlands Municipal Airport are based upon the Plan's recommended business response to aviation demand growth in the region. The subsections that follow describe how a number of options might improve revenues for the Airport. The projected levels of enhanced revenues, which are presented in tables at the end of this section, reflect the financial impacts of these and other specific initiatives recommended by this Plan. These initiatives include the following:

- Airport Branding Initiatives
- Flight School/Partnering with Educational Institutions
- Hangar Development
- Airport Events
- Attraction of SASOs and Aviation Support Businesses
- Increased Business Aviation Use
- Non-Aviation Land Development
- Rates and Charges Adjustments
- Fuel Sales by City

Airport Branding Initiatives

Airport branding from a managerial side was discussed in the previous section. From an implementation standpoint, there are a number of actions that can be undertaken including: a common paint scheme, City representation at the Airport in the form of an Airport Manager, a stand-alone website, a new promotional brochure, and a marketing campaign including direct mail, printed materials, and video/multimedia. Strengthening of the brand will permit the City to better market the Airport to customers in its service area. This is particularly important for increasing market share or attracting aircraft from general aviation airports in the region that may be closing over the next 10 years.

In addition, the City should consider the development of a unique logo for the Airport that relates to the City's logos and brand. However, a name change for the Airport is not recommended. Other branding activities such as the improvement of the entranceway, the cleanup of inoperative aircraft, and other actions could be implemented as funding becomes available.

It is recommended that the focus of Airport branding for Redlands Municipal should be twofold. The primary direction should be toward aviation customers and aviation-related businesses. The secondary focus of branding should be toward stakeholders within the City who will be called upon to pay for some portion of capital development projects in the future. Both of these groups are important and strategic for the long-term viability of the Airport. Therefore, it is recommended that:

The twofold Airport brand should be focused toward aviation customers and local stakeholders.

For the primary brand, the continued attraction of aviation activity is paramount in improving the revenue picture for the long term. The recommended branding targets have been described to include the following:

- Flight Training/Educational Partnering
- Personal Flying
- Business Aviation

While the business aviation component may attract twin engine propeller aircraft and some small and very light business jets, the primary activity at the Airport will be from single-engine, fixed wing aircraft.

The City will have to give attention to existing clientele and grow those segments. Small general aviation aircraft, helicopter operators, and other existing aviation activity at the Airport are important to keeping the operational numbers strong and capable of supporting the revenue base. In addition, the attraction of an expanded flight school, discussed later, would help increase overall aircraft operations and fuel sales.

With regard to stakeholders, the Airport brand should focus on improving the awareness of the value of the Airport to the community. The more that citizens know and appreciate about the Airport, the more they will be willing to support it both politically and financially. In this regard, the branding process would focus on public outreach, community involvement, and education about the economic impacts and asset value of the Airport.

Communicating the Brand

Communication of the improved Airport brand can utilize the normal channels of media, including direct mail, print media, and industry conferences (potential membership in the Association of California Airport (ACA) and the American Association of Airport Executives (AAAE) conferences). In addition, an effective online presence would significantly enhance the promotion of the Airport brand. Tools for enhancing online awareness can include a stand-alone Airport website and social media platforms. In this regard, the Airport has dedicated pages on the City's website (10 pages) but no Airport-run social media.

The use of Facebook, Twitter, YouTube, LinkedIn, and Instagram is growing as a means for airports to stay in touch with their users. These sites offer an opportunity for the Airport to connect directly with users on their terms and in ways these users already connect with other brands. Because individual airport users have immense power to broadcast feedback online, it is important that the Airport engage in online reputation management to promote the brand in a positive manner. Utilizing such tools is becoming commonplace in the aviation industry. Therefore, it is recommended that:

The City should develop social media outlets and an individual website as part of its branding strategy for Redlands Municipal Airport.

Strategic social networking content strategy for communicating the Airport brand requires regular attention, therefore the media utilized should be updated regularly (at least once per week). If staff is to be added at the Airport, one of the duties that could be assigned would involve the updating of social media.

Other Public Outreach

In supporting the secondary branding focus toward stakeholders, there are a number of functions that can be included within a marketing and public relations program. These functions are meant to raise the awareness of the value of the Airport to the community. The first and most obvious portion of this process would be to broadcast any studies of the economic impact of the Airport. That would include the Airport Community Value metrics mentioned earlier.

Secondarily, the public can be engaged through events such as the Hangar 24 AirFest (as they currently do) or through a speakers bureau program at the various civic associations and clubs (Chamber of Commerce, Optimists, Kiwanis Club, Redlands Evening Lions Club, etc.). The Redlands Economic Development Division should have a role in promoting these outreach activities. Therefore, it is recommended that:

> ***The City should partner with the Chamber of Commerce and other civics clubs to promote the Value of the Airport to the Community.***

Flight School/Partnering with Educational Institutions

Partnering with San Bernardino Valley College (SBVC) to develop a college-managed flight school/curriculum on the Airport could increase aviation activity. SBVC has an aviation program which features aircraft maintenance, but the College does not currently offer flight training. There is an inactive ground school program that we believe could be jump-started with an actual flight training program at Redlands Municipal Airport. These programs are complicated and will take a couple of years to institute. However, they typically produce flight students for a flight school (which can be an independent or third-party entity) and have the benefit of offering tuition-based training. Because many students are eligible for grants and loans, this portion of the equation works better for the flight school than operating without a funding mechanism. In addition, the Veterans Administration offers financial assistance to military veterans, who desire advanced pilot training.

An estimate of the potential number of student pilots within San Bernardino County revealed the potential to generate approximately 679 student pilots. If SBVC funneled student pilots to Redlands Municipal Airport, it would bolster the existing flight school and may attract another.

At minimum, the Airport would need to be able to provide hangar space for two additional aircraft. Industry experience indicates that a school with 20-25 students would be the minimum necessary to support a college program. The financial benefits of attracting an expanded flight school to the Airport would include: support of the existing flight school, added fuel sales, hangar

rentals, possible ground leases, licensing fees, and more aircraft maintenance business at the Airport. Therefore, it is recommended that:

> ***The City should initiate a direct dialogue with the Provost of San Bernardino Valley College to discuss the potential of adding flight training at REI to their existing aviation curriculum.***

Hangar Development

When the Rialto airport closed, there was a spike in based aircraft at Redlands, but because there was inadequate hangar space available, many of the aircraft found other airport locations. To adequately plan for the future, hangar demand at Redlands Municipal Airport was estimated to include 20 T-hangars and 15,000 square feet of box hangars over the next 10 years. Confirmation of this demand would be required in the form of waiting lists and pre-construction deposits for new hangar space. It is anticipated that new based aircraft are likely to result from initiatives of the City, combined with possible further contractions in general aviation airport capacity, regionally. As such, it is recommended that:

> ***The City should seek the development of T-hangars and conventional hangar space as demand warrants.***

New hangar demand can be accommodated through a variety of methods. The primary methods analyzed in this plan include the following:

- City Development of New Hangars
- Ground Lease with Private Hangar Developer
- Combination of City and Private Hangar Development

These methods were used in evaluating potential net revenues to the Airport, based upon demand forecasts through the year 2025. For the period, an estimated need of 35,000 square feet of additional hangar space is predicted within the 10 year planning horizon. According to the Master Plan, there is adequate space for this development in areas along the existing flight line.

For this analysis, it was assumed that the site preparation for the hangar development, the construction of the hangars themselves, and the need for additional hangar apron or taxiways would result in a total cost of near $100 per square foot of finished conventional hangar space. T-hangar space is slightly less expensive to construct, costing $75 per square foot. Some projects would be less expensive and some more. In total, an investment of roughly $3.0 million would be needed over the next 10 years to develop all of the hangar space projected by this analysis.

