TO: HONORABLE CITY COUNCIL

ATTN: FINANCE COMMITTEE

FROM: CITY MANAGER **DEPARTMENT:** ADMINISTRATIVE SERVICES

DATE: OCTOBER 19, 2010 **CMR:** 379:10

SUBJECT: **Presentation and Discussion of R. A. Wiedemann & Associates City of Palo Alto Airport Business Plan Options and Community Valuation Analysis; Request for Council Input and Direction on Options; and Formation of an Airport Advisory Committee**

EXECUTIVE SUMMARY

The Council directed staff and provided the resources to develop business plan options for termination of the Palo Alto Airport (PAO) lease prior to 2017, the time at which the County's 50 year lease expires. The intent is for the City to have operational control of PAO earlier than 2017. The attached report from R. A. Wiedemann and Associates (Report) lays out several management options as well as pro-formas showing their results. Overall, each option shows solid net revenues over the long-term. The results show the potential to pay back some or all of General Fund "seed" money necessary to transition the airport from county control and to reinvest in the airport's infrastructure.

Staff continues moving forward with the Council direction of assuming control over PAO operations earlier than 2017, but before the City can proceed it is important to fully understand the costs and implications of each option before deciding which option to pursue. On a fundamental policy level, does the City want any direct role in operating the airport either by hiring all airport management and operations staff or by managing a Fixed Base Operator who operates the airport? Or, does the City desire to contract with a Third Party Operator who, with minimal City oversight, basically runs the airport? This is a critical question which staff wants to explore further and for which Council input is requested.

To begin the complex process of pursuing any of the airport options in the Report, there will be a need for expertise to evaluate each option further and to chart a prudent course of action. At this time, it is estimated roughly that $500,000 in resources are needed to hire such experts. In addition, considerable in-house staff time is required to set the process in motion and to guide it to fruition. Based on Council input, staff proposes to return with a Budget Amendment

Ordinance (BAO) for funding and to establish an Airport Enterprise Fund. Among other costs, the BAO will fund an environmental site investigation to determine if there is any contaminated soil or groundwater at the Airport that requires clean-up prior to the County and FBO lease expirations. In addition, establishment of an Airport Advisory Committee is recommended as the City moves toward managing the airport. Staff estimates that the process could take a minimum of two to three years based on discussions with other agencies and feedback from R. A. Wiedemann and Associates.

RECOMMENDATION

Staff recommends that the Council:

1) Provide input on and accept the "Palo Alto Airport Business Plan" and "Airport Community Value" reports by R.A. Wiedemann & Associates

2) Provide input on airport management options outlined in the Business Plan and direction on which options to further evaluate in order to continue with Council direction to take over the airport early.

3) Direct staff to return to Council with a Budget Amendment Ordinance that establishes a new Airport Enterprise Fund and the resources necessary to progress with finalizing a business plan and a takeover of the Palo Alto airport. The BAO would reflect a loan from the General Fund to the new Enterprise Fund.

4) Begin exploration of forming an Airport Commission comprised of users, businesspeople, and other appropriate members to advise Council

BACKGROUND

In 1967 the City and the County entered into a 50-year lease for management of the Palo Alto Airport (PAO). The lease agreement both with the County and the current Fixed Base Operators (FBO) expires in 2017.

In 2006, a County consultant recommended returning airport management back to the City before the lease expired in 2017. At that time, it was believed the PAO was a drain on County resources and the County was not recouping the costs of its capital investments. Indications from the County that it would only perform basic, safety related maintenance improvements was of considerable concern given the condition of the Airport's aging infrastructure. Following reports by the City Auditor and the Palo Alto Airport Working Group (PAAWG), which contested the financial and other conclusions by the County, Council directed staff to begin negotiations with the County of Santa Clara (County) to terminate its lease earlier than 2017 and to commence work on the action and information items raised by Council on November 13, 2007. These included:

- Preparation of an airport business plan or evaluation of City options for operating the airport
- Preparation of a community valuation analysis to determine economic value of airport to the City and community

- Preparation of semi-annual progress reports on negotiation status with County

On December 8, 2008 (CMR: 440:08), the Council adopted a PAO Mission Statement proposed by the Palo Alto Airport Joint Community Relations Committee (PAAJCRC) and reviewed and accepted a proposal from R.A. Wiedemann & Associates for preparation of a Palo Alto Airport Business Plan and Community Value Analysis. Council passed a Budget Amendment Ordinance which, together with a prior appropriation, authorized the City Manager to execute a $105,000 contract with R.A. Wiedemann to develop a PAO business plan and community valuation analysis.

DISCUSSION

The primary objectives of this City Manager Report (CMR) is to: summarize the business plan options in the Wiedemann report (Report); outline the airport community valuation analysis; provide staff's recommendation on next steps; obtain Council feedback and direction both on next steps and airport management options; and to update Council on any other progress on negotiations with the County since the last progress report.

As staff continues to follow Council direction on an early takeover of the airport, it has identified preliminary and substantial financial and staffing commitments for this project. These costs would be advanced by a financially challenged General Fund. Although staff believes advanced funds can be repaid, outside legal advice will be required to determine which costs can be reimbursed as the airport operation generates net revenues over time. The transition and startup expenses identified thus far include:

1. Phase II Environmental Site Investigation estimated at $150,000
2. Airport, legal and other expert support at an estimated cost of $350,000
3. Potential expenses to address unknown but urgent airport operational or capital needs

In addition to the above, extensive staff time and resources that would otherwise be devoted to existing priorities will be required. Efforts and involvement from the City Manager, Deputy City Manager, Economic Development Manager, City Attorney staff, ASD Director, Deputy ASD Director, a Senior Financial Analyst, Public Works Director, Assistant Public Director, other Public Works staff, and other administrative support are needed to implement a takeover. The City staff has no expertise in this arena, so knowledgeable support to staff is a necessity both to evaluate the management options in this report and to start a transition process. It is staff's intent to return to Council with a BAO that establishes an Airport Enterprise Fund and provides funding to move forward with control of airport operations.

Wiedemann Business Plan Options Report

The Report examines the feasibility and potential options for transferring the direct control, management, and operation of PAO from the County to the City early or upon expiration of the airport lease in 2017. Understanding the City's concern about potentially assuming an asset that could absorb significant City resources, the report considers potential management structure options and their projected pro-forma financial performance prior to and following the lease expiration in 2017. Key issues are addressed including: potential financial outcomes, a lack of City staff resources and expertise to operate PAO, the environmental sensitivity of the airport's

location, construction constraints due to the Baylands Master Plan, existing subleases, aging facilities, Palo Alto community relations and economic impact, and the competitive market position of PAO relative to other airports in the area.

The Report's financial projections verifies, to varying extents, the conclusions in both the City Auditor and PAAWG reports that the PAO has the potential to support itself financially over the long-term, presuming that all assumptions or variables in the report come to fruition. R. A. Wiedemann and Associates (Wiedemann) was asked to determine the financial viability of the airport from 2012 to 2017 and to determine if it could remain profitable, under varying management structures, for 20 years thereafter. Using historical revenue and expense information dating back to 2000, the consultant developed several "baseline" forecasts for operation of the airport through 2017. These forecasts assume staffing levels that are consistent with those currently maintained by the county. The report then builds upon these "baseline forecasts" to evaluate alternative business models for operating the airport. Because there are multiple and detailed scenarios that build on a previous scenario, readers of this CMR are encouraged to examine the consultant report (Attachment A). A brief synopsis of each relevant scenario follows.

It is important to note that the "seed" expenses cited above is not included in the models or forecasts in the report nor is there any consideration of potential payback of the County's outstanding advance. It should be noted, however, that the City does not recognize the advance as a City obligation. Naturally, these expenses would offset the net revenues shown in the report's pro-formas and the results discussed below.

Baseline Forecast for City or County Operation of PAO through 2017 (p. 35 of Report, Table 11)

Based on relatively conservative revenue and expense growth assumptions (page 35) as well as continuing current FBO leases, the report concludes that between 2012 and 2017, the County or City would have a net deficit of $129,200. The report shows that operating income would be positive over this period, but that after an annual $50,000 contribution to matching capital or other capital needs a cumulative deficit would result. The author states, "This projection can be considered the worst case scenario for the City or County operation of the Airport – continually increasing costs and very slow revenue growth." The report then goes on to assess a takeover by the City by July 2011 and concludes that the City could perform "slightly better" than the County since it would not have to pay for all of the overhead personnel the County currently allocates. For example, the County currently allocates and recoups the cost of noise management staff that Wiedemann states the City would not need to support.

Baseline Forecast for City Operation of PAO from 2018 - 2037 (page 36-37, Table 12)

Addressing the 20 year period following 2017, the report finds potentially more robust net revenues, especially as a consequence of the FBO leases expiring. In 2008, the current, two FBO's only paid $134,900 in annual rent, but it is estimated, based on the revenue and expenses of FBO's at other airports, that the FBO's netted more than $1 million in revenue from their subtenants. Wiedemann confirms this estimate by including revenue streams from FBO tie-down spaces and hangar and office rentals as income to the City. The Report does recognize additional City costs to take the place of current FBO workload. For this scenario, the report

projects that from 2018 through 2037, the PAO could generate $13.7 million in surplus revenues after accounting for capital matching and other necessary capital improvements. The Federal Aviation Administration (FAA) has indicated verbally that the old 50 year lease with the current FBOs is inappropriate and borders on a gift of public funds. They recommend that leases of shorter duration, e.g., 15-20 years, be implemented and the FAA intends to monitor these contracts.

Once again, the financial projections above do not incorporate "seed" expenses, consideration of County capital "advances," or any exceptional or unexpected major capital expenses. Although this scenario portrays healthy surpluses that could cover the "seed" loan and other unanticipated expenses, it is critical to note that as a condition of having accepted FAA grants that all revenue generated at PAO must be funneled back into the PAO with the exception of paying City overhead and other appropriate expenses (e.g., legal, payroll, and human resource). Hence, the General Fund cannot "profit" from airport operations. This guideline applies to all of the options discussed below.

This option basically represents the City and its staff running the airport. It presumes City staff will have future managerial, fixed base operator, and maintenance expertise to run the airport personnel. The alternatives that follow are variations on the assumptions for this model or substitutions for part or the entire City staffing model.

Discussion and Analysis of Alternative Operational and Management Options

After evaluating the City run "baseline" scenarios pre and post 2017, the report considers several different operational and management structures for PAO. Although the report does discuss a scenario where the County continues to manage the airport after 2017 that could result in additional City revenues, this CMR focuses on those alternatives where the City takes a proactive role in managing or hiring management for the airport. These options include:

A. City Operation of the Airport
   In order for the City to operate the airport, the consultant recommends hiring an airport manager several months in advance of taking possession. Then, an assistant manager and a part-time City worker would be hired when the City assumes control. The airport operation would become an Enterprise Fund and an Advisory Group, comprised of knowledgeable users, business leaders and community members to the Council, would be formed

B. Joint FBO and City Operation of the Airport
   In this scenario, the City would contract with a Fixed Base Operator to provide day-to-day management of the airport. Duties would include daily inspections, minor maintenance, apron and ramp management, reports to Council, and interaction with FAA Control Tower operations. Basically, the Operator would substitute for some of the staff hired by the City under Scenario A (above).

C. Third Party Management
   This option could take a variety of forms, but essentially the City would completely turn over operations and management to a third, for profit party. The City would retain

fundamental ownership of the land and would provide, for example, a long-term lease so that the third party could invest in and profit from operations. The City would have minimal control over operations other than to ensure quality service to airport users and make sure the Third Party is performing as expected. The consultant says the four main benefits of this option include: capital infusion, efficiency gains, revenue gains for the Airport Enterprise Fund, and an opportunity to reinvent the airport. In addition, the City would require "measureable performance requirements that can be specified, with appropriate penalties for failure to meet them."

The Report provides the pros and cons of each option as follows:

Table 18 – Summary of Pros and Cons for All Options	
Pros	**Cons**
City Operation of the Airport (Baseline City Management Options)	
1) Greater control of all factors, relative to County control of Airport 2) Positive net revenues over long term 3) Monitor and control investment in capital assets. 4) Ability to respond to Airport users and resident neighbors.	1) Responsibility for all finances and management of the Airport 2) Must deal with all staffing issues. 3) Airport can become political issue 4) Potential financial risk
Additional Hanger/Apron	
1) Highest revenue stream of all options	1) Potential change of Airport view shed
City Plus FBO Management	
1) Lower labor costs 2) Higher net revenues relative to 3rd Party Management and Baseline Projections 3) FBO responsibility for technical aviation issues	1) Less control of day-to-day operation and management of Airport.
Third Party Management	
1) Indirect responsibility for operating the Airport. 2) Airport operates as a profit center, providing periodic payments to City. 3) May represent lowest financial risk of all options.	1) Least amount of control over day-to-day operation and management of Airport. 2) Dependent upon financial stability and strength of 3rd Party Operator.

City management of PAO with additional hangars/apron from 2012 - 2017 and from 2018 - 2037 (Tables 13 and 14 on pages 43 and 44, respectively)

Moving on to the projected financial results for each option, the Report considers building incremental or new hangars. Wiedemann is acutely aware of the restrictions of the Baylands Master Plan on intensification of use and includes this scenario only to assess the "economic value" future operations could yield. The additional hangars could be built in areas that are not environmentally sensitive. This model builds upon the "Baseline Forecast for City Operation of PAO from 2018 through 2037" described above, but adds additional revenue and expense associated with building and maintaining new hangars.

To add new tie-downs and hangars in this "landside" option, the Enterprise Fund would issue $4.55 million in revenue bonds for 20 years at an estimated 5% interest rate. Once again using conservative revenue and expense assumptions, the Report presents pro-formas for the periods 2012 through 2017 and for 2018 through 2037. For the period 2012 through 2017, the projection shows cumulative net results of negative $43,800, but for the period 2018 through 2037 the cumulative net results show a robust $20.5 million.

This option departs from the Baylands Master Plan because it assumes additional hangars. The Master Plan specifically prohibits any intensification of use and would need to be amended to allow this option to be implemented.

City Plus FBO Management Option: 2018 - 2037 (page 45, Table 15)
For this option the Report states it "is only slightly different from the complete City management of the Airport." Day-to-day operation of the airport would fall to the FBO and the City would have overall control of the airport and supply the legal and other administrative services that complement those of the FBO.

This scenario does not contain any new tie-downs or hangars and includes the estimated cost of an FBO. One assumption for this scenario that will require further analysis is that the FBO flat management fee is less than the assumed salaries and benefits for a City run operation. The author acknowledges that an RFP process and eventual FBO contract could change the assumed FBO costs. For the period 2018-2037, the pro-forma for this option shows cumulative net revenues of $22.6 million. Based on the financial results of this scenario, staff believes currently that further investigation is merited.

Third Party Operation of PAO Option: 2012 - 2017 and 2018 - 2037 (pages 46-47, Table 16)
There are a number of formats for third party operation of the airport and they can range from "either management only or an all-inclusive master lease of the entire airport." In the Report, the former is assumed for the 2012-17 period. The third party would manage airport operations and procedures, manage property and assets, do maintenance and repairs, do tenant administration, and other operational tasks. The City would be responsible for making all policy and leasing decisions. For their work, the third party would likely be paid for their costs as well as a percentage of gross airport revenues. The percentage, per the Report, is likely to be in the 5-10% range. In this option, the Report estimates that for the years 2012-2018, the cumulative net revenues would equal $816,200.

For the period 2018-2037, the Report assumes in its forecast a third party master lease for the entire Airport which translates into very little involvement by the City. Building upon the City plus FBO pro forma, the consultant's third party lease scenario assumes that the Airport Enterprise Fund could expect between 70 to 80% of net revenues. By assuming a 75% return, the pro-forma results in total third party payments to the City's Enterprise Fund of $16.98 million during 2018-2037. The Report states that a lease of around 25 years would be expected by the third party in order to recoup its investments in the airport. The lease would have to be approved by the FAA and State Aeronautics. The length of the lease could be an issue for the FAA given its reservations about long-term leases so this options merits further investigation.