City Development of New Hangars

Table 5-1 (shown previously) indicates the approximate cost of developing a 10,000 square foot hangar at the Airport. As shown, the hangar would have to rent for $6.66 per square foot per year. Currently, rents for hangar space vary on the Airport, ranging from $3.00 per square foot to $4.50 per square foot. In any event, it would be difficult to compete with market lease rates unless grant funding were used as a part of the financing mix.

Depending on funding availability, a National Plan of Integrated Airport Systems (NPIAS) general aviation airport (Redlands is a NPIAS airport) can use their FAA non-primary entitlement funds over a three-to-four year period to build on-airport, revenue-producing capital improvements such as hangars and fuel farms. Grant funding could reduce the local share of costs, making the development more feasible. Assuming grant funds were available, a 10,000 square foot conventional hangar could be constructed for $500,000 FAA grant and $500,000 City matching funds. If the City portion of this money was borrowed, it could be repaid over a 15-year period for roughly $4.15 per square foot, per year at 3 percent interest (Table 6-1).

Table 6-1 - Conventional Hangar Breakeven with FAA Grant		
Payback Period	15 yr Payback	20 yr Payback
Cost of Hangar	$500,000	$500,000
Total Cost with debt @ 3%	$621,524	$665,517
Breakeven/S.F.	$4.15	$3.33

Another possibility would be for the City to buy available hangars that are for sale at the Airport. This option is discussed in a later subsection of this report. A simple program developed as a part of this Business Plan can be used to assess whether or not a purchase would be feasible.

In addition to conventional hangar space, it may be possible for the City to develop T-hangars to meet demand, if there are grants available and enough commitments from local based aircraft owners. If grant funding were available from FAA for 50 percent of a 10-unit T-hangar ($375,000), the City's share could be repaid over a 10-year period for $362 per unit, per month at 3 percent interest (Table 6-2). With prices this low, the hangars could be adapted for climate-control, bi-fold doors, etc., without incurring above-market rents.

Table 6-2 - Ten Unit T-Hangar Breakeven with FAA Grant		
Payback Period	10 yr Payback	20 yr Payback
Cost of Hangar (City Share)	$375,000	$375,000
Total Cost with debt @ 3%	$434,523	$499,138
Breakeven/Unit/Month	$362	$208
Breakeven/Unit/Month with lease escalation @ 2.5% annually	$323	$162

Therefore, it is recommended that:

If grant funding is available and waiting lists can be established, the City should consider constructing T-hangars.

It should be noted that in many cases, financial returns on the development of T-hangars are generally below the private sector desired rate of return. At some airports, the role that the airport sponsor has taken involves funding needed facilities and services that the private sector will not fund. This is due to an ability to accept less-than-market rates of return on investments as a trade-off for providing the infrastructure needed for overall success. By constructing T-hangars, for example, the entire Airport could benefit through increased operational activity, increased fuel sales (supporting the City through flowage fees), increased aircraft maintenance activity (supporting on-airport businesses), and eventually paying off the investment through rents.

Private Development of New Hangars

If the City does not desire to develop new hangars or cannot identify the needed capital for development, private development of all new hangars may be necessary. This type of development occurs at many general aviation airports. Prior to this initiative, a new lease policy is needed that includes guidelines for ground leases that ensure the City's rights to the reversion of leasehold improvements at the expiration of the lease. Once a hangar reverts to City ownership, it is incumbent upon the City to seek rental rates as close to market value as can be negotiated. It is understood that this may be difficult with tenants who have constructed their hangars and now must pay more for them after many years of leases. However, the value of the hangar or other property is that it adjoins the Airport runway system. Thus, its location is functional to its value. Likewise, extending the lease should have some value above prevailing ground lease rates. Table 6-3 presents the pro forma for private development of new hangars at REI.

Table 6-3 - Private Development of Hangars

	10 Unit T-Hangar	Conventional Hangar
Hangar Square Feet	10,000 s.f.	10,000 s.f.
Cost of Hangar (2/3 cost of City)	$500,000	$666,667
Term	20 years	20 years
Total Ground Lease @ $0.20/s.f. 3% annual escalation	$53,740	$53,740
Total Cost (hangar + ground lease)	$553,740	$720,407
Private Developer Breakeven	$230/Unit/month	$3.60/s.f.

Therefore, it is recommended that:

If private development of new hangars is desired by the City, a lease policy that includes reversion clauses should be implemented beforehand.

Airport Events

As mentioned, the Airport currently is the site for Hangar 24 AirFest. In 2016, this airshow featured three bands, over 25 food vendors, and Hangar 24 craft beer. Now in its eight year, the AirFest is very popular, and has been drawing 15,000 or more. Other events at the Airport, such as car shows, 5K runs, radio controlled aircraft events, school and scouting group outings, etc. can be beneficial to the Airport and would not require the significant efforts that are needed to host an airshow. Educational outreach with schools should be implemented in order to draw youth to the Airport and into aviation related jobs and careers. Such an event could be coordinated with San Bernardino Valley College, if they decide to implement an aviation flight training program at the Airport. Therefore, it is recommended that:

The City should continue to use the Airport as a venue for AirFest and should encourage other events that are compatible with the Airport's operation.

In order for the Airport to benefit financially from these events, it is believed that an administrative permitting process needs to be developed. This process should be similar to the process used by the City in renting its parks. Chapter 12.44 of the Redlands Municipal Code provides regulations for the City park system. Several sections specifically discuss parks reservations and the payment of fees associated with the reservations. Reservations are currently required for the Redlands Bowl in Smiley Park, and the Avice Meeker Sewall Theater in Prospect Park. Group picnic tables located in Sections "A" and "C", the gazebo and the covered picnic area in Sylvan Park are reservable. The code further requires that any group of fifty or more persons must obtain a permit for park use. Any use of amplified sound also requires a permit. Applicants are required to reimburse the City for any cleanup and facility repair expenses. Further, any person obtaining a permit for park use must provide evidence of current insurance with the City named as an additional insured, as necessary.[1]

FAA Grant Assurance #24 – Fee and Rental Structure – states that an obligated airport will maintain a fee and rental structure for the facilities and services at the airport which will make the airport as self-sustaining as possible. Because the Airport is not considered a City park, events such as the AirFest must be approved through the City Council each year. To simplify this process and to attach fees to it for the City, the following recommendation is made:

The City should develop an administrative permitting process for sanctioned events at the Airport.

Attraction of SASOs and Aviation Support Businesses

The attraction of SASO and aviation support businesses was focused aviation amenities that most municipal airports offer to their customers. The Airport already has flight training, aircraft maintenance, helicopter services, fuel sales, and hangar operators. While each of these

[1] Source: http://www.cityofredlands.org/qol/parks/reservations

businesses may be expanded with increased demand, there are several missing items at Redlands Municipal Airport. These include the availability of jet fuel, and support businesses such as a satellite rental car service, and an Airport restaurant.

The availability of jet fuel will depend upon demand and a willing sales outlet. Currently, Redlands Aviation is not interested in selling jet fuel, even though there is a Pilatus turboprop listed as a based aircraft on the field. It is said that there are some tenants that bring jet fuel onto the Airport using small tank trailers. Self-fueling is permitted by the FAA, however, the Airport is entitled to a fuel flowage fee from these users.

If the City decides to enter the aviation fueling business (discussed in a later section), the potential to bring jet fuel to the Airport could be realized. Otherwise, it may be some time before the existing FBO offers jet fuel. Therefore, it is recommended that:

If the City enters the aviation fuel selling business, it should monitor the demand feasibility for jet fuel sales at the Airport.

Minimal demand feasibility can be defined as the sale of at least one complete fuel load (8,000 gallons) quarterly.