Summary of Pro-Formas and Consultant Conclusions

Table 17 from the Report (page 48) summarizes the financial forecasts for each of the options discussed above:

Table 17 – Summary of Financial Performance Options: Total Net Revenues

MANAGEMENT OPTION	2012-2017	2018-2037	Total Net Revenues
Baseline City Management	-$129,200	$13,678,500	$13,549,300
Additional Hangar/Apron	-$43,800	$20,500,700	$20,456,900
City Plus FBO Management	N/A	$22,646,400	$22,646,400
Third Party Management	$816,200	$16,984,800	$17,801,000

The Report concludes that the "City Plus FBO Management Option produces the greatest surplus of net revenues over the entire period" while "the Baseline City Management Option has the lowest total net revenues of the four options. The reason for the significant revenue differences between the City Management and City Plus FBO option is that the Consultant projects considerably less labor cost under the FBO scenario over time. Differences in outcomes between the FBO and Third Party options result from the Third Party taking a greater share of revenues to compensate them for costs and risks for assuming the entire airport operation. The variance between City and Third Party results from lower Third Party labor costs over time. From the pro-formas, it would appear that all options have sufficient revenues to cover the General Fund "seed" funding/loan as well as any other moderate, unanticipated operating or capital expenses.

In the "Recommended Options" section, the Report proposes two options: City and Third Party Management. These scenarios provide clear paths: either the City maintains complete control or delegates responsibility to a third party with relatively minimal oversight. Of the two options recommended in the report, the Third Party option results in better financial returns than the City run option. It should be noted that in all scenarios, the City is ultimately held responsible by the FAA for conditions at the airport.

The FBO option was not recommended because of potential FBO conflict of interest issues and the fact that the City would be responsible for all capital improvements while the FBO operated the airport. In addition, this model could lead to overlapping management and potential discord unless roles and responsibilities were clearly defined. Nonetheless, because this option yields the highest financial results, staff believes it is worthy of further analysis.

After making the recommendations, the Report describes the implementation steps for each of the two options. This is important information that sets the stage for a timetable with tasks to achieve the City's goal.

Airport Community Value

In Appendix B of the Report, the consultant goes beyond income statement projections for the airport management options and studies the economic benefit of the PAO. Using a software model, IMPLAN, to assess the impacts of expenditures by Airport employees, users, travelers an estimate of economic value is generated. Using a variety of "inputs" or data such as user spending on airplanes and employment at PAO, the IMPLAN model calculates direct and "induced" economic impacts. It is estimated that the Airport produces $64.3 million (including $22.4 million in wage income) in economic benefits to Palo Alto and surrounding communities. The model calculates that the airport supports 307 jobs. The $64.3 million does not include income, personal property and possessory interest taxes that are paid to the State, County and local jurisdictions. The Report states that over $3.7 million in State and local taxes is generated annually.

Semi-annual Progress Report on Negotiation Status with County

City and County staff have had periodic meetings to discuss the transition to City control. Discussions will continue to a more productive level after the completion of this report and Council direction is given.

Staff Recommendation and Comments

Moving toward a takeover of the airport will require a significant effort by staff and reliance on numerous outside experts such as outside legal counsel. This is the case whether the City assumes control prior to or when the County lease expires. It also will be the case if the City hires an FBO or Third Party. A most preliminary and perhaps aggressive estimate is that it will take a minimum of 2-3 years to implement City oversight. Staff's understanding is that this process must be thought through carefully and sequentially so as to facilitate the process, work through existing relationships, and maximize financial return to the Airport Enterprise. Negotiations and a contract with an FBO or a Third Party Operator will take considerable time and due diligence. It is recommended that an expert staff member or consultant be hired to work through the options in the Report and to guide the City toward an eventual takeover. In all of the above scenarios, the City will be responsible for submitting funding requests to the FAA.

This CMR has primarily concentrated on the financial results of the Consultant's report. There are non-financial issues that are important to consider and address. A fundamental policy question is how much involvement in and control of the airport does the City want, particularly since it lacks expertise in this arena and since any net revenues, after paying for any City overhead support, must be invested in airport improvements? Unless the City is prepared to repay FAA grant monies and decouple from FAA support (which a complicated process), there does not appear to be a direct return to the General Fund. The essential question is which management model is most efficient and effective in serving users, maintaining an important asset, and minimizing any impact on the General Fund?

A subsidiary question to City staff running the airport is how nimble and entrepreneurial will they be in contrast to an FBO or Third Party Manager who is familiar with facility maintenance, dealing with the FAA, accustomed to delivering a unique customer service, and who has the incentives to perform well? On the other hand, it should be noted that most California airports are managed by public agencies with a few exceptions in southern California that have third

party management. In fact, there has been one instance in which a public agency had to revoke third party management of the airport due to performance issues. The challenge in third party management is that strict specifications, performance measures, and oversight would be necessary if Palo Alto decides on this course. The City would likely need to hire a manager to keep vigil over the contract and service to the airport users.

Although the Report recommends two options, a City run airport or Third Party management, at this time staff believes the Council should also review and comment on the FBO option. Given the projected net revenues for an FBO model that are higher than the other options, this alternative merits further consideration and analysis. In addition, it provides the expertise the City needs to operate the airport if it chooses to have a management role short of full control. To assist with the analysis of management options and a transition to City control, staff recommends the formation of an advisory body to Council. Based on Council direction, staff will return with a Budget Amendment Ordinance (BAO) for required resources and the establishment of an Airport Enterprise Fund. A specific timeline (see below) for hiring the expertise and performing the required tasks to move forward would be provided along with the BAO.

In addition to the issue of a management model, there are concerns over the physical condition and vacancy rate at the airport. The former is a consequence of minimal County work in this area and the latter is a result of higher fees implemented by the County to recover its prior capital investments. These are important issues that affect the viability of the airport. In addition, there is significant community and economic value (see Appendix B) that should be recognized.

TIMELINE

Taking control of the airport will be a complex, step by step process that involves a host of entities and considerations. Multiple meetings with the County, the FAA, State, and East Palo Alto will occur over time. Legal, contractual, and operational issues will need to be worked through.

Depending on Council input and questions, staff envisions returning to Council with a BAO for additional resources and a more finalized Business Plan. At that time a more detailed timeline can be provided. Staff envisions the following, high-level timeline for next steps:

December, 2010	Return to Council with BAO
February, 2011	Formation of Airport Advisory Body
May, 2011	Advisory Board and Staff recommend, jointly or independently, Airport Management Option and Timeline Steps to Implement Airport Transition.

RESOURCE IMPACT

The preliminary costs of taking the first steps toward City control of PAO are $500,000. This estimate includes:

Phase II Environmental Site Investigation	$150,000
Airport Manager (annual cost)	$220,000

Other Expert or Consultant advice	$100,000
Legal advice (first year)	$ 30,000
Total	$500,000

The above costs are rough estimates and could vary depending on Council input and direction. Legal costs would be ongoing and would increase as negotiations with an FBO or Third Party ensue. In addition to an Airport Manager to help with the transition, other expert or consultant advice may be required. These expenses would be funded from the Budget Stabilization Reserve in the General Fund as a loan and repaid by the Airport Enterprise Fund once sufficient funds are accumulated.

POLICY IMPLICATIONS

This progress report and recommended actions are consistent with previous Council direction.

ENVIRONMENTAL REVIEW

A Phase I Environmental Site Assessment has been conducted and is attached to this CMR (Attachment C). The assessment was done to determine if any hazardous material spills have impacted soil and/or groundwater at PAO. The report concludes that there is sufficient cause to recommend a Phase II site investigation to evaluate potential soil and groundwater contamination at the PAO.

ATTACHMENTS

Attachment A: Wiedemann and Associates Business Plan and Community Value Analysis
- Appendix A: Survey of Airport Users
- Appendix B: PAO's Community Value

Attachment B: Environmental Site Assessment

PREPARED BY:

JOSEPH SACCIO
Deputy Director, Administrative Services

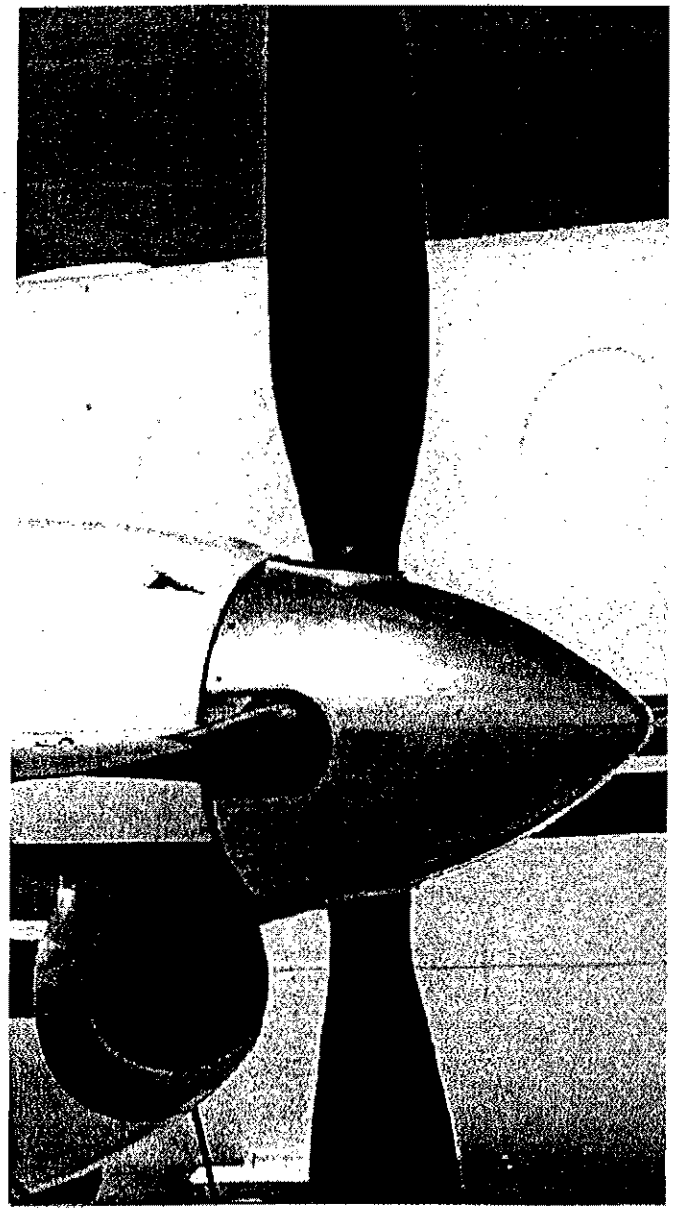
LALO PEREZ
Director, Administrative Services

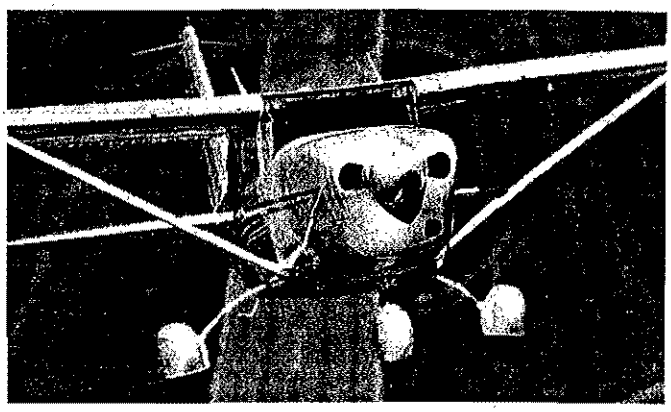
CITY MANAGER APPROVAL:

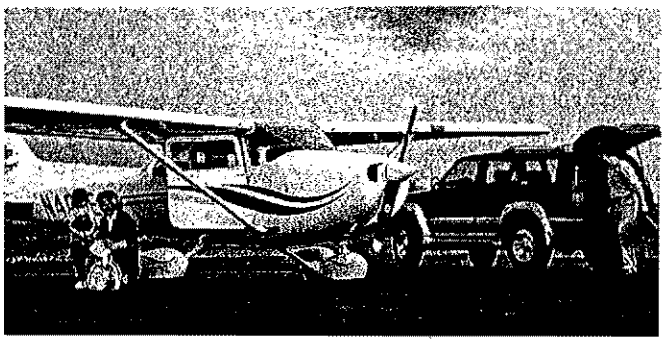
JAMES KEENE
City Manager

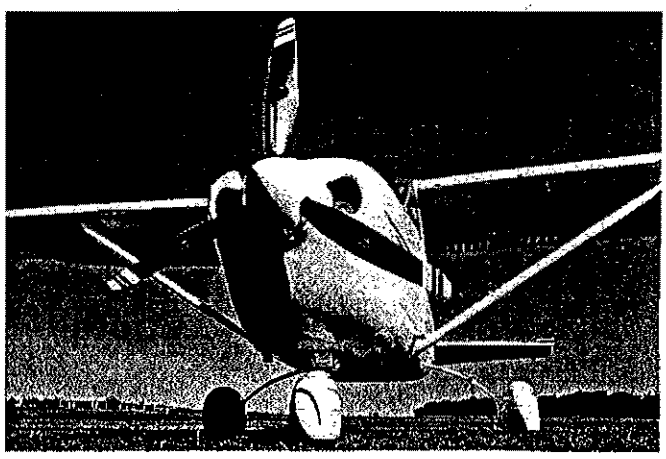
cc: County of Santa Clara
Palo Alto Airport Joint Community Relations Committee
Chair of the PAAWG

Palo Alto Airport Business Plan









Prepared for:

The City of Palo Alto, California

Prepared by:

R.A. Wiedemann & Associates, Inc.
AVIATION CONSULTANTS

P.O. Box 621 • Georgetown, KY 40324 • (502) 535-6570 FAX (502) 535-5314
www.rawiedemann.com

Palo Alto Airport
Draft Business Plan

Draft Technical Report

Prepared for:

City of Palo Alto, CA

Prepared by:

R.A. Wiedemann & Associates, Inc.

P.O. Box 621 • Georgetown, KY 40324 (502) 535-6570 • FAX (502) 535-5314

TABLE OF CONTENTS

TABLE OF CONTENTS (Cont.)

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ADDENDUM

DRAFT TECHNICAL REPORT
Palo Alto Airport Business Plan

1. INTRODUCTION

THE PURPOSE OF THIS BUSINESS PLAN FOR the general aviation airport located within the jurisdictional boundaries of Palo Alto, California (the "Airport" or "PAO") is to examine the feasibility of transferring the direct control, management, and operation of the Airport to the City of Palo Alto (the "City") prior to the expiration or earlier termination of the fifty-year ground lease with the County of Santa Clara, California (the "County") in 2017. In this regard, the City is exploring its options concerning an opportunity for the early termination of the lease, commencing as early as in 2011, thus creating the need for study of the administrative, financial, legal and political implications of taking such action. Of great concern to the City is the potential for assuming a liability that could require significant City resources to control, maintain and operate. This plan also will consider the potential management structure options and the projected financial performance of Airport operations following lease expiration in 2017.

1.1 Understanding & Key Issues

Our understanding of the Airport's current setting takes into account a number of long-standing events relating to the Airport, many of which occurred in the 1960s and 1970s. In particular, the Baylands Master Plan[1], first published in 1978, has spelled out the primary policy statement regarding any future growth or development within the Airport's boundaries. Limitations enunciated by this policy include a directive that there shall be no intensification of activity at the Airport. As such, previous efforts to expand the Airport's runway system were rejected, as were attempts to develop new hangars on the landside area of the Airport.

Since the lease with the County was signed in 1967, there have been many significant changes in the Bay Area. In particular, the development of Silicon Valley and high-tech industries, the influx of large numbers of affluent residents, a growing scarcity of developable land, and a greater concern for the ecology of the region has taken place over the past forty-plus years. The lease to the County was seen at the time as more efficient way to operate and maintain the Airport with minimal cost to the City. The current fixed base operator ("FBO") subleases were signed in 1969. The County ground lease and the FBO subleases by their terms and conditions will expire in 2017, if they are not earlier terminated.

The 102-acre Airport has one runway (13-31), which is 2,443 feet long and 70 feet wide. While it may be unusual that the small Airport has an Air Traffic Control Tower ("ATCT"), the ATCT ensures safe operations at the Airport, including the occasional stoppage of air traffic to permit geese to fly across the runway from the adjacent Palo Alto golf course. Another unusual aspect is that the small Airport has more than 500 based aircraft. This fact attests to the strong demand for local airport facilities in the Palo Alto area.

---

[1] Baylands Master Plan, 4th Edition, as Amended, City of Palo Alto, CA, 2008.