A satellite rental car service involves the remote parking of rental cars at the Airport by the rental car company. For a small general aviation airport, there is typically an agreement between the rental car company and the FBO to handle the paperwork associated with renting the cars. The rental car service is mostly a business amenity for itinerant visitors. If this is not possible, an alternative would be to provide a courtesy car to qualified visitors. In most cases, the courtesy car is just that – transportation into town in a used car. Sometimes there is a small fee; most of the time there is none. It depends upon the local situation and who is providing the cars. The types of cars used vary at airports, from old municipal police vehicles, to vans, to late model cars. The important concept, from a branding standpoint, is to have some form of transportation to and from the airport available to visitors. Therefore it is recommended that:

The City should ensure that there is adequate ground transportation to and from the Airport for air visitors.

The most often heard request from Airport users and SWOT attendees was the desire for an Airport restaurant. Such a facility would complement the Hangar 24 Craft Brewery, located adjacent to the Airport. Restaurants at general aviation airports seldom succeed without lots of use from local area patrons. The aviation community usually cannot support a restaurant without this help. That means the food and service has to be good.

For Redlands Municipal Airport, a significant issue with the development of a restaurant, would be its location. Currently, the only potential location in an existing Airport structure would be the terminal building. This is a relatively small space and the FBO lease indicates that the City

has access to the Lobby, stating: "the Lobby shall be used as a public airport lobby and patio and for any other related purposes deemed appropriate by City." Thus, if a restaurant was deemed appropriate and it could operate in that small area, it would be possible to locate it there. Currently, there is roughly 1,500 square feet that could be used for restaurant purposes in the Lobby space.

It is not likely that an airport restaurant could be sited on Airport property at a different location, unless one of the existing businesses were to move out of an existing building. If the restaurant locates off of the Airport property, there is no financial interaction with Airport revenues. Therefore, the only instance where financial and lease issues come into play for the City are with a restaurant located in the existing terminal building.

As mentioned before, most airport restaurants operate on the edges of profitability and don't contribute significant rental fees to their airports' sponsors. Therefore, a number of airports use a minimum fee plus a percentage of gross revenues for rental charges. The City would share in both the risk and the reward. Sliding scales are generally used for the percent-of-gross types of leases. If a restaurant can be attracted, it should be viewed as a positive amenity, rather than a significant income source for the City. Therefore, it is recommended that:

The City should determine whether restaurant development at the Airport terminal Lobby is workable, relative to structural requirements and FBO space needs.

If the Lobby can be used for a restaurant, the City should request statements of interest from qualified restaurant candidates.

Increased Business Aviation Use

Business aircraft constitute a stable growth segment of general aviation that would supplement marketing objectives for the Airport. Currently, many single-engine propeller aircraft are used for business purposes. However, that is not the focus of this effort. Instead, larger multi-engine and turbine powered aircraft are the target of this analysis. From the Business Plan Alternatives, it was assumed that two small business jets and four multi-engine aircraft can be attracted to the Airport for a total of six new based business aviation aircraft over the next 10 years.

There are a combination of factors that would be used to attract these business aircraft including the following:

- ***Availability of Jet Fuel:*** Most business aviation aircraft are either turbo-prop aircraft or turbofan jet aircraft. The turbine aircraft engines require jet fuel and thus, this is a major amenity needed.
- ***Branding Initiatives:*** The more professional an airport becomes, the more likely it is to attract business aviation. Business aviation users desire good service, all-weather operating capability, and airport security.
- ***Controlled Airport Access:*** There have been discussions of unauthorized access to the Airport and the need to improve security. This is particularly important to owners of high-

dollar aircraft using the Airport. If there are any fencing or security badging issues that need to be corrected, those would come before any marketing efforts.

- ***Hangar Space:*** Before a business aircraft can be attracted to the Airport, there must be available space for storing that aircraft.
- ***Direct Marketing:*** Once any perceived problems or unresolved issues are fixed and hangar space is available, the Airport can be marketed to a larger group via direct mail which points to an Internet address or QR code.

Given the above, it is recommended that:

> ***To attract more business aviation, the City must continue to upgrade the Airport brand by finding ways of increasing hangar space, providing jet fuel, increasing perceived security, and marketing these improvements.***

Non-Aviation Airport Land Development

From previous analysis, non-aviation Airport land development for revenue production was focused on solar panel farm or photovoltaic (PV) electric generation. There are quite a few airports in the United States that are implementing PV to earn additional revenue. Agricultural uses were ruled out as were other uses, such as office or commercial space on the Airport. For solar power generation, there are several steps needed in order to implement a solar PV site. These steps include:

- ***Site Selection:*** Choosing the best sites that are consistent with the long-term Airport development plans. The site selection must also take into account the kangaroo rat habitat on and near the Airport.
- ***Glare Analyses:*** Given the concern for potential glare impacts, the solar glare hazard analysis tool (SGHAT) should be used as an analytical screening tool.
- ***Grant Funding Opportunities:*** A full analysis of grant funding opportunities in California should be examined, which would include any local, state, federal, or private grants or incentives for solar PV sites. The California Solar Initiative which expires in 2016 may be replaced with similar incentives. Some federal grant programs require energy assessments, which involve complex ROI analyses and comprehensive audits of energy consumption and solar energy production and allocation.
- ***Operational Incentives:*** Net Energy Metering, or "NEM" is a special billing arrangement that provides credit to customers with solar PV systems for the full retail value of the electricity their system generates. Customers that generate a net surplus of energy at the end of a twelve-month period can receive a payment for this energy under special utility tariffs, which may vary by utility company.

Assuming that a location on the Airport can be found and that environmental concerns associated with the kangaroo rat and solar glare hazard can be overcome, the City must negotiate with a willing power company such as Southern California Edison (SCE) to accommodate the solar farm. Airports across the nation are taking advantage of this revenue source for their

underutilized property. Figure 5-1 (presented previously) shows the potential locations for solar panel farms on the Airport. Therefore, it is recommended that:

> ***The City should initiate discussions with local power companies to determine whether a large solar panel farm is feasible at the Airport.***

This would involve specifics on the upcoming incentives, costs, potential revenues, and any information on existing solar farms in Southern California. For this analysis, we are assuming a margin of $0.02 per kilowatt hour. However, changing levels of incentives may impact that number up or down.

Rates & Charges Adjustments

From our analysis, there are three areas where the City could adjust prices and remain competitive:

- ***Fuel Flowage Fee:*** The Airport charges a fuel flowage fee of $0.02 per gallon. Average fuel flowage fees range from $0.07-$0.10 per gallon. In addition, all fuel used at the Airport should be subject to this fee, including tenants who have their own tanks.
- ***Land Lease Rates:*** Current land lease rates are $0.12 per square foot (with CPI adjustments) for the largest Airport tenant. Typical rates are closer to $0.20 per square foot.
- ***Hangar Rental Fees:*** City hangar rental rates have remained static for a number of years, even though the lease agreement allows for CPI adjustments. If these adjustments were implemented from 2010, rates would be almost 10 percent higher than they are now.

Therefore, it is recommended that:

> ***The City should raise selected rates and fees for new leases or as permitted by existing lease agreement terms.***

State Grant Revenue

Redlands Municipal Airport is eligible for State grants for both operating and non-operating costs. The Caltrans Division of Aeronautics provides a State grant program to help general aviation airports cover these costs. In this regard, Annual Credit Grants are provided to eligible public use, publicly owned airports at $10,000 per year. Grant Certification (DOA-0007) and Disbursement Requests (DOA-0009) forms must be submitted to the Division of Aeronautics each fiscal year to establish an airport's eligibility. The following can be funded with Annual Grants:

- Operation and maintenance (wages/salaries, utilities, service vehicles, and all other noncapital expenditures)
- GA fueling facilities
- Restrooms/showers

- GA airplane wash racks.

It was noted that in FY 2014-2015, this State grant money was not shown in the Airport's revenue base. Therefore, it is recommended that:

> ***The City should take advantage of the $10,000 Caltrans annual credit grant to fund operational costs at the Airport.***

Fuel Sales by the City

From Section 5, the discussion of fuel sales by the City focused on the potential revenue that could accrue from this source. It was estimated that demand would begin at about 50,000 gallons per year and that margins would be between $0.75 and $0.50 per gallon. The cost of a 12,000 gallon fuel tank installed was estimated at $125,000 and the time period needed to pay off the tank was roughly five years.

From the SWOT and other discussions with pilots at the Airport, there is a need for competitive pricing and other items such as oil, fuel additives, lubricants, and pilot supplies. Depending upon the price that the City can secure for above-ground fueling facilities, the addition of fuel sales can be a long-term revenue producer in a relatively short period of time. It could also increase demand at the Airport, as competitive fuel pricing may increase itinerant demand. Over the longer term future, this could lead to the offering of Jet-A fuel by the City.

The location of the fuel facility could be in one of several places and would be dependent upon factors such as:

- The ability of a tanker truck to access the fuel tank(s).
- The load bearing capacity of the pavement to support an 8,000 gallon tanker truck.
- The ability of aircraft to access the self-serve fueling facilities.

Two general locations would make sense prior to in-depth study. The first would be on the existing pad at the City's hangars where the old fueling facility was located. The underground tanks are filled with sand and would not be used. Instead, double-walled, above ground tanks would be used to dispense the fuel. The second location could be on the west ramp near Aviation Drive or Sessums Drive. This location would be closer to the roadway and could be easier for tanker truck access. However, there would need to be clear access around tie-down areas for aircraft desiring to purchase fuel. Engineering assistance could aid in the final location decision, along with and a "pen and ink" change to the ALP. Therefore, it is recommended that:

> ***The City should consider offering self-service fuel sales for AvGas. If demand warrants over the longer term, consideration should be given to offering Jet-A fuel as well.***

Discussions with fuel providers would be a good start in getting their perspectives on facilities and best Airport sites for refueling purposes. These fuel providers will also have good information on the costs of equipment, pricing, and options for payment.

6.3 Impact on Revenues and Expenses

The revenue enhancement strategies recommended for Redland Municipal Airport represent opportunities to improve the financial performance of the Airport. These strategies will impact baseline projections of revenues and expenses. For this process, a number of assumptions for each strategy must be made, along with the resulting impact on net revenues. Table 6-4 presents an optimistic forecast of how these enhancement strategies could impact the revenue and expense picture for REI, if the assumptions for each scenario are met. The assumptions for each strategy are footnoted in Table 6-4.

Table 6-4 - Recommended Plan

Operating Revenues	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Rental Income	$265,301	$266,895	$272,474	$275,492	$275,554	$275,554	$275,873	$281,989	$284,893	$285,222	$285,288
Additional Hangar Revenue[2,4]	***$0***	***$0***	***$0***	***$0***	***$8,400***	***$12,981***	***$17,308***	***$17,831***	***$68,776***	***$70,079***	***$70,855***
Additional Land Lease Revenue[3,4]	***$0***	***$0***	***$0***	***$0***	***$3,750***	***$3,806***	***$3,863***	***$5,228***	***$5,307***	***$5,386***	***$6,834***
Additional Revenue Market Rates[1]	***$0***	***$0***	***$9,443***	***$12,044***	***$15,665***	***$17,125***	***$20,854***	***$22,359***	***$26,201***	***$27,751***	***$31,709***
Fuel Flowage Fee	$1,711	$1,745	$1,780	$1,816	$1,852	$1,889	$1,927	$1,965	$2,004	$2,045	$2,085
Additional Fuel Revenue (Projects)[2,3]	***$0***	***$0***	***$0***	***$0***	***$380***	***$460***	***$700***	***$700***	***$920***	***$920***	***$920***
Additional Fuel Revenue Airport Fuel Farm[3,7]	***$0***	***$0***	***$0***	***$30,600***	***$37,767***	***$39,771***	***$76,548***	***$97,197***	***$101,655***	***$102,330***	***$123,020***
Tie-Down Fees	$9,179	$9,316	$9,456	$9,598	$9,742	$9,888	$10,036	$10,187	$10,340	$10,495	$10,652
Gate Access Fees	$7,293	$7,402	$7,513	$7,626	$7,741	$7,857	$7,974	$8,094	$8,216	$8,339	$8,464
Investment Income	$1,705	$1,730	$1,756	$1,783	$1,809	$1,836	$1,864	$1,892	$1,920	$1,949	$1,978
Current Unsecured Taxes	$35,225	$35,753	$36,289	$36,834	$37,386	$37,947	$38,516	$39,094	$39,680	$40,275	$40,880
Solar Field Revenues[5]	***$0***	***$0***	***$0***	***$0***	***$0***	***$37,800***	***$37,800***	***$37,800***	***$37,800***	***$37,800***	***$37,800***
Total Operating Revenue	**$320,453**	**$322,841**	**$338,711**	**$375,792**	**$400,045**	**$446,913**	**$493,263**	**$524,337**	**$587,713**	**$592,592**	**$620,486**
Operating Expenses	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Salaries & Benefits	$76,972	$84,864	$87,410	$90,032	$92,733	$95,515	$98,381	$101,332	$104,372	$107,503	$110,728
Building/Grounds Maintenance	$6,495	$17,210	$17,468	$17,730	$17,996	$18,266	$18,540	$18,818	$19,101	$19,387	$19,678
Additional Hangar Expenses[4]	***$0***	***$0***	***$0***	***$0***	***$0***	***$0***	***$0***	***$0***	***$2,500***	***$2,538***	***$2,576***
Phone and Utilities	$32,983	$33,972	$34,992	$36,041	$37,123	$38,236	$39,383	$40,565	$41,782	$43,035	$44,326
General Govt Service Charge	$56,989	$57,274	$58,133	$59,005	$59,890	$60,789	$61,700	$62,626	$63,565	$64,519	$65,487
Services	$25,057	$196,204	$34,768	$35,290	$35,819	$36,356	$36,901	$37,455	$38,017	$38,587	$39,166
Supplies	$8,675	$6,813	$6,915	$7,018	$7,124	$7,231	$7,339	$7,449	$7,561	$7,674	$7,789
State Grant[6]	***$0***	***$0***	***($10,000)***	***($10,000)***	***($10,000)***	***($10,000)***	***($10,000)***	***($10,000)***	***($10,000)***	***($10,000)***	***($10,000)***
Total Operating Expenses	**$207,171**	**$396,337**	**$229,686**	**$235,116**	**$240,685**	**$246,393**	**$252,244**	**$258,245**	**$266,898**	**$273,243**	**$279,750**
Net Operating Revenues (Loss)	**$113,282**	**($73,496)**	**$109,025**	**$140,676**	**$159,360**	**$200,520**	**$241,019**	**$266,092**	**$320,815**	**$319,349**	**$340,736**

[1]***Lease Rate Adjustment:*** City T- Hangar leases were adjusted to market rates ($350 per unit) by 2018;
- *Existing Box Hangars:* Expired leases were increased by CPI growth since the lease was first signed (up to 10 percent). The average price per square foot (sf) increased from $3.85 per year to $4.03 per year in 2017- (4.81% increase).
- *Ground Leases:* New ground leases rates increased to $0.20 per sf.

[2]***Flight School/Partnering with Educational Institutions:*** Program is assumed to start in FY 2019 with two single-engine aircraft; increasing in FY 2020 and FY 2021 by an additional single-engine aircraft.

[3]***Attraction of Business Aviation:*** Assumes three multi-engine aircraft and two small jet aircraft by FY 2025.