Key issues that are identified in this business plan include the following:

- ***Environmental Sensitivity:*** The importance and recognition by the community of environmental sensitivity in and about the Airport. This factor drives much of the policy decisions made about the Airport. The Airport boundaries are contiguous to the City-owned Baylands, Byxbee Park, and the nearby Don Edwards San Francisco Bay National Wildlife Refuge. Two endangered species found in and about the Airport include the Salt Marsh Harvest Mouse and the California Clapper Rail.

- ***Substantial Construction Prohibition***: Although the Baylands Master Plan does not expressly prohibit construction, there has long existed community concerns that the construction of additional or larger facilities at the Airport may result in intensified activity at the Airport. Thus the Baylands Master Plan enunciates the City's policy against intensification of activity at the Airport.

- ***Viewshed:*** The Palo Alto community has expressed a strong desire to preserve the viewshed of the Baylands near the Airport, from the vantage of Embarcadero Road. This preservation effort has served to deter the construction of new T-hangars on vacant Airport land. An ongoing landscaping project along Embarcadero Road has resulted in the growth of natural visual barriers which tend to make the Airport less visually or aesthetically objectionable. There are plans to extend landscaping along Embarcadero Road so that parked airplanes are less visible.

- ***Aging Facilities:*** The City expects the County to reinvest or promote the reinvestment in capital facilities at the Airport through lease expiration in 2017. The County has assured the City that, as the County is the ground lease tenant, it will continue to fulfill its lease obligation to maintain the Airport "as though it were the sole owner thereof." As 2017 draws near, the City's officials are well aware that there is little financial incentive for the County to rehabilitate and extend the useful life of facilities beyond the leasehold term. By reclaiming the Airport prior to 2017, the City's officials believe such action could assure a higher level of capital improvement and maintenance of the Airport. The difficulty of adequately improving and maintaining the Airport is compounded by the condition of soils at the Airport, which are typical of the relatively unstable coastal tidelands in the Bay Area due to their sandy and silt-loam nature and the effect of tidal action. These conditions effectively result in the reduction of the useful life of the pavements at the Airport by almost one-half. For example, though a runway pavement typically has a useful life of twenty years, the City anticipates that the pavement rehabilitation at the Airport, which was completed in 2001, will likely require substantial work in the 2012-2013 period.

- ***FBO Subleases:*** Some level of uncertainty regarding the renewal of the FBO subleases is perceived to exist and this may impact capital reinvestment in the FBO facilities, including hangars and pavements. Because the hangars and other buildings at the Airport will revert to the City's control and possession in 2017, similar

concerns about sufficient maintenance and capital investment in the airfield facilities also have arisen. In addition, there is some perception that the current FBO leases are underpriced and that any new lease would provide the Airport operator with a larger share of the FBOs' income.

- ***Rate and Fee Increases:*** The County's increase in tie-down rates in 2008 was viewed by some as a means of recouping money previously spent at the Airport, prior to lease expiration. The first round of rate increases by 8 percent coincided with the departure of 31 tie-down tenants. A second round of rate increases planned (but not implemented due to tenant objections) for June 2009, raised concerns that more based aircraft tenants would depart from the Airport, thereby potentially undermining the future cash flow at the Airport. Fuel flowage fees at PAO are now 10 cents per gallon higher compared to fees charged at the other two County-owned general aviation airports (Reid-Hillview airport and South County airport).

- ***Airport Operation:*** The City lacks in-house expertise and experience to manage and operate a general aviation airport. This concern has caused the City to consider other airport management structures that are used by various airport sponsors around the country, including third party or FBO types.

- ***Financial Feasibility:*** Many of the management and policy decisions to be made regarding the City's control, management and operation of the Airport will revolve around the City's ability to make the Airport financially viable as a self-supporting enterprise of the City. In particular, the City is not interested in taking on a facility that drains its resources without any expectation of a return of the General Fund contributions. Pro formas that can demonstrate whether or not the Airport can produce positive net revenues (under the most feasible management structure) are an essential part of the analysis.

- ***Community Relations:*** The value of the Airport as a community asset is influenced by community participation during the Airport Day event, occurring biannually, and the ongoing use of the Airport by individuals and businesses drawn to the Airport. Because airport operations occur mostly over uninhabited marshland and water, airport noise impacts on the community are minimal. The County- and City-appointed Joint Community Relations Committee ("JCRC") representatives work with the Palo Alto community in regard to noise complaints and as such, there are a surprisingly low number of complaints about airport operations in the area.

- ***Other Jurisdictions:*** The City recognizes that key decisions regarding the Airport warrant the City of East Palo Alto's participation or input in the Airport planning process. The Airport's northwest boundary abuts East Palo Alto and flight operations do occur over East Palo Alto in San Mateo County. In addition, the Airport falls within the jurisdiction of Santa Clara County's Airport Land Use Commission.

- ***Economic Impacts of the Airport:*** As a part of this Business Plan, the value of the Airport to the community will be estimated. This will include an estimate of the asset value of existing facilities at the Airport and an estimate of jobs, income, total output, and taxes that could be generated by activities at the Airport.

1.2 Desired End Products

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

- An assessment of the economic feasibility of City operation of the Airport through the year 2017.
- An assessment of the economic feasibility of City operation of the Airport in the post-2017 period.
- An assessment of the competitive market position of the Airport, relative to other airports in the service area.
- Pro forma options which project the expected results of different Management and Operating structures:
  - City Self-Management
  - FBO Airport Management
  - Other Third Party Airport Management
- An assessment of current Airport business operating practices.
- An assessment of the airport community value, to include both physical assets and economic impacts such as jobs, income, total output, and taxes generated.

1.3 Business Plan 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*** - Background and Management Structure
- ***Section 3*** - Existing Airport Characteristics
- ***Section 4*** - Baseline Financial Projection
- ***Section 5*** - Business Plan Alternatives
- ***Section 6*** - Recommended Options
- ***Appendix A*** - Detailed Survey Results
- ***Appendix B*** - Airport Community Value

2. BACKGROUND AND MANAGEMENT STRUCTURE

AN UNDERSTANDING OF THE HISTORICAL BACKGROUND AND management structure of the Airport will enable the City to identify challenges and opportunities associated with the impending change in control and management of the Airport. All aspects of control, management and operations of the Airport, including, but not limited to, the operating structure lease agreements, and other management considerations now in place for the County will require a thorough review by the City when the County lease expires or is earlier terminated.

To help establish the grounds for any changes in management structure, a clearly defined and realistic mission for the Airport is needed to provide an overall goal for guiding the operation of the facility. To be effective, this mission must reflect the desires and goals of the community and its elected and appointed representatives. To adequately lay the groundwork for future management structure decisions, the following topics are discussed:

- Current Airport Mission
- Current Airport Management Structure

2.1 Current Airport Mission

Palo Alto Airport's role is that of a general aviation facility, providing general aviation services for regional air transportation. Palo Alto Airport accommodates general aviation activity including all types of small to medium propeller aircraft. The Airport is operated by the County of Santa Clara's County Roads and Airport Department. The current mission of the Airport is included indirectly in the County of Santa Clara's County Roads and Airport Department mission which states:

> "The mission of the Roads and Airports Department is to preserve, operate, and enhance the County's expressways, unincorporated roads, and three general aviation airports in a safe, timely and cost-effective manner to meet the needs of the traveling public."

This mission statement is sufficiently general to provide operational leeway to adapt to current conditions. In addition to the Roads and Airports Department mission statement, the Airport Land Use Commission of Santa Clara County has the following mission statement:

> "To provide for the orderly development of each public use airport and the area surrounding these airports so as to promote the overall goals and objectives of the California airport noise standards and to prevent the creation of new noise and safety problems."

In addition to these, there is a County-level Airports Commission whose mission is to act in an advisory capacity to the Board of Supervisors on matters of policy concerning the operations, long-term financing, capital improvements and the acquisition of land or airspace for the County airport system.

In November of 2008 the Palo Alto City Council adopted the following Preamble and Mission Statement.

The Functions and Value of the Palo Alto Airport:

The Palo Alto Airport is an important civic asset for the nearby communities of Palo Alto, East Palo Alto, Menlo Park, Mountain View, Los Altos, and Los Altos Hills, as well as other communities. As part of the National Air Transportation System, it functions to meet the air transport needs for a range of constituents and agencies; these include business, recreational, medical patient and transplant organ delivery, and critical emergency services during a disaster or serious incident. It is also a designated reliever airport, accommodating general aviation operations incompatible with local large air-carrier airports.

The Mission of the Palo Alto Airport is:

- To operate a safe, efficient and cost-effective airport providing for general aviation operations within limits imposed by its size and location.
- To operate in conformity with all applicable laws and Federal Aviation Administration (FAA) requirements.
- To be self-supporting and operate without cost to the City's General Fund.

While there are diverse opinions, the Palo Alto Airport is considered by some as an asset to the community, providing air transportation infrastructure needed for both business and personal travel.

2.2 Current Airport Management Structure

As mentioned, PAO is owned by the City and has been leased to the County since 1967. The current lease expires in 2017, but an early end to the lease is being explored. The current management of the Airport is subject to County organizational structure. In this regard, Figure 1 presents an Organizational Chart, showing the direct lines of responsibility and formal communication for airport management. The Organizational Chart shows the lines of responsibility from the County's Director of County Airports to his Assistant Director, with staff input from the County's Noise Program Manager. The line of responsibility continues down through the Assistant Director of County Airports to the individual Airport Operations Supervisors. Palo Alto has been assigned one half-time Supervisor and two Airport Operations Workers. The current formal organizational chart for the Airport Operations is shown in Figure 1. Other staff shown in the Chart include the Airports Business Manager and the Administrative Assistant. Not shown in the Organization Chart are the levels above the Director of County Airports. In this regard, the Director of County Airports reports to the County Roads and Airports Department. The Roads and Airports Department is made up of four divisions: Administration, Road Operations, Infrastructure Development, and Airport Operations. That Department, in turn, reports to the County Executive who reports to the County Board of Supervisors.

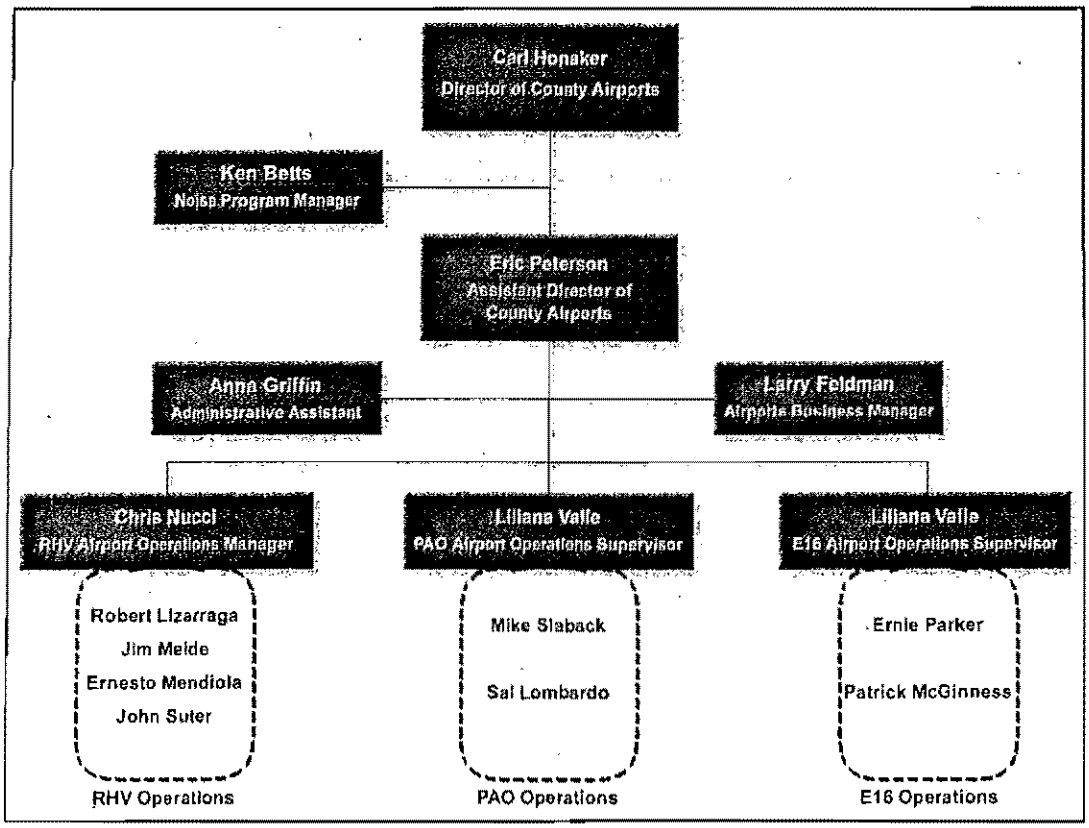


Figure 1 - *Formal Organization Chart*

Airport Operations

The County Airports Division policy is to staff the Palo Alto Airport during all hours of operations, or for 74 hours each week. The day-to-day operation of the Airport is the responsibility of the Airport Operations Supervisor. The Airport Operations Supervisor's position incorporates all facets of Airport administration along with responsibility for the equipment and maintenance of grounds at the Airport. The Airport Operations Supervisor must have a working knowledge of Federal, State, and local laws and regulations relating to aviation. From an administrative standpoint, the Airport Operations Supervisor oversees two Airport staff members. Two full-time Airport Operations Workers perform a variety of tasks including maintenance of facilities and equipment, landscaping, janitorial duties, tracking tenants, billing transient aircraft, repair and maintenance of runway facilities (such as runway marker lights, windsocks, and signs). The Palo Alto Airport Operations Supervisor spends two days per week at South County Airport.

Airport Staffing

The rationale for staffing the Palo Alto Airport was developed by the County using the following mathematical relationships:

- Annual Staff-hour Needed (74 hours/week times 52) = 3,848 hours
- Divided by Average Productive Hours/Worker (80% times 2080) = 1,664 hours
- Equals Full-Time Equivalents Needed = 2.3

With 2.6 full-time equivalent staff positions budgeted, the Department has an excess of 0.3 staff position. This excess can be used to cover for sick leave, vacation time, and other unexpected staffing issues.

3. EXISTING AIRPORT CHARACTERISTICS

PALO ALTO AIRPORT IS ONE OF FIVE airports located in Santa Clara County, California (Figure 2). The Airport occupies a 102-acre site within the urban limits of the City. Access to the Airport is directly off Embarcadero Road.

The original Palo Alto Airport facility was developed in 1923 and was situated near Newell Road and Embarcadero. In 1929 Stanford University was designated by the Aeronautics Branch of the Department of Commerce as Aviation Ground School Number One and the Airport was then moved to a location near El Camino on Stanford land (the current site of the football stadium parking lot). In 1935 the Airport was moved to the Baylands in what was then San Mateo County. Then in 1954 the Airport was moved further into the Baylands to its present location in order to make way for the Palo Alto golf course. In 1963 the county boundaries changed and the Airport was back within Santa Clara County. The Airport is owned by the City but is under lease to the County until 2017. An early termination of the lease is being considered as a part of this Business Plan.