[4]***Hangar Development:*** Demand for 35,000 sf of hangar space over the next 10 years is assumed.
- *City Development* of 10,000 sf of T-hangars; T-hangars constructed in 2023; Assumes 50% grant funding will be available; T-hangar construction costs of $75/sf; debt service 20 years at 3 percent; rent starting at $400 per unit per month and increase annually by 1.5 percent.
- *Private Development* of 10,000 sf of T-hangars constructed in 2019; (3) 5,000 sf Conventional Hangars; Hangars constructed in 2019, 2022, and 2025.

[5]***Solar Farm:*** Assumes annual net revenues of $37,800 will start in FY 2020; 7 acres at $5,400/acre net of revenues minus all expenses.

[6]***Annual Credit Grant:*** Assumes the Airport will take advantage of the $10,000 Caltrans annual credit grant to fund operational costs at the Airport.

[7]***Fuel Sales:*** Assumes the City will begin 100LL fuel sales in FY 2018 and Jet A fuel sales in FY 2021.
- *100LL:* 12,000 gallon fuel tank; cost $125,000; 42,000 gallons sold first year (50 percent of fuel sales); margin of $0.75 per gallon.
- *Jet A:* 12,000 gallon fuel tank; cost $125,000; 32,000 gallons sold first year (8,000 gallons per quarter); margin of $0.75 per gallon.

Table 6-5 includes non-operating expenses and shows the net revenues/deficits projected for each year of the forecast. This optimistic table assumes that **all** revenue enhancement initiatives are undertaken and produce according to their forecasts. As such it represents the highest potential revenue production for Redlands Municipal Airport as envisioned by this Business Plan.

Table 6-5 - Recommended Plan Net Revenue (Deficit)

Fiscal Year	Operating Revenues	Operating Expenses	Non-Operating Expenses	Net Surplus/ (Deficit)
2015	$320,453	$207,171	$108,197	$5,085
2016	$322,841	$396,337	$95,793	($169,288)
2017	$338,711	$229,686	$67,493	$41,532
2018	$375,792	$235,116	$94,446	$46,231
2019	$400,045	$240,685	$94,446	$64,914
2020	$446,913	$246,393	$87,746	$112,775
2021	$493,263	$252,244	$121,399	$119,620
2022	$524,337	$258,245	$121,399	$144,693
2023	$587,713	$266,898	$119,403	$201,412
2024	$592,592	$273,243	$119,403	$199,947
2025	$620,486	$279,750	$119,403	$221,333

Capital Improvement Program

The Airport has an outstanding debt to the Solid Waste Fund. In fiscal year 2002-2003, the Solid Waste Fund took over the $651,088 loan (advance) that was previously owed to the General Fund. The history on this loan was to cover the Aviation Fund operating deficits that occurred prior to 2002-2003. In fiscal year 2005-2006, the loan increased $935,300 as a result of the purchase of additional hangars. The $935,300 purchase plus interest brought the total loan balance to $1,795,184 at the end of the 2005-2006 fiscal year. At the end of the 2014-2015 fiscal year, the loan to the Solid Waste Fund has been paid down to $960,930. The $960,930 loan balance includes both the additional hangar purchase as well as the loan previously made to cover the operating deficits prior to fiscal year 2002-2003.

There is no set debt service schedule for the Airport loans from the Solid Waste fund. Each year, the principal an interest payment depends on the available financial resources of the Aviation Fund which is reflected in the adopted budget. The City tracks the principal and interest payments made on the loan. Interest is calculated using the Local Agency Investment Fund (LAIF) rate and is applied to the outstanding balance on the loan each year. For this Plan, the debt service was calculated to pay off the Solid Waste fund loan by 2035.

In addition to the existing debt service, there is a planned set of capital improvements, which was shown previously in Section 4, Table 4-10. As presented, the City is anticipated to provide matching funds at a level of $16,700 annually, for the foreseeable future. The combined totals of capital spending and debt repayment are presented in Table 6-6. This breakdown explains the totals shown in Table 6-5. Given the surplus revenues after 2019, there is an ability to accelerate the payoff of the existing loan from the Solid Waste fund beginning in 2020 and ending in 2025.

Table 6-6 – Recommended Plan Non-Operating Expenses

Year	ACIP Costs	Plan Spending	Existing Loan	Total
2015	$43,697	$0	$64,500	**$108,197**
2016	$45,000	$0	$50,793	**$95,793**
2017	$16,700	$0	$50,793	**$67,493**
2018	$16,700	$26,953	$50,793	**$94,446**
2019	$16,700	$26,953	$50,793	**$94,446**
2020	$10,000	$26,953	$50,793	**$87,746**
2021	$16,700	$53,906	$50,793	**$121,399**
2022	$16,700	$53,906	$50,793	**$121,399**
2023	$16,700	$51,910	$50,793	**$119,403**
2024	$16,700	$51,910	$50,793	**$119,403**
2025	$16,700	$51,910	$50,793	**$119,403**

Capital improvements recommended by the Plan can be funded through a variety of sources. These include Federal, State, local, and private.

Federal Funding

Redlands Municipal Airport is eligible for assistance in funding capital projects through the FAA Airport Improvement Program (AIP). AIP grants typically fund up to 90 percent of development costs for eligible projects. Under the current federal authorization (which has lapsed) the Airport is eligible for $150,000 per year in entitlement funding and competes for additional discretionary FAA funding. An airport can delay getting entitlement funding for up to four years to accumulate enough revenue to complete a project if it cannot be funded for $150,000 or does not get fully funded from other sources.

Improvements related to enhancing airport safety, capacity, security, and environmental concerns are eligible through the AIP program. Typical AIP eligible projects include: airport master plans and airport layout plans; land acquisition and site preparation; airfield pavements, e.g. runways, taxiways, and transient aprons; lighting and navigational aids; safety, security, and snow removal equipment; selected passenger terminal facilities; and obstruction identification and removal. In addition, some revenue producing projects can be funded from an airport's entitlement grants if there are no runway or safety projects at that airport.

Highest funding priority according to FAA's rating procedure is generally offered those projects that are safety related such as obstruction removal, runway safety area improvements, and facility improvements to meet current FAA Airport Design Standards.

State Grant Programs

Caltrans, Division of Aeronautics provides state funding for airport development projects from the Aeronautics Account in the State Transportation Fund. Grants and loans from the Division fund projects for safety, maintenance, and capital improvements at airports and also fund the preparation of airport land use compatibility plans. A summary of eligible projects includes the following:

- ***AIP Matching:*** the State can provide its 5% match (effective May 24, 2012) for any type of project as long as its primary benefit is for general aviation (GA) and the project is included in the State's Capital Improvement Plan (CIP).
- **Obstruction Removal.** Removal of obstructions from runway safety areas, RPZs or approach surfaces, and the other imaginary surfaces, if they have been determined by the FAA or the Department to be a hazard.
- **Radios.** Aviation radio equipment and facilities.
- **Land.** Acquisition of land and avigation easements.
- **Lighting**. Purchase and installation of runway, taxiway, boundary, or obstruction lights, with directly related electrical equipment, ***to meet general aviation needs***.
- **Fencing.** Minimum security fencing around the perimeter of an airport, ***for general aviation purposes***.
- **Transient Parking.** Construction/reconstruction of transient ***general aviation*** aircraft parking areas.

- **Bond Service.** Servicing of revenue or general obligation bonds that have been issued to finance airport capital improvements.
- **Navaids.** Air navigation aids including rotating beacons, runway end identifier lights, and localizer transmitters.
- **Airport marking systems** such as segmented circles, wind socks, traffic pattern indicators, and wind tees.
- **Noise monitoring equipment** to meet ***general aviation*** needs.
- **Project Services.** Engineering for eligible construction projects; appraisal and escrow fees for land acquisition.
- **Runways** and **Taxiways.** Construction and reconstruction.
- **Service roads** that are not open to the public.
- **Surfacing** of runways, taxiways, and aircraft parking areas to ***GA standards***.
- **Water supply** and **sanitary disposal systems** for airport use.
- **Master plans** and **airport layout plans.**
- **Comprehensive Land Use Plan (CLUP).** Activities of an airport land use commission (ALUC) to prepare or update a CLUP.