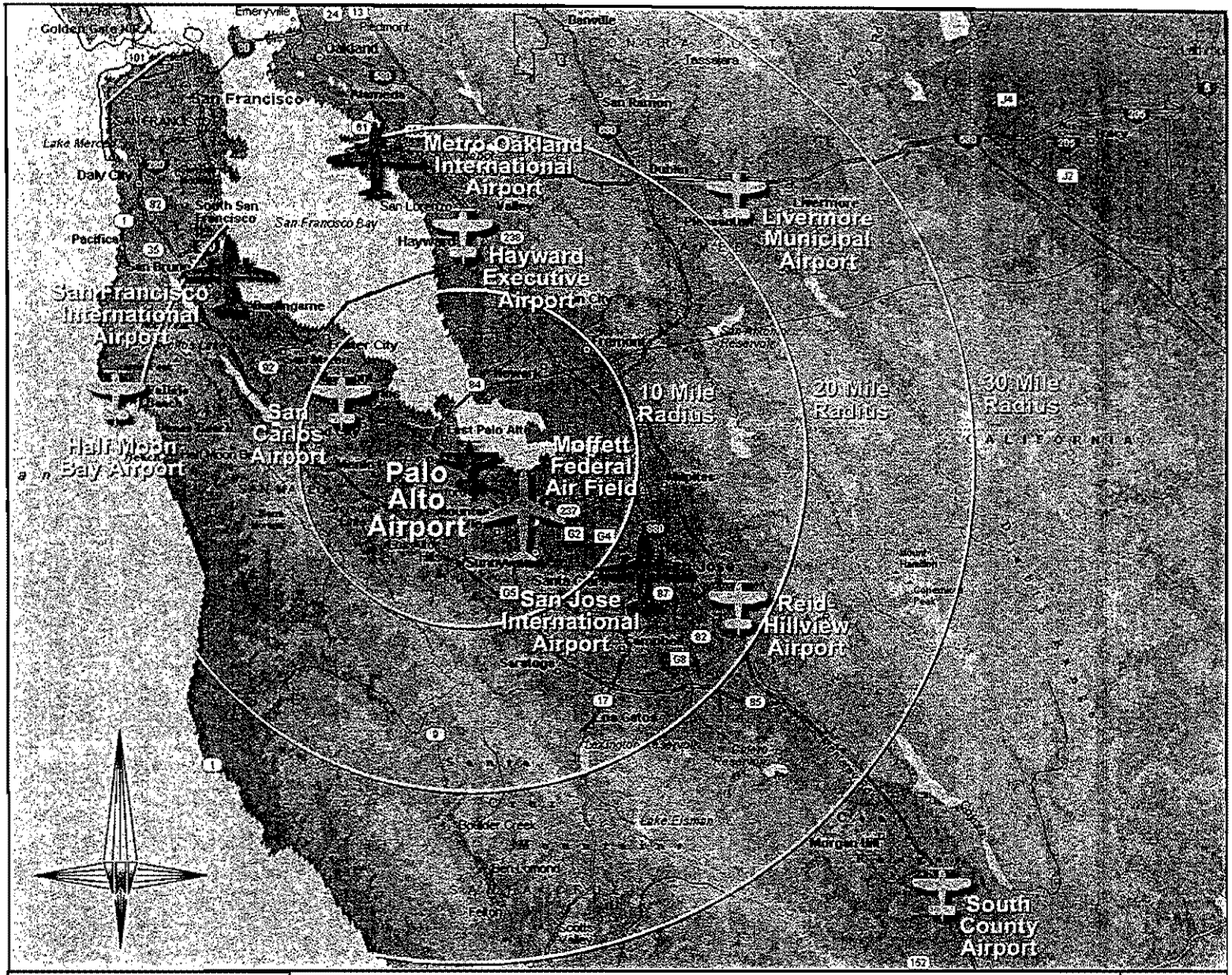
3.1 Airside Facilities

Runway Information

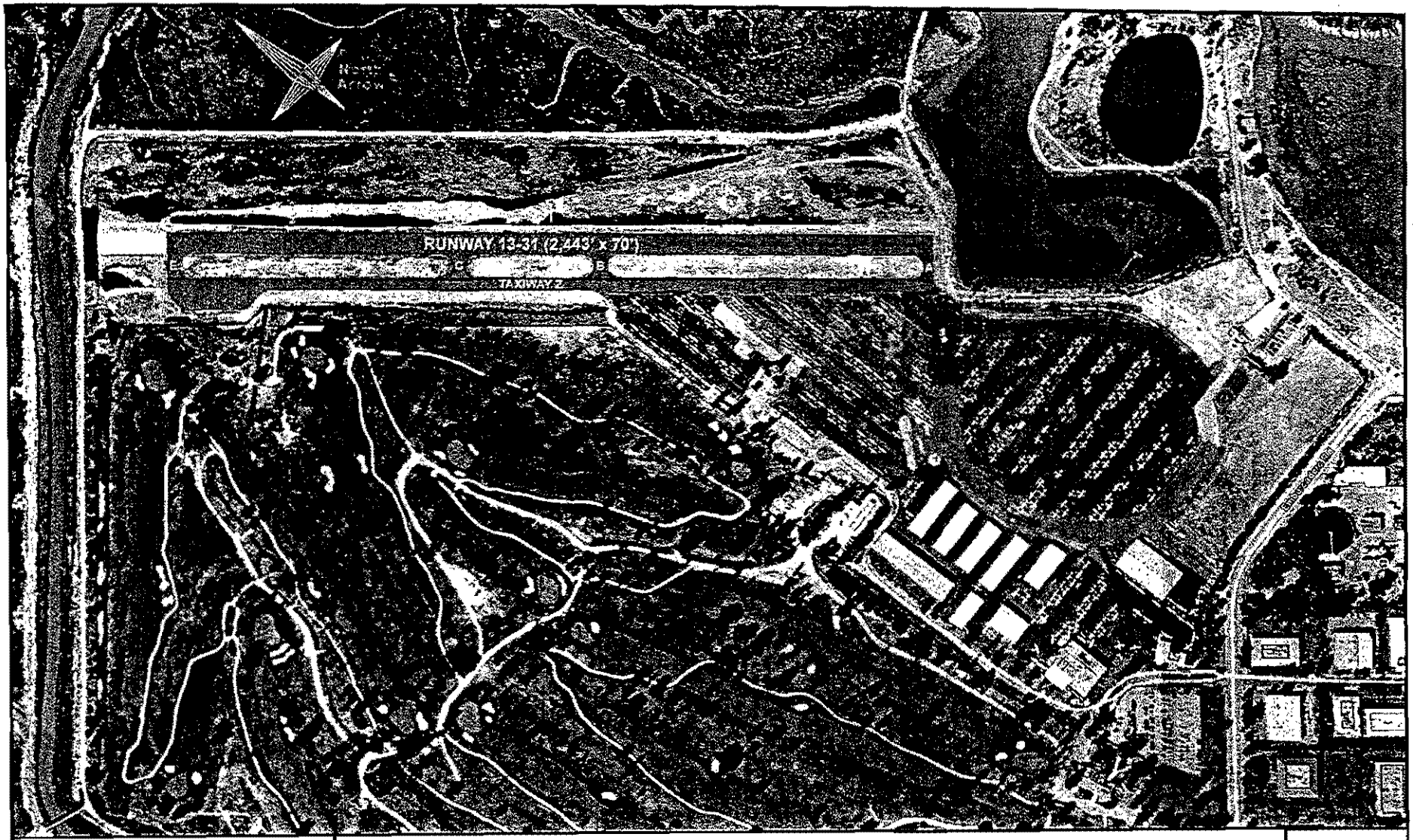
The Airport has one runway (13-31) that is 2,443 feet in length by 70 feet in width (Figure 3). Runway 13-31 will need rehabilitation by 2012. Parallel to the runway and 128 feet southwest of the runway centerline, is a 30 foot wide taxiway (Taxiway 'Z'). Table 1 identifies the existing runway data. The Airport's design aircraft is a light twin-engine aircraft (B-I) such as a Beechcraft Baron or Piper Seneca. That designation aircraft has a wingspan of 49 feet or less, an approach speed of less than 121 knots, and a maximum takeoff weight of 12,500 pounds. The Airport elevation is 4 feet above mean sea level.

There is also an unlighted helipad located west of the terminal building. Although it is fully functional, the helipad does not conform to the heliport design criteria set forth in FAA Advisory Circular 150/5390-2B, *Heliport Design*, because of set-back guidelines. The current Airport Capital Improvement Plan calls for the conformity to these guidelines through the construction of a helicopter landing pad and parking area in 2011/2012.

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. The second component is depicted by a Roman numeral and is related to the airplane wingspan. The categories of each component are described as follows:



R.A. Wiedemann & Associates, Inc. AVIATION CONSULTANTS	Palo Alto Airport Business Plan	Figure 2
	Airport Service Area	



R.A. Wiedemann & Associates, Inc.
AVIATION CONSULTANTS

Palo Alto Airport Business Plan

Existing Airport Layout

Figure
3

Table 1 – PAO Runway Data	
Item	**Runway 13-31**
Length	2,443'
Width	70'
Surface	Asphalt
ARC	B-I
Lighting	Medium Intensity Runway
Marking	Basic/Non-Precision
Weight Bearing Capacity	Single Wheel - 12,500
Navigational & Visual Aids	GPS & VOR DME

- Aircraft Approach Category is based upon 1.3 times an aircraft's stall speed in their landing configuration at their maximum certificated landing weight:
  - A: Speed less than 91 knots.
  - B: Speed 91 knots or more but less than 121 knots.
  - C: Speed 121 knots or more but less than 141 knots.
  - D: Speed 141 knots or more but less than 166 knots.
  - E: Speed 166 knots or more

- Airplane Design Group is based upon wingspan:
  - I: Up to but not including 49 feet.
  - II: 49 feet up to but not including 79 feet.
  - III: 79 feet up to but not including 118 feet.
  - IV: 118 feet up to but not including 171 feet.
  - V: 171 feet up to but not including 214 feet.
  - VI: 214 feet up to but not including 262 feet.

Table 2 shows the taxiways and their descriptions.

Table 2 – PAO Taxiways	
Taxiway	Description
Z	Full Parallel Taxiway
A-E	Connecting Taxiways
G	Transition Taxiway from Tie-Downs to Parallel Taxiway
Taxi-lane 1 – J	Lanes Between Tie-Downs

3.2 Landside Facilities

Landside facilities provide for revenue production at most general aviation airports. As such, a thorough inventory of these is important to the Business Plan. The landside facilities at the Palo Alto Airport (except the terminal building) are located southwest of Runway 13-31 and

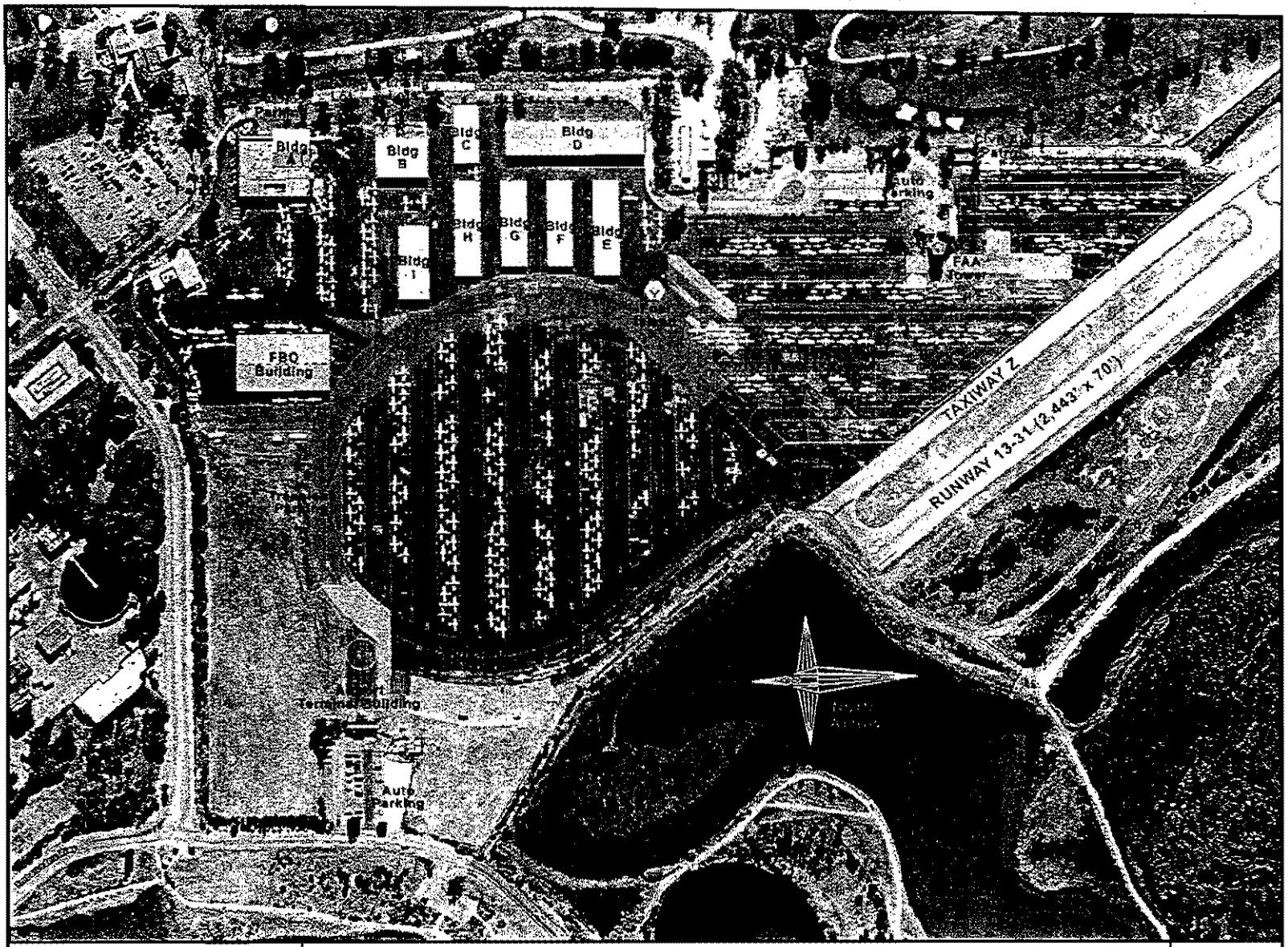
are accessible from Embarcadero Road. They include a terminal building, FBO facilities, fueling facilities, conventional hangars, T-hangars, aircraft parking apron, and auto parking facilities (Table 3 and Figure 4). The aircraft hangars are completely controlled by the respective FBOs as a part of their lease agreements. However, these buildings will revert to City control when these leases expire in 2017.

Table 3 – Landside Buildings

Building	Description
Building A: Two Hangars and Office Space	Two Maintenance hangars 5,200 sq ft and 12,800 sq feet of office space. Office Space has heating and air-conditioning, 120v electrical service and five restrooms.
Building B: Maintenance Hangar	9,350 sq feet. Metal hangar building with concrete foundation and floor. Standard 120v and 220v electrical service; metal roof, sliding doors and two gas heaters on timers.
Building C: Five T-hangars and Two End Units	Five T-hangar spaces and two end units. All steel construction including roof with concrete floors. No heat; 120v electrical service. One end unit has small restroom with shower.
Building D: 12 Box Hangar Spaces	12 box hangar spaces approximately 1750 sq feet each. Wood frame and sliding door building with tar and gravel roof; concrete floors. Minimal 120v electrical service, no heat or restroom facilities.
Building F, G: Eight T-hangar spaces and two end units each	Each building has eight T-hangar spaces and two end units. Metal framing and siding and roofs, sliding doors with man-door access and asphalt floors. Minimal 120v electrical service.
Building E, H: Nine T-hangar spaces and two end units each	Each building has nine T-hangar spaces and two end units. Metal framing and siding and roofs, sliding doors with man-door access and asphalt floors. Minimal 120v electrical service.
Building I	Six large T-hangar spaces and two end units. One of which has a second floor mezzanine, and is equipped with a restroom.
Office Building	5,600 sq ft office space
Conventional Hangar	24,000 sq ft hangar space
Civil Air Patrol Building	This 1,300 sq ft building is located near the FAA Air Traffic Control Tower. It is used by the Civil Air Patrol.
Terminal Building	A small temporary modular building located off of Harbor Road. The primary function of the general aviation terminal office facility is to serve as the focal point for GA pilot and passenger transfer between ground transportation and general aviation aircraft though the FBO facility assists with this.
FAA Air Traffic Control Tower	The FAA Air Traffic Control Tower at PAO is a three story building, constructed in the 1960s. The tower cab has roughly 800 sq ft. It is staffed by 8 FAA personnel and serves to improve safety and coordination of PAO aircraft operations in the San Francisco airspace environment.

Apron Area

Paved tie-downs are used for outside aircraft storage. In PAO's case, tie-downs are a major part of the revenue stream for the Airport Sponsor. Currently, there are a total of 441 paved tie-downs spaces and 85 hangar spaces at the Airport. Of these, 86 tie-downs and 85 hangar spaces are controlled by the FBOs. Some larger aircraft may use more than one tie-down space at a time. Paved apron space is used to accommodate both based and transient aircraft



R.A. Wiedemann & Associates, Inc.
AVIATION CONSULTANTS

Palo Alto Airport Business Plan

Airport Landside Facilities

Figure 4

parking needs. The current Airport capacity for based aircraft includes both tie-down and hangar spaces and as such, has been estimated as high as 526 based aircraft.

Automobile Parking

Automobile parking spaces at the Airport are limited due to the small landside area assigned for this function. There are approximately 210 on-Airport parking spaces. There are three different parking locations on the Airport as shown in Figure 3. These locations include parking in front of the FBO building, remote parking near the FAA Tower, and parking at the Airport terminal building. During peak periods, spaces other than those near the terminal building are filled and additional parking off the Airport is used. In this regard, the Golf Course parking lot is used by Airport patrons simply because it is close to the FBO building and there is no charge. Given the lack of space for auto parking, it is not likely that additional parking spaces will be developed in the future.

3.3 Support Services

This section describes the many support services and related facilities at the Palo Alto Airport. Services offered to general aviation users of the facility include fueling, aircraft maintenance, aircraft storage, aircraft rental, air traffic control services, and flight training. The facilities include aircraft refueling facilities, aircraft storage buildings, the FAA Air Traffic Control Tower, and FBO offices and hangar facilities.

Fixed Base Operators

Palo Alto has two primary FBOs and several Specialty Aviation Service Operators (SASOs) located at the Airport:

Primary FBOs

- ***Roy-Aero Enterprises, LLC*** manages approximately 9.7 acres of subleased land at Palo Alto that contains offices, hangars, and tie-down rentals.
- ***Dr. Brandt:*** A sublease tenant of Dr. Brandt is ***Rossi Aircraft,*** which is the only full service FBO on the field. Rossi offers 100 Low Lead AvGas (100LL) and Jet A fueling from trucks between 6 am to 7 pm daily. They also offer aircraft maintenance and management.

In keeping with the Baylands Master Plan primary policy statement regarding any future growth or development in the Airport area, limitations include a directive that there be no intensification of Airport activity. This policy has been interpreted as meaning a limitation of two FBOs at the Airport. These FBOs have historically had tenants of their own that perform some limited or specialty services related to aviation. SASOs located at PAO include:

On-Airport SASOs

- ***Advantage Aviation*** offers maintenance, a flight school, and aircraft sales and rentals.
- ***Peninsula Avionics*** offers avionics installations, repairs and services.

- ***Jorgenson-Lawrence*** offers aircraft sales and management.
- ***Palo Alto Fuel Services, Inc.*** is a subsidiary of Roy-Aero Enterprises that provides 100LL AvGas.
- ***Z.P. Aircraft Maintenance*** offers aircraft maintenance.
- ***Flight Schools, Flying Clubs, and Charter Services:*** The Airport is home to six flight schools. Advantage Aviation has a 2,800 square foot flight training facility and a 10,000 square foot hangar that it uses for training and aircraft storage. Centurion Flight Services, Shoreline Flying Club, Sundance Flying Club, Stanford Flying Club and West Valley Flying Club offer aircraft rentals and flight training. West Valley Flying Club is the largest nonprofit flying club in the nation. They have 42 aircraft available and two flight simulators at Palo Alto Airport. They also account for approximately 80,000 annual operations at Palo Alto Airport.
  - Palo Alto Airport has three companies that offer charter services at the Airport:
    - ***Centurion Flight Services***: 24 hour charter, instruction, rental and aerial photography.
    - ***Executive Helicopter:*** offers rental and charter services.
    - ***Advantage Aviation Charter LLC:*** offers chartering services with two types of aircraft: the CE-182T (Cessna Skylane) and the BE-C90 (Beechcraft King Air).

Fuel Storage and Dispensing Equipment

The Airport has a total of five above-ground storage tanks (AST) for fuel – Jet-A, and 100LL. Fuel is dispensed via trucks owned by Rossi Aircraft, Inc, or from Palo Alto Fuel Services, which operates the on-airport fuel island that offers self-serve 100LL fuel 24 hours per day by credit card.

Air Traffic Control Tower

The Airport has an Air Traffic Control Tower that operates between the hours of 7 am to 9 pm. The Tower is three stories in height and has 800 square feet of cab space. The FAA employs eight certified controllers with an additional four controllers in training.

Fire Protection

General Aviation (GA) airports such as Palo Alto are not required to have specific on-airport rescue or firefighting staffing. GA airports typically receive these services from the local community emergency agencies. Fire protection for the Airport is provided by the City of Palo Alto from its Fire Station 3 on Embarcadero Road (roughly 1.6 miles from the Airport). Menlo Park Fire Protection District serves as the first responder to potential aircraft accidents should they occur north of San Francisquito Creek.

Emergency Staging Area

The Palo Alto Airport assists as an aerial medical evacuation (medevac) staging area, emergency training location, earthquakes staging area, and an evacuation staging area. The FAA

can provide emergency communications from the Control Tower, if needed. In addition, the Airport is used by the Civil Air Patrol, Doctors without Borders, and the Red Cross.

Restaurant

Due to the Airport's small land area, there is only one main non-aviation tenant at the Airport. The Abundant Air Café, which is located adjacent to the FBO building, is a restaurant that offers free Wi-Fi, a frequent diner card, and patio parties. The restaurant is meant to serve Airport users, but can serve others as well.

3.4 Airspace Environment

One critical component of an airport's operating location is the airspace environment in which it is situated. In busy airspace terminal areas, air traffic from one airport affects traffic and capacity at a nearby airport. From a business perspective, potential delays caused by airspace congestion can be costly to based aircraft owners. As such, the proximity of San Francisco International Airport (SFO), Moffet Field (NUQ), and San Jose International Airport (SJC) can impact FAA-controlled instrument operations at PAO. In this regard SFO is within 18 miles, NUQ is within 5 miles, and SJC is within 12 miles.

Airspace Structure

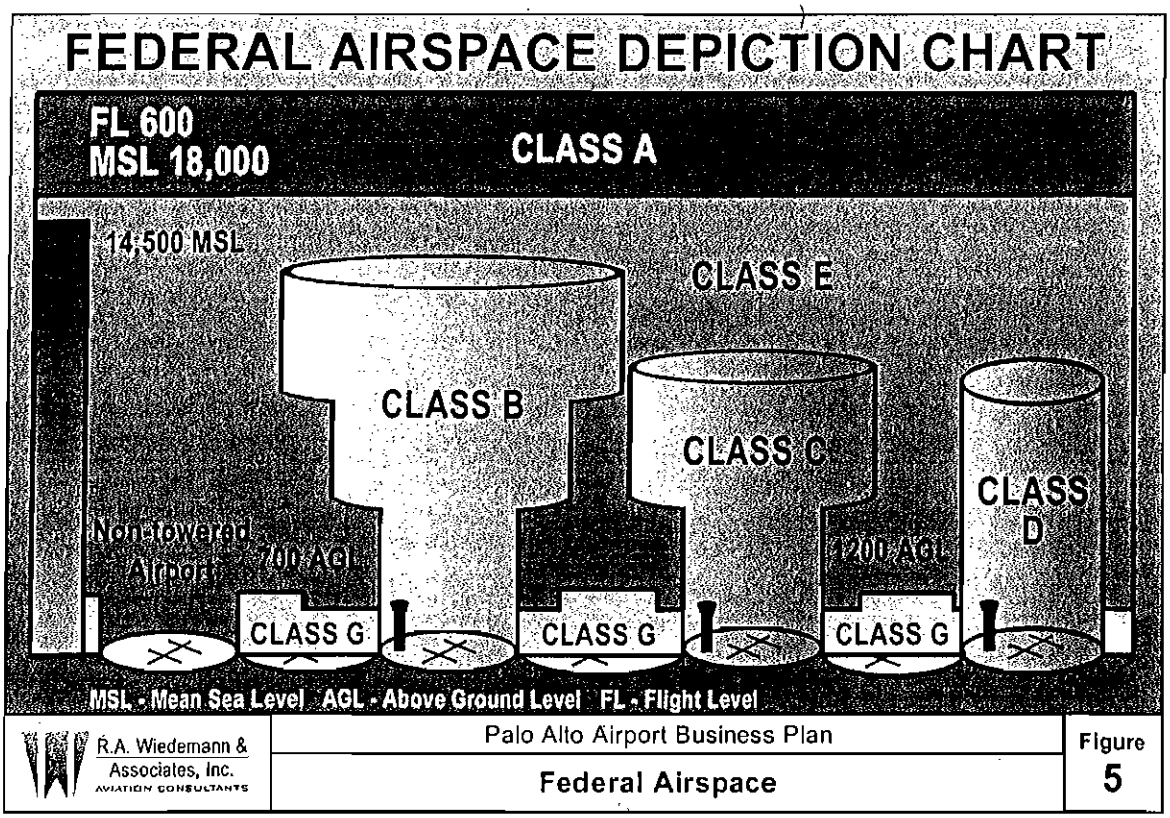
Airspace structure is classified as Uncontrolled, Controlled, Special Use, or Other. Uncontrolled Airspace is defined as all airspace that has not been designated as Controlled and within which Air Traffic Control (ATC) has neither the authority nor responsibility for control. Controlled Airspace, on the other hand, is supported by ground/air communications, navigation aids, and air traffic services. The specific FAA airspace classifications are listed below:

There are five classes of Controlled airspace (Figure 5) and one class of Uncontrolled airspace:

- ***Class A:*** All airspace above 18,000 feet mean sea level (MSL).
- ***Class B:*** An area with a 20 Nautical Mile (NM) radius around the nation's busiest commercial airports. SFO has Class B airspace which overlies PAO airspace.
- ***Class C:*** An area with a 10 NM radius around busy commercial airports. SJC has Class C airspace.
- ***Class D:*** An area with a 5 NM radius (or larger) around moderate activity commercial and military airports.
- ***Class E:*** General/enroute controlled airspace beginning 700 feet Above Ground Level (AGL), or 1,200 feet AGL and extending upward to the overlying Class A area.
- ***Class G:*** Uncontrolled airspace from the surface to 700 feet AGL, or 1,200 feet AGL.

There are a number of factors pertaining to Controlled airspace that impact pilots flying through California airspace. First, regardless of weather conditions, ATC authorization is

required prior to operating within the Class B airspace over the SFO. Further, it should be noted that large turbine powered airplanes operating to or from a primary airport must operate at or above the designated floors while within the lateral limits of the Class B airspace. Smaller aircraft can "fly under" the Class B area floors but are cautioned against flying too close to Class B area boundaries, especially where the floor of the Class B area is 3,000 feet or less or where normal visual cruise altitudes are at or near the floor of higher levels. At PAO, the airspace ceiling that lies under the Class B airspace transitions from 2,500 feet (north of the airport) to 4,000 feet beginning just south of the runway.



In addition to these restrictions, all aircraft operating at or above 10,000 feet (MSL), or within 30 miles of a Class B airspace primary airport, or within and above all Class C airspace up to 10,000 feet MSL, or within 10 miles of certain designated airports, need to be equipped with Mode C transponders. These devices automatically report to ATC the location and altitude of an aircraft.

Air Traffic Control Assessment

Discussions with the Air Traffic Manager at the PAO Air Traffic Control Tower indicated that many of the airspace restrictions associated with SFO and SJC do not materially impact PAO traffic. In this regard, most of the PAO air traffic uses Visual Flight Rules (VFR) and as such, do not have to wait for Instrument Flight Rule (IFR) clearance from the FAA.

Rather, they receive clearance from the local Tower to take off and land visually, as long as they stay beneath the Class B and Class C airspace located nearby. Occasionally, the direction of air traffic flow from SFO or SJC may interrupt VFR traffic at PAO for short periods of time.

For IFR traffic, PAO pilots must wait for FAA clearance on a first-come-first-serve basis. That is, requests are forwarded from the PAO Tower to the FAA's Terminal Radar Control facility (TRACON). The TRACON will work these requests in with other area airport requests for IFR clearance. During poor weather, waits at the PAO airport are usually no longer than 15 minutes. This is clearly acceptable, given the much longer waits at some other busy terminal areas across the nation. Overall, it can be stated that the existing airspace and air traffic control environment is not detrimental to operational use of the Airport. As such, the potential operation of PAO by the City would not be adversely affected by this constraint.

3.5 Airport Operational Characteristics

The Airport's operational characteristics form the basis for future projections of revenues and expenses. At PAO, there has been a fairly high level of aircraft activity for many years. There are a number of factors contributing to this activity, including the lack of alternative airports in the nearby area, along with a high level of disposable income in the Silicon Valley. These two factors tend to concentrate the aviation activity at small airports in the area like PAO and San Carlos (SQL).

The typical profile of aircraft type at PAO is a small, single engine or light twin engine aircraft. In April, 2009, there were 472 total aircraft based at the Airport. Of these, there were approximately 423 single-engine and 47 twin-engine aircraft. In addition, there were 2 helicopters based on the field. In 2008, there were 166,828 aircraft operations (an operation is either a landing or a takeoff – a landing and takeoff are two operations). Although there has been a recent decline in the total number of based aircraft, the Airport has historically operated at almost full landside capacity for many years.

One reason for the high number of aircraft operations at PAO is the significant amount of training that occurs via West Valley Flying Club. In this regard, West Valley may account for as much as 50 percent of total operations or around 80,000 per year. This is significant when considering that other flying clubs on the Airport such as Sundance, Stanford, and Advantage Aviation, offer flight training as well.

From a financial standpoint, the greater number of based aircraft at an airport, the greater the revenues that can be generated for the airport Sponsor. These revenues are derived from leases for tie-down spaces and from FBO leases. An exodus of based aircraft can significantly impact the bottom line for the Airport.

Airport User Survey

In early April 2009, an Airport User Survey was developed and mailed to aircraft owners who based their aircraft at the Airport. Approximately 500 surveys were distributed. Prior to this mailing, the Airport User Survey was launched via www.Zoomerang.com so that

respondents could either complete and mail in the survey or complete it online. The online survey was administered via web link from the home page of the City of Palo Alto website (www.cityofpaloalto.org). Surveys were requested to be returned by May 1st. During this period, a total of 145 visits were recorded on www.Zoomerang.com and 64 surveys were completed. Additionally, 78 hard copy surveys were submitted, for a total of 142 responses to the Airport User Survey. Ninety of the 142 survey responses listed an address, representing 19 different cities and towns within California. Of these, 20 responses were attributed to a Palo Alto address.

In summary, there were several key points expressed as a result of the survey of Palo Alto Airport users:

- A total of $3,280,135 was spent by 129 Palo Alto Airport users on their aircraft in 2008.
  - Average annual spending per aircraft was estimated at $20,900.
- One hundred and thirty-seven aircraft users reported an estimated 115,466 annual operations (57,733 takeoffs).
- Impact of price increases: Approximately 77 percent of respondents indicated that either any increase at all, or any increase that is significant (greater than CPI/ inflation or not competitive with other airports), will cause them to relocate their aircraft.
- The top three airports that based aircraft users would consider moving to are:
  - Moffett Federal (if available in the future) 36.9%
  - San Carlos Airport 26.2%
  - Mineta San Jose International (if available) 12.9%

Business users indicated that they rely on the use of the Palo Alto Airport for:

- Convenience to their office facilities or commute to other office locations
- Conducting business at the airport
- Providing aviation-related services which are dependent on an airport location.

3.6 Environmental Concerns

The importance and recognition of the environmental sensitivity of the Airport area cannot be overstated. Not to diminish the importance of this subject, this section covers only the major topics regarding environmental concerns and is not meant as an exhaustive inventory of these issues. As a part of the Baylands Area, the Airport coexists with the nearby Don Edwards San Francisco Bay National Wildlife Refuge and Byxbee Park recreation area. There are two endangered species in the vicinity of the PAO, including the Salt Marsh Harvest Mouse and the California Clapper Rail. The FAA Tower stops operations twice a day for a flock of geese that fly from their nesting area to the golf course and back.

The predominant land uses in the Airport environs are wetlands, bay waters, golf course, commercial and limited residential. The City of East Palo Alto, located in San Mateo County, is adjacent to the northwest portion of the Airport. The Baylands Master Plan[1] (2008) has spelled out the primary policy statement regarding any future growth or development in the Airport area. Limitations imposed by this policy include a directive that there should be no intensification of Airport activity or changes that will significantly intrude into open space. As such, previous efforts to expand the airport runway system were rejected, as were attempts to develop new hangars on the landside area of the facility.