Local Sponsor Funding

Local funding of capital projects for Redlands Municipal Airport can be accomplished either through the City's enterprise/reserve/capital funds or in some cases, the local general fund. This expenditure may be offset by airport-generated revenues. The City can also issue general obligation (GO) or revenue bonds. These bonds are usually reserved for large capital projects. Independent underwriters must evaluate revenue bonds, and the proposed bonds must demonstrate a reasonable expectation of repayment. As some Airport projects do not generate revenue surpluses, they may not always meet this test.

Private Enterprise Funding

Private investors are also a potential source of funds for revenue producing development. Tenants and/or investors may finance the construction of facilities from which they derive income. While the direct revenues to the Airport are usually limited to the lease charges for the land underlying the facilities, the City would not need to obtain its own funding for these improvements. For leases with reversion clauses, the private investment in improvements will eventually revert to the local sponsor, who can then charge market rates for the remaining useful life of the facility. Additionally, the increased activity resulting from the airport improvements often increase the number of based aircraft, which in turn, generate additional revenue associated with fuel sales and other aviation services.

6.4 Summary Recommendations

The purpose of this Business Plan for Redlands Municipal Airport is to assess potential means to improve the Airport's financial performance, economic development, and operation. To do this, a number of potential operational and development scenarios were evaluated, providing the City of Redlands with decision-making information. The Plan is founded upon an

understanding of current activities at the Airport and sets forth options to address a number of key issues: updated lease agreements, defining the Airport brand, the possible need for new hangar space, the development of non-aviation property, and the continued engagement of the City with its Airport users and tenants. The recommended plan of action from this report rests, in large part, on five primary strategic initiatives:

1) Strengthen the Airport Brand: This initiative begins with a vision of what the Airport can become in the future. From a branding standpoint, there are a number of actions that can be undertaken including: a common paint scheme and beautiful entrance, City representation at the Airport in the form of an Airport Manager, a stand-alone website, a new promotional brochure, and a marketing campaign including direct mail, printed materials, and video/multimedia. Strengthening of the brand will permit the City to better market the Airport to customers in its service area and can increase business aviation use. This is particularly important for increasing market share or attracting aircraft from general aviation airports in the region that may be closing or downsizing over the next 10 years. The recommended branding targets include: Flight Training/Educational Partnering; Personal Flying; and Business Aviation.

2) Increasing Revenues: The City has not been able to afford a full-time manager because net revenues at the Airport have been meager over the last several years. To increase revenues and serve aviation demand, the City should consider getting into the fuel sales business and increasing their role as a property-owner. The entrance into the fuel sales market would require an above-ground AvGas tank, with an eye toward providing Jet-A fuel in the future. The development of hangar lease revenue can occur through either the construction of hangars with grant and other funding, or acquisition of hangars as they come on the market.

3) Solving Existing Issues: There are a number of issues facing the City and the Airport. These include the development of acceptable helicopter flight patterns (which should be resolved shortly), the continued removal of the dirt hill on the east side of the Airport, the continuing need to increase communication and trust between the City and Airport patrons, the need to protect the Airport and surrounding citizens from incompatible land uses, and a number of other issues. Some of these issues are beyond the scope of this Business Plan, others are addressed as a part of the Plan.

4) Non-Aviation Land Uses: Non-aviation land uses can include both on-Airport and off-Airport areas. The Plan identifies areas on the Airport that can be used for revenue generation, including up to 32 acres of land for solar panel farm use. This use is contingent upon environmental clearances, particularly the kangaroo rat habitat. For off-Airport land uses, the City should encourage light industrial and commercial/retail land uses. The City has already protected the Airport from incompatible land uses by requiring avigation easements that restrict noise complaints or litigation for new residential housing in the Airport environs. This information should be publicized so as to prevent future misunderstandings.

5) Other Recommendations: There were 34 specific recommendations made by the Plan. Some of these other initiatives covered by the Plan included the potential partnering with San Bernardino Valley College to add flight training at REI to their existing aviation curriculum. Also, the Plan recommended an update to the existing rates and charges schedule, based upon CPI escalations. Other recommendations involved the possible attraction of a restaurant to the Airport, increased business aviation use, and continued support and expansion of the Hangar 24 AirFest event.

Specific recommendations by timeframe and priority are presented as follows:

On-Going Initiatives Prior to This Study

- ***Priority #1 – Helicopter Flight Paths:*** Recommendations from the study of helicopter activity and flight paths should be implemented to the benefit of helicopter operators at the Airport.
- ***Priority #2 – AirFest:*** The City should continue to use the Airport as a venue for AirFest and should encourage other events that are compatible with the Airport's operation.
- ***Priority #3 – Annual Credit Grant:*** The City should take advantage of the $10,000 Caltrans annual credit grant to fund operational costs at the Airport.
- ***Priority #4 – Dirt Hill Reduction:*** The City should continue to work with San Bernardino County to have the responsible property owner reduce the size of the dirt hill to the east of the Airport.

Immediate

- ***Priority #1 – Airport Manager:*** The City should fill the vacant Airport Manager's position with City staff stationed at the Airport on a part-time basis.
- ***Priority #2 – Rates & Charges:*** The City should raise selected rates and fees for new leases or as permitted by existing lease agreement terms.
- ***Priority #3 – Land Use Compatibility:*** The City should publicize the full nature of existing avigation easements that restrict noise complaints or litigation for new residential housing in the Airport environs.
  - If land around the Airport is to be developed by private interests, the City should encourage light industrial and commercial/retail land uses.
  - The City should review and update its Airport Land Use Compatibility Plan to ensure that it conforms to the 2011 California Airport Land Use Plan.
- ***Priority #4 – AAB Meetings:*** The City should consider increasing the frequency of Airport Advisory Board meetings to at least one per month.
  - The City should continue to engage existing Airport Users (clients and tenants) to solicit feedback on Airport issues.

Remainder of 2016

- ***Priority #1 – Airport Brand:*** The City should adopt a future brand for the Airport and then weigh all spending and service actions against this vision.
  - The twofold Airport brand should be focused toward aviation customers and local stakeholders.
- ***Priority #2 – Airport Community Value:*** The City should coordinate with economic

development agencies and through its online presence to publicize the Airport's Community Value.
  - The City should partner with the Chamber of Commerce and other civics clubs to promote the Value of the Airport to the Community.
- ***Priority #3 – Permitting Process:*** The City should develop an administrative permitting process for sanctioned events at the Airport.
- ***Priority #4 – Hangar Development:*** The City should seek the development of T-hangars and conventional hangar space as demand warrants.

Short Term: 2017 – 2018

- ***Priority #1 – Rules and Regulations:*** The City should develop a set of Airport Rules and Regulations that emphasize safety and conformance to industry standards.
- ***Priority #2 – Fuel Sales:*** The City should consider offering self-service fuel sales for AvGas. If demand warrants over the longer term, consideration should be given to offering Jet-A fuel as well.
  - If the City enters the aviation fuel selling business, it should monitor the demand feasibility for jet fuel sales at the Airport.
- ***Priority #3 – Lease Policy:*** The City should create a new Airport Lease Policy to clarify tenant-Airport lease responsibilities and future options.
- ***Priority #4 – Minimum Standards:*** The City should create a new Minimum Standards document to clarify and standardize requirements and for aeronautical business at the Airport.
- ***Priority #5 – Solar Panel Farm:*** The City should initiate discussions with local power companies to determine whether a large solar panel farm is feasible at the Airport.
- ***Priority #6 – Flight Training Partnership:*** The City should initiate a direct dialogue with the Provost of San Bernardino Valley College to discuss the potential of adding flight training at REI to their existing aviation curriculum.
- ***Priority #7 – Airport Restaurant:*** The City should determine whether restaurant development at the Airport terminal Lobby is workable, relative to structural requirements and FBO space needs.
  - If the Lobby can be used for a restaurant, the City should request statements of interest from qualified restaurant candidates.
- ***Priority #8 – Ground Transportation:*** The City should ensure that there is adequate ground transportation to and from the Airport for air visitors.
- ***Priority #9 – Online Presence:*** The City should develop social media outlets and an individual website as part of its branding strategy for Redlands Municipal Airport.
- ***Priority #10 – Hangar Development:*** The City should seek the development of T-hangars and conventional hangar space as demand warrants.