The Palo Alto Airport is also located in a FEMA-designated "Special Flood Hazard Area Inundated by 100-Year Flood." Due to this designation, any new structures that are to be occupied must be 8 feet above mean sea level (AMSL). Since the Airport is 4 feet AMSL, all new occupied structures will have to be raised 4 feet to meet the 8 feet AMSL category. Non-occupied structures do not need to be elevated. San Francisquito Creek has flooded seven times since 1910, with record flooding in 1998, causing major flooding on Airport property. As buildings reach their useful life, rebuilding of these structures will have to comply with these standards.

Other Environmental Concerns:

The County Master Plan for Palo Alto Airport also lists some of the following environmental concerns:

- ***Subsidence:*** The area consists of marshland that was drained and filled with dirt. The City's "1998-2010 Comprehensive Plan" shows the Palo Alto area as having historical subsidence levels of from 2 to 3 feet.
- ***Ground Shaking and Liquefaction:*** The Airport is located in a seismically active area.
- ***Dam Failure Inundation Area:*** The Airport area may be subject to seismically-induced flooding from dam failure of Felt Lake, Searsville Lake, and Lagunitas Reservoir dams.

Perhaps the greatest impact on the financial performance of the Airport would be the environmental concerns that place caps on the development of buildings at the Airport. This stems from the desire to limit activity at the Airport that was described in the Baylands Master Plan.

3.7 Airport Capital Improvement Program

The Airport is eligible for capital project funding assistance from Federal Aviation Administration through the Airport and Airway Improvement Program (AIP), which is periodically reauthorized. The latest occurred in January 2004, when the FAA Reauthorization Legislation was signed into law as the "Vision 100 – Century of Aviation Reauthorization Act." To take advantage of this program, the Airport is required to prepare, update annually, and submit to the FAA a five-year Airport Capital Improvement Program (ACIP) to apply for federal

[1] Baylands Master Plan, 4th Edition, as Amended, City of Palo Alto, CA, 2008.

grants. These grants typically fund 95 percent of eligible development costs. AIP eligible projects include the planning, design, and construction of projects associated with public use nonrevenue generating facilities and equipment of the Airport. 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. These items can include hangars, fueling facilities, automobile parking facilities, private use areas of terminal facilities, and other revenue generating facilities. 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.

Currently the AIP program provides an annual entitlement grant of up to $150,000 per eligible general aviation airport for qualifying projects. An airport can delay getting this funding for 1, 2, or 3 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.

Table 4 - Airport Capital Improvement Plan (ACIP) 2009-2013

Year	Project Description in Priority Order	Federal	State*	Sponsor	Total
2009/2010	Signage, Runway/Taxiway Marking Changes IAW FAA RSAT Recommendations	$142,500	$0	$7,500	$150,000
2009/2010	Pavement Maintenance for Existing Runway, Taxiways and Aircraft parking	$285,000	$0	$15,000	$300,000
2011/2012	Reconfigure Taxiways G and Z to comply with FAA Standards	$380,000	$0	$20,000	$400,000
2011/2012	Construct Helicopter Landing Pad and Parking	$237,500	$0	$12,500	$250,000
2011/2012	Construct Exit Taxiway D	$114,000	$0	$6,000	$120,000
2011/2012	Construct Additional Transient Aircraft Parking Areas	$427,500	$0	$22,500	$450,000
2011/2013	Overlay Existing Runway and Taxiways	$1,900,000	$0	$100,000	$2,000,000
	TOTALS	$3,543,500	$0	$186,500	$3,730,000

* It is assumed that the State will not have funds available for the Airport thus making the City responsible for the local and state share (4.75 pereent state and 0.25 percent local).

Other AIP Funding Categories

State Apportionment Funding: This is a portion of the FAA's funding that is set aside based on the number and types of airports in the State. The funding is provided to airports in the State depending on priority and needs for qualifying projects.

Discretionary Funding: The remaining budget is then prioritized based on Safety, Security, Capacity, and other criteria. The FAA estimates how much is needed to complete the funding for the top projects that are not fully funded that year by other grant methods. Sometimes an airport will not receive funding either from entitlements or apportionments to fund a project. When this occurs, discretionary funding can be used to fill funding gaps for important projects.

Congressional Earmark: This funding is procured for very specific projects that may not get enough priority in the FAA system but are deemed necessary by a Congressional Representative. This is typically undertaken for high cost projects that cannot be funded completely using other methods. This funding comes out of the FAA's Airport Improvement Program before the rest is apportioned to each FAA district. Congressional earmarks have come under criticism in recent months and may be removed as an option for federal lawmakers in the future.

State Funding

All State grant programs for California airports are funded from the Aeronautics Account in the State Transportation Fund. Tax revenues, which are collected on general aviation (GA) fuel, are deposited in the Aeronautics Account. GA jet fuel is taxed at 2 cents per gallon and AvGas is taxed at 18 cents per gallon. These taxes generate about $7 million per year. The Aeronautics Account has several other revenue sources (interest that is earned on its cash balance and sale of documents such as the State aeronautics chart). It should be noted that although technically available, State funding has not been offered recently due to budget shortfalls.

Annual Grants: These are State grants to eligible airports for discretionary use subject to applicable laws and regulations, with prior approval from the Department. The Annual Grant ($10,000 per year) can fund projects for "airport and aviation purposes" as defined in Section 21681(f) of the State Aeronautics Act. Also, the Annual Grant can fund fueling facilities, restrooms, showers, wash racks, and operation and maintenance. The Annual Grant can provide part of the sponsor's match for projects that are funded by FAA grants as long as the project is otherwise eligible for State funding. If the Aeronautics Account does not have sufficient funds, the Annual Grant amount is reduced in proportion to the funds available. Up to five years' of Annual Grants may be accrued at the sponsor's discretion.

AIP Matching Grants: These are State grants to eligible airports for eligible projects subject to programming and allocation by the California Transportation Commission (CTC). This grant assists the sponsor in meeting the local match for Airport Improvement Program (AIP) grants from the FAA. An FAA AIP grant can be matched with State funds. By statute, the Department typically matches 5 percent of the Airport Improvement Program (AIP) federal grant amount, as a non-federal match, when the federal share is at either 90 percent or 95 percent of the project cost. The federal share was 90 percent prior to 2003. The Century of Aviation Reauthorization Act of 2003, VISION 100, increased the federal share of airport funding from 90 percent to 95 percent of project cost. This impacted the State matching grants. At 90 percent federal contribution, the State match was 4.5 percent, the local match was 5.5 percent. At 95 percent federal contribution, the State match is 4.75 percent, and the local match is 0.25 percent.

Based on urgency legislation enacted in 2002, the Department may also increase its match to the full 10 percent required non-federal match for certain "security projects" at eligible airports.

Acquisition and Development (A&D) Grants: These are state grants to eligible airports for eligible projects subject to allocation by the CTC. Sponsor Eligibility Act Airport Land Use Commission (ALUC) can receive funding to either prepare or update a comprehensive land use plan (CLUP). An A&D grant can fund projects for "airport and aviation purposes" as defined in Section 21681(f) of the State Aeronautics Act. An A&D grant cannot be used as local match for an FAA grant, but an AIP Matching grant may be used for this purpose. However, an A&D-funded project can be constructed in conjunction with an FAA-funded project. Project services (engineering, design, etc.) are limited to 12 percent of the actual construction cost of a project, including change orders that have been approved by the Department. For land acquisition, "project services" means appraisal, title and escrow fees. The minimum amount of an A&D grant is $10,000. The maximum amount that can be allocated to an airport in a single fiscal year is $500,000. This $500,000 maximum can occur as a single grant or multiple grants. The local match can vary from 10 percent to 50 percent of the project's cost. The match rate is set annually by the CTC. (A 10 percent rate has been utilized for the past 15+ years.) The Annual Grant may not be used for the local match to an A&D grant.

Local Sponsor Funding

Local funding of capital projects for publicly-owned general aviation airports can be accomplished either through a public sponsor's enterprise fund or in some cases, the local general fund. This expenditure may be offset by airport-generated revenues. Public bodies may also issue general obligation (GO) or revenue bonds. These bonds are usually reserved for large capital projects. A revenue bond is backed by a promise to pay the principal and interest represented by the bond with revenues generated by the project that it funds. As the issuance of revenue bonds does not affect the general borrowing power of the issuing party, it represents an attractive funding mechanism to a local political jurisdiction. Independent underwriters must evaluate revenue bonds, and the proposed bonds must demonstrate a reasonable expectation of repayment. As some airport facilities generate more indirect benefits to the community than direct revenues, 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 an airport are usually limited to the lease charges for the land underlying the facilities, the local sponsor does not need to obtain its own funding for these improvements. 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.

3.8 Market Analysis

Airport Market Area

Figure 2 (presented earlier) illustrates the Airport service area including other nearby public-use airports. For the Palo Alto Airport, the service area is roughly based on the location of alternate airport basing locations. This can range from a 30-minute driving distance to a 60-minute driving distance, depending upon the level of traffic and time of day. Within the PAO service area are located ten public-use airports and one former military base. Three of these airports offer airline service: San Francisco International, Metropolitan Oakland International (OAK), and San Jose International. The other general aviation airports located within PAO's service area are: Half Moon Bay, Hayward Executive, South County, Reid-Hillview, San Carlos, and Livermore Municipal. Moffet Federal Airport, a former miliary airfield, is currently controlled by the National Aeronautics and Space Administration's Ames Research Center and is considered private-use. Limited operations are allowed there for military aircraft, NASA flight testing, blimps, and some private aircraft.

Facilities

Table 6 provides a comparison of airport facilities at public-use airports within the service area of the Palo Alto Airport. Of the listed airports, seven have runways of 5,000 feet or greater. These airports can accommodate business jet activity. The only private-use airport in the analyisis, Moffett Federal, has the longest and widest runway in the service area (9,202 feet by 200 feet). Hayward Executive is the largest public non-commercial airport in the service area with runway dimensions of 5,694 feet by 150 feet. Palo Alto has the shortest runway in the service area with a primary runway length of 2,443 feet by 70 feet. All the airports in the service area have instrument approach procedures of some type, and all the airports but Half Moon Bay and South County have air traffic control towers.

Based Aircraft

There are a reported total of 2,797 aircraft based at the airports within the Palo Alto Airport's service area. The vast majority of these (87 percent) are single engine aircraft. Of the 126 jet aircraft in the service area, 100 (79 percent) are located at three commercial service airports (OAK, SFO, and SJC). At general aviation airports, 15 based jets are located at Hayward Executive, 10 are located at Livermore Municipal, and one is based at San Carlos. With a total of 472 aircraft on the field including 47 multiengine aircraft and two helicopters, PAO is operating below its historical high operational levels. Vacancies on the aircraft apron tie-down area have risen from zero in 2003 to 49 in 2009. Almost all of the airports in the service area have waiting lists for aircraft hangars, including Palo Alto. However, PAO does not have any waiting list for tie-down space.

Aviation Services

Table 7 presents the availability of various aviation services at each of the area airports. Listed services at Palo Alto include major airframe and powerplant repairs, flight instruction,

charter services, avionics, aircraft sales, aircraft rentals, glider, air ambulance, and aerial survey. Palo Alto Airport offers more services than any other general aviation airport in the service area.

Hangars and Tie-downs

Monthly tie-down spaces are available at all of the service area airports contacted except Half Moon Bay due to weather and Moffett Federal due to being a private military airport. Prices for tie-down spaces range from $60 to $150 at the various facilities (Table 8). Palo Alto Airport has the highest tie-down rates in the service area.

Aircraft storage space in conventional hangars is currently available at Half Moon Bay, though the one hangar that is available does not provide complete shelter from the weather. All the other area airports including PAO report no vacancies in conventional hangars. The cost of conventional hangar space at Palo Alto Airport is in the mid-range of the competing airports in the service area.

Five airports in the service area have T-hangars on the field; however, availability is limited as there are waiting lists at all but South County Airport. In 2005, 100 T-hangars were developed at South County Airport and in 2009, there is still a 40 percent vacancy rate. By contrast, the wait time for T-hangars at PAO is between one and ten years. Thus, "location" is a critical aspect of T-hangar demand. Prices on T-hangars range from $212 to $1,200 per month. Monthly T-hangar rates at Palo Alto Airport are priced between $850 and $1,200 per month - the highest in the service area. 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.

Fuel Prices

Avgas is available at seven of the service area airports. The highest per gallon prices (as of May, 2009) was found at Hayward Executive Airport ($4.79). The lowest price was found at Half Moon Bay and Livermore Municipal Airport at $3.95 per gallon. All fuel prices change frequently, however. Jet Fuel is available at five airports in the service area. The lowest price ($3.42) was found at South County. The highest price was found at Hayward Executive Airport ($4.56). Palo Alto had the second highest Jet Fuel cost at ($3.89). Adjustments in pricing may be required to maintain and/or increase market share of fuel sales.

Prices Compared at Santa Clara County-Operated Airports

When considering only the airports that Santa Clara County manages, the pricing structure associated with these three airports emerges (Palo Alto, South County and Reid-Hillview). Tie-down fees for these airports range from a low of $86 per month at South County to a high of $188.50 at Palo Alto (Table 5).

Table 5 - Santa Clara County Tie Down Rates			
Aircraft Weight/Fuel Fee	Tie-Down Rental Rates/Month & Fuel Flowage Fees		
	Reid-Hillview	South County	**Palo Alto**
0 to 3,500 lbs	$120.50	$86	**$129.50**
3,501 to 5,200 lbs	$140	$100	**$150**
5,201 to 10,200 lbs	$157.50	$112.50	**$168.50**
10,201 to 17,000 lbs	$175.50	$126	**$188.50**
Fuel Flowage Fees	$0.10	$0.10	**$0.20**

Conventional hangar space is only offered at PAO and costs $400-$500 dollars per month. The Palo Alto Airport also has the highest single engine T-hangar rates at $850 per month while T-hangar rates at South County are $600 per month and $573 per month at Reid-Hillview. Since vacancies exist at South County, the lower prices for T-hangars are reasonable. Overall, the important pricing difference involves tie-down fees. The Palo Alto Airport has the highest tie-down fees of any of the service area airports. This fee structure is causing some PAO tenants to relocate to less expensive alternative airports. Aircraft owner and pilot attitudes toward the pricing structure are documented in the survey that was conducted (Appendix A). Finally, it should be noted that fuel flowage fees for PAO are ten cents higher per gallon than at Reid-Hillview or South County.