Longer Term 2019 – 2025

- ***Priority #1 – Hangar Development:*** The City should seek the development of T-hangars and conventional hangar space as demand warrants.
  - If grant funding is available and waiting lists can be established, the City should consider constructing T-hangars.
  - If private development of new hangars is desired by the City, a lease policy that

includes reversion clauses should be implemented beforehand.

- ***Priority #2 – Business Aviation:*** To attract more business aviation, the City must continue to upgrade the Airport brand by finding ways of increasing hangar space, providing jet fuel, increasing perceived security, and marketing these improvements.

7. AIRPORT COMMUNITY VALUE

IN RECENT YEARS, THE VALUE OF AIRPORTS has come under closer examination from both government officials and the general public. In many communities, this has resulted in higher expectations of financial performance and economic benefits. Measuring this performance and some type of return on investment is critical to the argument for future capital improvement projects. For the City of Redlands, the value of the Airport to the community may be important in the decision-making process surrounding funding support of operations or capital improvements. Therefore, the documentation of REI's economic impact and contribution to the local economy is the first half of this work. The other half of the equation is the determination of the asset value of the Airport, so as to equip decision makers with information about the value of any capital investment at the Airport.

When examining the economic health and well-being of a business, it is customary to examine both the income statement and the balance sheet. Similarly, the Airport Community Value (ACV) measurement examines the "income statement" (as measured by the RIMS II economic modeling) and the "balance sheet" (as measured by the depreciated or useful life value of REI assets). Most economic impact studies have focused only on the "income" side of an airport's economic value. For a full picture, the existing value of airport facilities should also be included in the airport's economic impact. This would take the form of an estimate of replacement costs or existing facility worth (including useful life depreciated values of facilities). With a baseline value such as this, measurement of the total value of an airport is possible.

Given these analytical needs, this section is organized to address the following topics:

- Economic Activity Generated by REI
- Existing Value of Airport Property and Facilities
- Summary of Airport Community Value

7.1 Economic Activity Generated By REI

The economic activity of Redlands Municipal Airport was measured by estimating the number of direct jobs, income, and output generated at the Airport. In addition, there is a ripple effect of these jobs and income on the community. Just as the nation experiences multiplier effects of job creation or cutbacks, individual communities experience similar processes - both positive and negative - only at a smaller scale.

The Multiplier or Ripple Effect

Previous economic impact studies show the multiplied effects of spending money on an enterprise. As an example, if a new firm comes into an area and employs 50 people and also purchases some local goods and services, the economic impact is attributable to the company's direct outlays plus the respending of these outlays by firms supplying goods and services to the new firm. There are generally two types of ripple effects: (1) those associated with firm-to-firm transactions, and (2) those derived from the wages and salaries allocated to employees in these firms. The wages and salaries paid to the 50 new employees are spent and respent several times

within the community. Retail establishments that have nothing to do with the nature of the new firm's business are affected by its presence as the new employees spend their income on clothes, automobiles, restaurant meals and so forth. Thus, for every dollar of new wages and salaries, an additional 25 to 75 cents of income might be generated elsewhere in the area. As supplier companies providing inputs to the new firm expand their own production and allocate more resources to wages and salaries, a further consumption-generated ripple effect occurs.

When all the effects are taken in the aggregate, a new job often generates the equivalent of another job (summed up over many partial jobs in different parts of the area's economy) if the community is large and has a sophisticated consumer retail base. In smaller communities, a new job can generate between one-third and two-thirds additional jobs. Ripple or multiplier effects work in both a **positive** way (when an existing airport expands) and in a **negative** manner (when an aviation enterprise moves to another airport or goes out of business).

Numerous studies have been conducted to establish respending multipliers for various geographic areas and segments of the economy. Sector-specific, input-output multipliers are usually developed to estimate the respending impacts of wages and salaries and other related expenditures. For impacts relating to airport employment, construction, and local business use, multipliers from a number of different sectors are used.

Annual Economic Impact

Annual economic impacts are estimated by taking all of the direct impacts and subjecting them to the multiplier effect analysis, and then adding the direct and induced impacts together. Definitions of these terms are as follows:

- ***Direct Spending:*** Includes on-airport spending on employment, operations, and capital projects. It also includes off-airport spending by air travelers for rental cars, hotels, restaurants, etc. Thus, direct spending is associated with both the *providers* and the *users* of airport services.
- ***Induced Benefits:*** Multiplier effect impacts above the original direct spending created by the successive rounds of spending in the local economy until the original direct impact has been incrementally exported from the local area.
- ***Jobs and Income:*** Quantify the income generated by aviation and the number of jobs supported by the Airport.
- ***Total Output in Dollars:*** The combined impacts of direct and induced spending.

Thus, the economic impacts of aviation can be felt in parts of Redlands's local economy that are far removed from aviation. Regions that are more economically self-sufficient have higher respending "multipliers" than do regions that are more dependent on regional imports since less of the money is siphoned out of the community for goods and services.

The quantified direct impacts from Redlands Municipal Airport were estimated by the consultant through the use of surveys, published financial statements, and estimates of visitor activity:

- Jobs: 9 Full-Time, 8 Part-Time
- Average Annual Capital Expenditures: $124,200
- Average Annual Visitor Expenditures: $269,500

When these inputs are used for the RIMS II model, the following economic impact results are shown:

Table 7-1 - Direct and Induced Economic Impacts: Redlands Municipal Airport

ITEM	AMOUNT
Direct Impacts	
Airport-related Income*	$937,300
On-Airport Expenditures (Total including capital costs)	$2,343,300
Airport-related Employment (Total)	20
Induced Impacts	
Induced Direct Impacts	$2,378,500
Total Induced Employment Impacts	21
Grand Total Dollar Impacts	**$4,721,800**
Grand Total Income Impacts*	**$1,668,400**
Grand Total Employment Impacts	41

* Includes indirect incomes from visitor spending and capital development. This is a subset of the total impacts and is already included in the output number.

As shown, the operation of the Redlands Municipal Airport produces roughly $1.7 million in incomes, $4.7 million in total economic output, and it sustains 41 jobs. These components of the Airport's value were quantified as a part of the airport economic activity portion of the analysis, and represent the "income statement" for REI.

7.2 Existing Value of Airport Property and Facilities

Two estimates of existing airport asset values are helpful in describing the overall Airport Community Value. The first value of an existing airport is the replacement cost of the facility. While this is not the current value of the facility due to depreciation of assets, it gives an idea of the resources needed to replicate the facilities at the local airport. The Airport replacement value can be estimated by multiplying unit costs of construction times the existing quantities of facilities to derive an approximate infrastructure investment total. Land values are added to the facility development costs, yielding a total replacement value. Not included in this mix are the potential difficulties of actually replacing the airport due to environmental issues, land use constraints, and property availability. A second important descriptor in the ACV involves the "depreciated" or "useful life" value of the existing airport facilities. Both of these are described in the following sections.