Table 6 - Facility Comparison

Airport	*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	
Palo Alto*	PAO	Public	102	-	47	423	2	–	472	2443' X 70'		GPS	Yes
Half Moon Bay	HAF	Public	325	-	2	37	1	–	40	5,000' X 150'		GPS	No
Hayward Executive	HWD	Public	543	15	42	339	14	–	410	5,694 X 150'	3,107' X 75'	GPS	Yes
South County*	E16	Public	179	-	10	71	2	–	83	3,100' X 75'		GPS	No
Moffett Federal*	NUQ	Private	-	-	25	10	15	–	50	9,202' X 200'	8,127' X 200'	ILS	Yes
Reid-Hillview*	RHV	Public	179	-	27	291	3	–	321	3,100 X 75'	3,099' X 75'	GPS	Yes
San Carlos	SQL	Public	110	1	40	321	10	–	372	2,600' X 75'	2,600' X 75'	GPS	Yes
Livermore Municipal	LUK	Public	643	10	36	551	4	–	601	5253' X 100'	2,699' X 75'	ILS	Yes
Commercial Airports													
San Francisco International	SFO	Public	5,207	4	3	1	2	–	10	11,870' X 200'	10,602' X 200'	ILS/GPS	Yes
Metropolitan Oakland Int'l	OAK	Public	2,600	29	95	141	12	–	277	10,000' X 150'	6,212' X 150'	ILS	Yes
San Jose Int'l*	SJC	Public	1,050	67	24	68	2	–	161	2 parallel 11,000 X 150'	4,599' X 100'	ILS/GPS	Yes
		TOTAL		126	351	2,253	67	-	2,797				

Source: Airport Master Record as Published 7 April 2009 (www.gcr1.com/5010WEB & www.aimav.com).
* Airport located in Santa Clara County

Table 7 - Service Comparison

Airport	*Frame Repairs*	*Power Repairs*	*Flight Instruction*	*Charter Service*	*Avionics*	*Aircraft Sales*	*Aircraft Rentals*	*Other*
Palo Alto*	Major	Major	Yes	Yes	Yes	Yes	Yes	Glider, Ambulanee, Aerial Survey
Half Moon Bay	Major	Major	-	-	-	-	-	
Hayward Executive	Major	Major	Yes	Yes	-	-	Yes	
South County*	Major	Major	Yes	Yes	-	Yes	Yes	
Moffett Federal*	-	-	-	-	-	-	-	
Reid-Hillview*	Major	Major	Yes	-	-	Yes	Yes	
San Carlos	Major	Major	Yes	Yes	Yes	-	Yes	
Livermore Municipal	Major	Major	Yes	Yes	-	Yes	Yes	
Commercial Airports								
San Francisco International	Major	Major	Yes	Yes	Yes	Yes	-	Air Freight
Metropolitan Oakland Int'l	Major	Major	Yes	Yes	Yes	Yes	Yes	Air Freight, Cargo
San Jose Int'l*	Major	Major	Yes	Yes	Yes	Yes	Yes	Air Freight, Cargo

Source: Airport Master Record as Published 7 April 2009 (www.gcr1.com/5010WEB & www.airnav.com).
* Airport located in Santa Clara County

Table 8 - Rates and Charges Comparison

Airport	*Tie-Down*		*Conventional Hangars*		*T-Hangars*		*Fuel*		*Waiting List (Hangars)*
	$/month	**Available**	**$/month**	**Available**	**$/ month**	**Available**	**100 ll**	**Jet A**	
Palo Alto*	$129.50-$188.50	Yes	$400-$500	No	$850-$1,200	No	$3.99	$3.89	Yes
Half Moon Bay	N/A	N/A	$425	1	N/A	N/A	$3.95	-	No
Hayward Executive	$60-$75	Yes	$750-$1,080	No	$212-$412	No	$4.79	$4.56	140 planes (7-9 years)
South County*	$86	Yes	N/A	N/A	$600	Yes	$3.99	$3.42	No
Moffett Federal*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Reid-Hillview*	$120.50 $157	Yes	N/A	N/A	Single $468-$573 Twin $795-$865	No	$4.01	-	1 year
San Carlos	$118	Yes	$359 old $533-$639 new	No	N/A	N/A	$4.10	$3.80	60 planes
Livermore Municipal	Single $76-$87 Twin $105	Yes	$515-$554 $1,253 -$1,549	No	$293-$389	No	$3.95	$3.72	3 to 10 years
Commercial Airports									
San Francisco International	-	-	$350/night	Yes	N/A	N/A	$6.65	$5.51	-
Metropolitan Oakland Int'l	$17/night	Yes	$20-$30/night	Yes	N/A	N/A	$4.76	$4.05	-
San Jose Int'l*	$40/fuel	Yes	$100-$150/night	No	N/A	N/A	$5.37	$5.24	-

Source: RA Wiedemann & Associates Inc. Telephone Survey 5-26-09
N/C No Charge
N/A Not Available
* Airport located in Santa Clara County

4. BASELINE FINANCIAL PROJECTIONS

THIS SECTION IDENTIFIES HISTORICAL REVENUES AND EXPENSES attributable to Palo Alto Airport and projects those revenues and expenses first to the year 2017, and then from 2018 to the year 2037. The forecast to 2017 has one baseline projection that will serve as both the County pro forma and the City pro forma. This projection represents a baseline or status quo revenue and expense scenario for the Airport with no revenue enhancement projects included. For purposes of this analysis, it was assumed that the City and County cost structures for operating the Airport are identical.

Unless the lease with the County is terminated sooner, the County's responsibly will officially expire in 2017 as will the two FBO leases and all other contracts relating to the Airport. In 2017 all hangars and tie-down spaces will revert back to the City's control. Thus, a baseline projection of financial performance was made for the City's operation of the Airport for the period 2018 to 2037. In a later section, alternative projections of financial performance will be developed based upon comparisons between various types of management structures. To properly frame these financial statements, this section is organized to present the following:

- Historical Revenues and Expenses
- Baseline Forecast of Revenues and Expenses: 2010-2017
- Baseline Forecast of Revenues and Expenses: 2018-2037
- Summary and Findings for Baseline Scenario

4.1 Historical Revenues and Expenses

Table 9 shows the historical revenues and expenses for 2000 through 2008 taken from the statement of revenues and expenses for PAO provided by the County. This total does not include the annual contributions to the Airport from the County for capital development grants. Those contributions are not considered revenues from operations by this analysis. Rather, this analysis is geared to identify the actual revenue producing ability of the Airport, along with its actual operating costs.

Revenues to the County from Palo Alto Airport are derived from the following:

- ***Aircraft Storage (Tie-downs):*** The County currently operates 355 tie-downs ranging from $129.50 to $188.50 per month. Of these, 49 are vacant. The 2008 revenues of $506,728 produced an average of $138 per tie-down, per month. Thus, the vacancies created an opportunity cost to the County that averaged $81,100 in 2008. In addition to these public tie-down spaces, there are 86 private tie-downs and 85 hangar spaces which are under FBO control.

- ***FBO Lease Revenue:*** There are two FBOs at PAO that have leases with the County. Roy-Aero Enterprises LLC leases 9.706 acres at $0.19/square foot. This equals approximately $8,275 per acre which is $80,300 annually. The County also receives 6 percent of the revenue from 45 of Roy-Aero hangars and six end units which totaled $28,640 in 2008. The other FBO, Airport Management Group, Inc. (AMG) leases 3.024

acres at $0.2025/square foot. This equals approximately $8,800 per acre which is $26,676 annually. The ground rent remains fixed for the FBOs until the next scheduled five-year interval reappraisal (December 2009 and December 2014 for Roy-Aero, and December 2013 for AMG)

- ***Fuel Flowage Fees:*** The fuel flowage fee at Palo Alto is the highest of all County operated airports at $0.20 per gallon. Reid-Hillview and South County Airports have fuel flowage fees of $0.10 per gallon.

- ***Transient Aircraft Revenue:*** Transient aircraft are required to pay a fee when occupying a tie-down at the Airport. Of PAO's 441 tie-down spaces, 36 space are allocated for transient aircraft. Tie-down rates are determined by aircraft size and duration of stay.

- ***Other Facility Revenue:*** This category captures all revenue that is not attributable to the other categories. This includes vending income, auto parking fees, charter landing fees, government credit card rebates, and tie-down waiting list fees. For 2008, this category also included a rental car lease from Enterprise (valued at $32,800). That lease was canceled by the rental car company in June, 2009. Thus, future years for this category will yield significantly less revenue than the 2008 total.

Operating Expenses do not include depreciation expenses, since they are non-cash expenses and are reflective of the Airport's asset base rather than income and expense production. Operating Expenses were derived from the following:

- ***Salaries and Benefits:*** This includes direct salary and benefit costs for two Airport Operations Workers and one part-time Airport Supervisor. It also includes the allocated percentage (31.07 percent in FY08) of Airports Administration staff salaries and benefits. The breakdown for this line item in 2008 is $232,950 for Operation staff (including the supervisor) and $187,617 for Airports Administration staff.

- ***General Administration:*** The General Administration Expenses allocation for PAO for FY08 was 31.07 percent of the Airports Administrative costs not related to salaries and benefits. Airport Administrative costs includes insurance, communications, professional services, roads and Airports Departmental overhead charges and the County's General overhead charges.

- ***Aviation Services:*** This expense category incorporates PAO operating expenses such as utilities, terminal building expense, non-capital maintenance, and other miscellaneous expenses of operating the Airport.

The historical operating revenues and expenses shown in Table 9 for PAO represent aggregated totals of several accounting sub-categories.

Table 9 - Historical Revenues and Expenses for PAO

REVENUES/EXPENSES	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	*Av Growth Rate/Yr**
Operating Revenues:										
Aircraft Storage	320,303	419,978	507,129	485,504	487,893	489,231	489,035	506,122	506,728	5.88%
Lease Revenue (FBOs)	96,068	124,930	121,038	130,047	123,830	131,249	133,563	129,953	134,905	4.30%
Fuel Flowage	40,477	44,922	54,964	54,478	53,941	57,883	59,967	82,664	110,974	13.43%
Transient Revenue	14,494	58,026	31,776	35,973	24,447	27,068	24,627	27,329	31,419	10.17%
Other Facility Revenue	3,338	N/A	37,854	21,654	32,955	20,046	19,465	15,384	50,141	40.31%
Total Operating Revenue	**474,680**	**647,856**	**752,761**	**727,656**	**723,066**	**725,477**	**726,657**	**761,452**	**834,167**	7.32%
Operating Expense										
Salaries & Benefits	295,575	315,137	357,903	368,712	371,150	424,954	436,301	377,014	420,567	4.48%
General Administration	187,784	142,571	156,256	171,457	161,621	174,533	123,449	159,281	179,147	-0.61%
Aviation Services	99,757	91,206	115,980	122,937	72,919	118,667	128,860	148,382	114,800	1.76%
Total Operating Expenses	**583,116**	**548,914**	**630,139**	**663,106**	**605,690**	**718,154**	**688,610**	**684,677**	**714,514**	2.62%
Net Operating Income	**(108,436)**	**98,942**	**122,622**	**64,550**	**117,376**	**7,323**	**38,047**	**76,775**	**119,653**	N/A

* The average growth rates per year are developed by calculating the compound growth rates between the starting year (FY 2000) and the ending year (FY 2008) for each line item.

As shown in Table 9 historical operating revenues have grown much more quickly than historical operating expenses. During the period, operating revenues have grown at an average annual rate of 7.3 percent. Operating expenses, on the other hand, have grown at a rate of 2.6 percent per year. Beginning in 2001, the Airport began generating surplus net operating revenues. While these have fluctuated from year to year, they have averaged almost $60,000 since 2000.

Significant actions by the County that have increased revenues within the past couple of years include:

- Increases in tie-down rates at PAO, to levels above those for Reid-Hillview and South County.
- Increases in fuel flowage fees at PAO, which are double those for Reid-Hillview and South County ($0.20 versus $0.10).
- Securing an agreement with Enterprise Rent-a-Car to locate at PAO in 2008. That lease was cancelled by Enterprise, eliminating that windfall for future years.

The increased vacancy rate for PAO tie-downs has been attributed by some to the downturn in the national economy and the increase in prices for tie-down spaces. Table 10 presents an historical look at the tie-down vacancy percentages and tie-down fees for an average aircraft size:

Table 10 – Monthly PAO Tie-Down Vacancy Percentage and Fees

Year	Total	Vacant	% Vacant
2000	367	88	24%
2001	367	7	2%
2002	360	0	0%
2003	360	0	0%
2004	354	8	2%
2005	351	11	3%
2006	357	32	9%
2007	357	16	4%
2008	355	33	9%
2009	355	49	14%

4.2 *Baseline Forecast of Revenues and Expenses – 2010 to 2017*

As mentioned previously, a projection of revenues and expenses was developed for the Baseline Forecast, showing the effects of minimal changes to the current operational structure at the Airport. In essence, this projection considers the financial production of the Airport as it is today, with little change through the year 2017. The analysis is designed to determine whether or not PAO could be self-supporting from an operating standpoint between now and the expiration of the current lease agreements. The projection applies to both the County and City operation of the Airport. Table 11 presents a projection of revenues and expenses for PAO, for the period from 2010 to 2017.

Forecasting assumptions used in the projection included the following:

Revenues

- A postponement of the currently-proposed increase in Tie-Down fees (Aircraft Storage) until 2011. At that time tie-down prices were increased by the proposed 8 percent increase, with CPI increases every year thereafter (4 percent is the projected CPI).
- Reappraisal of the FBO leases occurs in 2013 for Dr. Brandt, and 2014 for Roy Aero. It is assumed that a minimum 50 percent increase in rents will be assessed at these dates.
- No increase in Fuel Flowage Fees or Transient Revenues over the period.
- A decline of more than $32,800 in Other Facility Revenue from the 2008 level of $50,141 due to the loss of Enterprise Rent-a-Car lease.

Expenses

- Growth in Salaries & Benefits Expense by 4.25 percent per year throughout the period.
- Growth in General Administration Expense by 4 percent per year through 2017.
- Growth in Aviation Services Expense by 4 percent per year throughout the period.

Nou-Operating Expenses

- A local share capital expenditure of $50,000 annually was added to the forecast to cover potential capital improvement costs and matching fund requirements for federal and state grants. This amount would cover almost $2.0 million in FAA grants per year at a matching rate of 2.5 percent. The pro forma assumes that the City would have projects included in some years that were not eligible for federal or state funding.

Table 11 – Baseliue Forecast for County Operation of PAO (2010-2017)

YEAR	2008*	2010	2011	2012	2013	2014	2015	2016	2017	Av Growth Rate/Yr
Operating Revenues										
Aircraft Storage	$506,728	$506,700	$547,236	$569,125	$591,890	$615,566	$640,189	$665,796	$692,428	4.60%
Lease Revenue (FBOs)	$134,905	$134,900	$134,900	$134,900	$134,900	$157,200	$202,400	$202,400	$202,400	5.96%
Fuel Flowage	$110,974	$111,000	$111,000	$111,000	$111,000	$111,000	$111,000	$111,000	$111,000	0.00%
Transient Revenue	$31,419	$31,400	$31,400	$31,400	$31,400	$31,400	$31,400	$31,400	$31,400	0.00%
Other Facility Revenue	$50,141	$17,300	$17,300	$17,300	$17,300	$17,300	$17,300	$17,300	$17,300	0.00%
Total Operating Revenue	**$834,167**	**$801,300**	**$841,836**	**$863,725**	**$886,490**	**$932,466**	**$1,002,289**	**$1,027,896**	**$1,054,528**	4.00%
Operating Expenses										
Salaries & Benefits	$420,567	$457,075	$476,501	$496,752	$517,864	$539,873	$562,818	$586,738	$611,674	4.27%
General Administration	$179,147	$193,765	$201,516	$209,576	$217,959	$226,678	$235,745	$245,175	$254,982	4.00%
Aviation Services	$114,800	$124,168	$129,135	$134,300	$139,672	$145,259	$151,069	$157,112	$163,397	4.00%
Total Operating Expenses	**$714,514**	**$775,008**	**$807,152**	**$840,628**	**$875,495**	**$911,810**	**$949,632**	**$989,025**	**$1,030,053**	4.16%
Net Operating Income	**$119,653**	**$26,292**	**$34,684**	**$23,097**	**$10,995**	**$20,656**	**$52,657**	**$38,871**	**$24,475**	-1.03%
Non-Operating Expenses										
Local Share Capital Costs	$0	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	0.00%
Total Net Revenues	**$119,653**	**-$23,708**	**-$15,316**	**-$26,903**	**-$39,005**	**-$29,344**	**$2,657**	**-$11,129**	**-$25,525**	N/A

* 2008 = Actual, 2010-2017 = Forecast

** Forecast decrease represents loss of $32,800 Enterprise Rent-a-Car lease.

Within the Baseline scenario, the FBOs are responsible for capital expenditures on their hangars and other revenue producing facilities. These are not eligible for Federal funding as long as they are under private control.

Under these difficult revenue generation conditions, the Airport would show a net operating surplus of $231,700. However, if local share capital development costs of $50,000 annually are included, there is a net revenue loss of -$168,300 over the eight-year forecast period. This projection can be considered the worst case scenario for the City or County operation of the Airport – continually increasing costs and very slow revenue growth. In all likelihood, revenues will increase more than predicted through growth in the areas that have been held constant in the forecast.

If the City ends its lease with the County by July, 2011, losses (totaling -$129,200) from that point forward would belong to the City. It is the Consultant's opinion that the City can perform slightly better than the County due primarily to fewer personnel required to operate the Airport. That is, PAO will not require the County's noise program manager, and the City would not have to pay an allocation percentage for administrative staff to run multiple airports as the County does. Rather, the salaries and benefits for PAO staff would be limited to those working at the airport and an administrative allocation added for functions such as accounting, invoicing, and professional services. Nevertheless, the costs shown in Table 11 were assumed to apply to both the County and the City operational scenarios.

4.3 Baseline Forecast of Revenues and Expenses: 2018-2037

In the twenty years after 2017 when the current leases expire (assuming no early cancelation or extensions of the leases), the City will have complete control over all of the hangar and FBO facilities at the Airport. Thus, in 2018 the City should experience a revenue windfall from the Airport, based upon the ability to rent hangars and tie-down spaces that were under FBO control. Table 12 presents a summary of the revenue and expense pro forma for baseline performance of PAO under City operation. The revenues and expenses are shown in increments in order to display the entire 2018-2037 period within the Table.