Airport Replacement Value

When considering the value of an airport, its economic impact is usually identified, but rarely are the assets identified or valued. At Redlands Municipal Airport, a significant value of the facility is related to its replacement value and current asset worth. The replacement value of Redlands Municipal Airport is an estimate of the construction value of the individual facilities at the Airport. This estimate uses the dimensions of the major assets, multiplied by the unit costs of construction to obtain an approximate total value for the cost of the Airport. Table 7-2 shows the estimation of those costs, including the value of the property on which the current Airport is located. Replacement of the Airport would cost about $103.4 million (Table 7-2).

Table 7-2 - Redlands Municipal Airport Replacement Value

	Description	Units		Cost/Number	Amount
Land Value	Acres from 5010	194	Cost/Acre	$ 287,000.00	$ 55,678,000
Pavement					
Runway	Length x Width	337,800	Cost/sq.ft.	$ 15.00	$ 5,067,000
Taxiway	Length x Width	171,500		$ 15.00	$ 2,572,500
Apron Area	Estimated	825,150	Cost/sq.ft.	$ 9.00	$ 7,426,350
Hangars					
Box Hangars	Total Square Footage	225,700	Cost/sq.ft.	$ 100	$ 22,570,000
T-Hangars	Total Units	103	Cost/Unit	$ 75,000	$ 7,725,000
Fuel System	0=None, 1=10,000 gals, 2=More than 10,000 gals.			Lump Sum	$ 150,000
Navigational Aids	0=None, 1=Nonprecision 2=Precision			Lump Sum	$ 500,000
Internal Roadways	Total Linear Feet	-	Cost/l.f.	$ 140	$ -
Auto Parking Lots	Total Square Footage	22,000	Cost/sq.ft.	$ 8	$ 176,000
Perimeter Fence	Total Linear Feet	13,600	Cost/l.f.	$ 20	$ 272,000
Non-Hangar Buildings	Estimated	5,100	Cost/sq.ft.	$ 250	$ 1,275,000
Total Replacement Value					$ 103,411,850

Thus, one method of valuing the facility would be to consider the equivalent costs of replacement. Since many of the existing facilities are aging, they have lost a portion of their value in accordance with their useful life. In this regard, a second measure of Airport value was made - Current Value of Airport Facilities.

Current Value of Airport Facilities

The current value of Airport facilities was estimated using the calculated replacement value along with the age of various facilities and their estimated useful life. The ACV metric includes the following assumptions:

- ***Paved Area Value Reductions:*** The replacement cost of paved areas were reduced by applying the following percentages based on estimated facility age:
  - Good (0-5 years): -12.5%
  - Fair (6-10 years): -37.5%
  - Poor (11-20 years): -75%
  - Over 20 years: -100%

- ***Hangars and Non-Hangar Building Value Reductions:*** Using a 40-year life as a reasonable benchmark, the following percentages were applied to estimated replacement values for each facility:
  - 0-5 years: -6.25%.
  - 6-10 years: -18.75%
  - 11-20 years: -37.50%
  - Over 20 years: -67.00%

- ***Other Facilities:*** Other facilities such as fuel systems and instrument approaches were not reduced in value, since their replacement costs are assumed to increase at the same rate as their depreciation.

- ***Land Value:*** The land value used for the ACV metric was taken from an average of recent listings of property in the vicinity of the Airport. For the purpose of the ACV metric, both the existing and replacement land values are the same since land typically does not depreciate in value.

Table 7-3 - Depreciated/Existing Airport Value

	Age of Existing Facilities				
Land Value	N/A				$ 55,678,000
Pavement	Square Feet 0-5 years old	SF 6-10 yrs	SF 11-20 yrs	SF Over 20 yrs	
Runway			337,800		$ 1,266,750
Taxiway			171,500		$ 643,125
Apron Area			182,000	643,150	$ 409,500
Auto Parking Lots			22,000		$ 44,000
Hangars					
Conventional Hangars		56,000	94,300	75,400	$ 12,931,950
Box Hangars				103	$ 2,549,250
Fuel System					$ 150,000
Instrument Approaches					$ 500,000
Internal Roadways			-		$ -
Linear Fence			13,600		$ 170,000
Non-Hangar Buildings				5,100	$ 420,750
Existing Facility Value					$ 74,763,325

To account for the remaining useful life in terms of replacement costs, the replacement values listed in Table 7-3 were decreased in accordance with the age and remaining useful life of each facility. No deprecation was assumed for the land or the fuel system since they hold their original value by function. As an asset to the City, the Airport's existing facility value based upon useful life estimates is approximately $74.8 million. This is roughly 72 percent of its replacement value as estimated with land costs.

One measure of return on assets (ROA) is an airport's ability to use its assets to generate operating revenues. Assets include cash and cash equivalents, as well as physical items of tangible value, such as buildings, equipment, pavement, and land owned by the airport. For the most part, the ROA measurement should be used historically for the industry being analyzed. If peer airport comparisons are made, it is imperative that the airports being reviewed are similar in size and aircraft activity. For airports, ROA is measured using operating revenues, which is an acceptable variable for ratio comparison. Information from our database indicates that reasonable ranges for this ratio are between 0.2 percent and 2.2 percent. Redlands Municipal Airport has an ROA from operating revenues of 0.4 percent, which is in the lower range of the production scale.

Another measure of ROA involves the use of economic output in the ratio. As such, Redlands Municipal Airport is producing economic output equal to 6.3 percent of its current asset value each year. Unlike a school system that requires funding for salaries, maintenance, and equipment to produce jobs and economic output, the Airport provides a large economic output in addition to producing a net positive operating return on investment (prior to depreciation expense). Large capital investments do require participation by the City, and then, only on a 5 percent matching basis in most cases. Thus, even the capital investments are leveraged 19 to 1.

It is recognized that economic benefits are not the only reason to invest in projects. There are quality of life factors, safety, and other issues that are worthy of a community's investment. However, in comparing economic benefits, these ROA measures are very useful.

7.3 Summary of Airport Community Value

The value of Redlands Municipal Airport has been estimated in this analysis, using two very different measures. The first was the economic activity metric, which assesses the job creation, income, and output, generated at the Airport. This value was estimated using RIMS II economic modeling. Our study indicated the Airport generates an average of $4.7 million per year in total economic output and sustained 41 full-time equivalent jobs in the area.

A second measure of the value of the Airport involves the current asset value. In this regard, a method was used that first estimated the current replacement value of the facility and then reduced that value by the useful life remaining on each specific asset. This procedure resulted in a replacement value estimate of $103.4 million and a current value of $74.8 million. Taken as a snapshot in time, the total value of the Airport could be estimated to include its annual economic activity ($4.7 million) plus its current asset value ($74.8 million). Adding these two numbers, it can be shown that **the overall value of the Airport to the community is $79.5 million.**

There are a number of non-monetary benefits of aviation that have not been mentioned in

this analysis. Some of these benefits include:

- ***Transportation Benefits:*** Defined as the time saved and cost avoided by travelers who use airports rather than the next best alternative. Redlands Municipal Airport provides access to the National Air Transportation System.
- ***Stimulation of Business:*** Redlands Municipal Airport is used by area businesses. As such, its convenience is valued by aviation business travelers.
- ***Law Enforcement and Aeromedical Evacuation:*** Redlands Municipal Airport serves as a base for the Redlands Police aircraft and is also used for aeromedical evacuation teams and flight services, when necessary. The law enforcement and life-saving functions have intrinsic value that often cannot be adequately quantified.
- ***Recreation:*** Roughly 50 percent of commercial airline travel and 50 percent of general aviation travel is for recreational purposes.

All of the above factors point to a value of an airport that is not easily quantified. The impacts that were estimated within the body of this report are only one facet of the overall picture. The economic activity generated by the Airport along with its current asset value represent the monetary value of the facility, while these other non-monetary factors describe other features of its intrinsic worth.