Table 12 – Baseline Revenues & Expenses for City Operation of PAO (2018-2037)

Year	2018	2022	2027	2032	2037	Av Growth Rate/Yr
Operating Revenues						
355 Space Aircraft Apron	$720,125	$778,887	$842,445	$947,636	$1,024,963	1.02%
86 Space FBO Apron	$167,040	$180,670	$195,413	$219,813	$237,750	1.02%
Hangar/Office Rentals	$1,199,100	$1,402,777	$1,706,693	$2,076,453	$2,526,323	4.00%
Fuel Flowage	$111,000	$111,000	$111,000	$111,000	$111,000	0.00%
Transient Revenue	$29,000	$29,000	$29,000	$29,000	$29,000	0.00%
Other Facility Revenue	$17,300	$17,300	$17,300	$17,300	$17,300	0.00%
Total Operating Revenue	$2,243,565	$2,519,634	$2,901,851	$3,401,202	$3,946,336	3.02%
Operating Expense						
Salaries & Benefits	$637,670	$753,183	$927,429	$1,141,986	$1,406,181	4.25%

Table 12 – Baseline Revenues & Expenses for City Operation of PAO (2018-2037)						
Year	2018	2022	2027	2032	2037	Av Growth Rate/Yr
General Administration	$397,772	$465,337	$566,154	$688,812	$838,046	4.00%
Aviation Services	$170,546	$199,515	$242,741	$295,331	$359,316	4.00%
Total Operating Expenses	$1,205,988	$1,418,035	$1,736,324	$2,126,129	$2,603,543	4.13%
Net Operating Income	$1,037,577	$1,101,599	$1,165,527	$1,275,073	$1,342,793	1.37%
Non-Operating Costs						
Local Share Capital Costs	$338,000	$395,412	$481,079	$585,307	$712,115	4.00%
Total Net Revenues	$699,577	$706,187	$684,448	$689,766	$630,678	-0.50%

Assumptions for the 2018 to 2037 period that differ with those of the 2010 to 2017 period include the following:

Revenues

- A total of 86 new tie-down spaces (former FBO apron) are available for revenue production to the City.
- Former FBO hangar and office rentals are available for revenue production to the City. Thus, the City would be collecting these rents rather than the FBO.
- While, no growth in Fuel Flowage was projected. Transient Revenue and Other Facility Revenue was projected to grow at the rate of inflation.

Expenses

- Salaries and Benefits are assumed to grow by 4.25 percent per year.
- General Administration increased by 50 percent to account for additional administrative workload related to former FBO rental properties (collections and lease administration). CPI adjustments were included for future years.
- Aviation Services was forecast to increase by 4 percent per year to reflect projected CPI.
- A Non-Operating Capital Development and Maintenance account was created to reflect local share capital improvement costs and to invest in maintenance of revenue producing facilities. Beginning year was estimated at 5 percent of the estimated existing hangar and building value. CPI adjustments were included for future years.

Cumulative net operating revenues to the City under this baseline projection for the years 2018 to 2037 were estimated to total almost $13.7 million.

4.4 Summary and Findings for Baseline Scenario

For the Baseline Scenario, cumulative net operating revenue surpluses were shown for both the 2012-2017 and 2018-2037 periods for City operation of the Airport ($231,700 and $23,743,500, respectively). However, when non-operating costs are added, the 2012-2037 period shows a cumulative net deficit of -$168,300 in total revenues. For the longer term (2018-2037), total net revenues (which include non-operating costs) were estimated at $13,678,500.

The Baseline projections did not include discussions of alternate methods of managing or operating the Airport. They also did not include projections associated with any additional hangar development at the Airport. Those discussions and analyses are presented in the next section of this report.

5. ALTERNATIVE OPERATIONAL STRUCTURES

THIS SECTION CONSIDERS DIFFERENT OPERATIONAL STRUCTURES FOR PAO and estimates the economic consequences of implementing those options. In particular, the City is interested in the potential use of alternate management for the Airport either in the form of an FBO or some other third party management arrangement. In Section 4, baseline pro formas were developed to estimate the financial outcome of City management of the Airport from the years 2012-2037. This section presents analysis for the following:

- Common Operational Structures for Airports
- Projections of Financial Performance:
  - Baseline City Management Option: 2012-2037
  - Additional Hangar/Apron Option: 2012-2037
  - City Plus FBO Management Option: 2012-2037
  - Third Party Management Option: 2012-2037
- Summary of Financial Performance Options
- FAA Policy on Revenue Diversion
- FAA Policy on Airport Land Release or Airport Closure

5.1 Common Operational Structures for Airports

As the City decides which management option to employ for the Airport, there are a number of pros and cons for using different structures. If the goal of the City regarding the Airport is identified, it may be easier to develop a matching operational structure. This report provides the background and projected economic outcomes for different management structures so that sound decisions can be made for the future of PAO operation. Four options for airport management are identified as follows:

- Continued County Operation of the Airport
- City Operation of the Airport
- Joint FBO and City Operation of the Airport
- Third Party Management

In all four options, the City must retain ownership of the Airport to satisfy Federal Aviation Administration Airport Improvement Program grant assurances, as well as State of California Aeronautics grant aid requirements. These are further discussed in Section 5.5.

Continued County Operation of the Airport

In this option, the City would re-negotiate a lease with the County for its operation of the Airport. The viability of this option would depend upon the County's desire to continue operating the Airport and the City's endorsement of that arrangement. Under this option, the existing lease would be kept in place through the year 2017, followed by a new lease with the County. It is possible that in a newly renegotiated lease, the City could assume ownership of all existing FBO property and the associated revenues. The City would then become the landlord of

the hangars, apron area, and fueling operation at PAO. Revenues from this operation could be significant. On the other hand, under this scenario, there would likely be little or no control of County pricing policy or reinvestment in airport facilities.

City Operation of the Airport

If the City is to be the sole operator of the Airport, there are several changes in the staffing and management structure needed. In general, the City would need to implement the following:

- Retain an Airport Manager several months before actually taking possession of the Airport. In addition, an Assistant Airport Manager and a part time City worker would need to be assigned to the Airport, once it was under City control.
- Set up of an Enterprise Fund (or similar fund) for Airport operation, where charges from other City departments could be recorded as costs against Airport revenues. In addition, a new expense category would include Airport Operations.
- The City would begin billing airport apron tenants and collecting lease revenues from FBOs.

Although not required for general aviation airports like PAO, an airport operations manual should be developed that would spell out daily, monthly, and annual responsibilities of personnel and City administration, show contact names and numbers, and describe emergency and security procedures.

Typically, many municipal airports have unelected airport boards or advisory/oversight groups that function to advise or assist in managing the Airport and its operations. These advisory groups vary widely in authority and complexity. Some have complete operational control of their airports while others are advisory only. Prior to the City of Palo Alto taking back PAO, it is recommended that an advisory group be formally chartered that would report to the City. These positions are usually appointed with staggered terms and usually represent a cross-section of airport users and stakeholders. Most have a good knowledge of aviation, business, government, and the community.

Joint FBO and City Operation of the Airport

This option is only slightly different from the complete City management of the Airport. In this regard, the City would contract with an FBO to provide management personnel for the Airport. The City would still be required to provide legal and other City services to the Airport under General Administration, but the actual day-to-day operation and management at the Airport would be undertaken by the FBO. As the FBO must staff the facility for its own business purposes, it could also provide watchful management of the Airport for the City, including:

- Daily Airport inspection
- Minor maintenance
- Apron and Itinerant Ramp management

- Reporting to City and attendance at Council Meetings
- Interaction with FAA Control Tower Operations

These and other tasks would be assigned to an FBO. By using personnel already located at the Airport, the City should save significantly on labor costs using this method.

Third Party Management of the Airport

Third party management of an airport is sometimes called "airport privatization," depending upon how inclusive of services the agreement or lease is. However, this generally does not mean divestiture by the governmental owner of the airport. In general, the governmental sponsor still maintains ownership of the airport and benefits from privatization by not paying for the operation of the facility. The public has a right to be secure in the knowledge that this service won't suffer at the hands of a private, for-profit enterprise. This assurance is provided through the fact that third party airport management is generally not a complete divestiture. In most cases, this type of management structure includes an ongoing public-private partnership.

There are a number of versions of the Third Party Management structure that have been implemented in the U.S. These range from true "privatization" where the owner is paid to let a third party run the airport for profit, essentially "leasing the airport," with no owner involvement. A second model involves full third party leasing of the governmental owned airport, sometimes with payments to the owner, but with allowance for profit taking from leases and rents (usually of facilities the third party builds or acquires outright with their own funding). A third model involves the hiring of a third party to operate the airport that is still owned by the governmental entity. In each option, the responsibility for grant-in-aid applications for airport improvement projects and the required local match funding has to be determined.

A number of airline and large general aviation airports have tried leasing and privatization as a means of more efficiently operating their facilities. Generally, there are four basic reasons to use third party management:

- Capital Infusion
- Efficiency Gains
- Revenue Windfall
- Opportunity to Reinvent the Airport

Some airport owners have little or no interaction with the operation of their airports and instead, use their contractors as extensions of their municipal governments. For existing airports, the simplest form of privatization is contracting out management of the airport on a relatively short-term basis. Larger economic benefits generally can be obtained via a long-term lease of the airport. One particular benefit of contracting out is that measurable performance requirements can be specified, with appropriate penalties for failure to meet them.

It should be noted that the FAA has expressed concern that the sale or long-term lease of an airport would violate the obligations undertaken by the municipal owner as a condition of its

federal grants. The most significant of these is the obligation not to divert an airport's revenues. Federal law requires that public airport revenues be used for capital and operating costs. The FAA considers sale or lease proceeds to be airport revenue that cannot be transferred to other municipal uses. Therefore, the financial incentives for U.S. public airports to privatize or use third party management are constrained and they may even impede efforts to privatize because of a consequentially higher cost of capital and a reduced ability to generate more revenues. For Palo Alto Airport, any lease agreement to manage the Airport would require that revenues from the lease over and above expenses could not be diverted to other uses. In short, the City of Palo Alto could not earn money from the Airport to use elsewhere. All money made at the facility would have to be reinvested in the Airport. This provision of the Federal law is being reviewed for general aviation airports and may be changed at some time in the future.

5.2 Projections of Financial Performance

Different management structures and hangar totals will produce different amounts of revenue at PAO. Prior to implementing any strategy, the development of desktop models to test the economic outcomes is important. For PAO, a number of operational structures have been suggested for the future, including:

- Baseline City Management Option: 2012-2037
- Additional Hangar/Apron Option: 2012-2037
- City Plus FBO Management Option: 2012-2037
- City Plus Third Party Management Option: 2012-2037

Each of these options and their respective financial performance is presented in below.

Baseline City Management Option: 2012-2037

The financial pro formas associated with the Baseline City Management of PAO were presented in Section 4 of this report. To recap, those projections showed slow revenue growth (slower than general price inflation) and normal expense growth (exceeding projected price inflation). With these assumptions, the following total net revenues (which included capital development costs) were estimated:

- -$129,200 for 2012-2017
- $13,678,500 for 2018-2037

The significant revenue production in the second period is due to the reversion of private hangars to City ownership and control.

Additional Hangar/Apron Option: 2012-2037

If additional hangar and apron space is developed at the Airport, there is an opportunity to increase financial performance over the Baseline projections. This section is not meant as an endorsement of the additional revenue producing facilities. Rather, it simply serves as a means of estimating the economic value of this option. Any decision to pursue these additional

revenues must be made by the City, in concert with its Airport stakeholders and funding agencies. Table 13 presents the short term (2012-2017) financial pro forma for what could be considered a full landside development option. For the purpose of this report, the "landside" at PAO refers to Airport areas that have buildings and aircraft storage. They do not include the runway and associated taxiways, runway protection zones, or safety areas. This pro forma contains the following assumptions:

- Early termination of the lease with the County for operation of the Airport – 2012 assumed as first full year of City operation.
- City development of hangars using debt financing (principal of $4,550,000 for 20 years at 5 percent interest).
- Additional apron area secured through FAA grants.
- Deliberately low projections of Fuel Flowage Fees, Transient Revenue, and Other Facility Revenue.

Table 13 - City Management of PAO with Additional Hangars/Apron (2012-2017)

Palo Alto	2012	2013	2014	2015	2016	2017	Av Growth Rate/Yr
Operating Revenues							
Aircraft Storage	$569,125	$591,890	$615,566	$640,189	$665,796	$692,428	4.00%
Additional Tie-Down Rental	$35,352	$36,766	$38,237	$39,766	$41,357	$43,011	4.00%
Additional Hangar Rental	N/A	N/A	$393,000	$408,720	$425,069	$442,072	4.00%
Lease Revenue (FBOs)	$134,900	$134,900	$157,200	$202,400	$202,400	$202,400	8.45%
Fuel Flowage	$111,000	$111,000	$111,000	$111,000	$111,000	$111,000	0.00%
Transient Revenue	$29,000	$29,000	$29,000	$29,000	$29,000	$29,000	0.00%
Other Facility Revenue	$17,300	$17,300	$17,300	$17,300	$17,300	$17,300	0.00%
Total Operating Revenue	**$896,677**	**$920,856**	**$1,361,303**	**$1,448,375**	**$1,491,922**	**$1,537,211**	**11.38%**
Operating Expense							
Salaries & Benefits	$496,752	$517,864	$539,873	$562,818	$586,738	$611,674	4.25%
General Administration	$209,576	$217,959	$226,678	$235,745	$245,175	$254,982	4.00%
Aviation Services	$134,300	$139,672	$145,259	$151,069	$157,112	$163,397	4.00%
Interest on Debt Service	N/A	$224,600	$217,700	$210,300	$202,600	$194,600	-3.65%!
Total Operating Expenses	**$840,628**	**$1,100,095**	**$1,129,510**	**$1,159,932**	**$1,191,625**	**$1,224,653**	**7.82%**
Net Operating Income	**$56,049**	**-$179,239**	**$231,793**	**$288,443**	**$300,297**	**$312,558**	**41.02%**
Non-Operating Costs							
Debt Service Principal	N/A	$136,100	$143,000	$150,400	$158,100	$166,100	5.11%
Local Share Capital Costs	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	0.00%
Total Non-Operating Costs	**$50,000**	**$186,100**	**$193,000**	**$200,400**	**$208,100**	**$216,100**	**34.01%**
Total Net Revenues	**$6,049**	**-$365,339**	**$38,793**	**$88,043**	**$92,197**	**$96,458**	**N/A**

Cumulative net revenues for the six years shown in the table total -$43,800, which is an improvement of $124,500 over the Baseline pro forma. Principal payments on the debt service range from $136,100 per year to $166,100 beginning in 2013.

For the longer term, the net revenue production is much higher. Table 14 shows the pro forma for the 2018-2037 period, assuming the development of additional hangar and apron area at PAO. Net revenue production includes both the FBO facilities that transfer at the end of the current lease in 2017, plus the additional hangar and tie-down fees from the development of these facilities. Cumulative net revenues for the 2018-2037 period total $20,500,700.

Table 14 - City Management of PAO with Additional Hangars/Apron (2018-2037)

YEAR	2018	2022	2027	2032	2037	Av Growth Rate/Yr
Operating Revenues						
355 Space Aircraft Apron	$720,125	$778,887	$842,445	$947,636	$1,024,963	1.88%
86 Space FBO Apron	$167,040	$180,670	$195,413	$219,813	$237,750	1.88%
Additional Tie-Down Rental	$44,732	$48,382	$52,330	$58,864	$63,667	1.88%
Additional Hangar Rental	$459,754	$497,270	$537,848	$605,005	$654,374	1.88%
Hangar/Office Rentals	$1,199,100	$1,402,777	$1,706,693	$2,076,453	$2,526,323	4.00%
Fuel Flowage	$111,000	$111,000	$111,000	$111,000	$111,000	0.00%
Transient Revenue	$29,000	$33,926	$41,276	$50,219	$61,099	1.88%
Other Facility Revenue	$17,300	$20,239	$24,623	$29,958	$36,448	1.88%
Total Operating Revenue	**$2,748,051**	**$3,073,151**	**$3,511,628**	**$4,098,948**	**$4,715,624**	**2.88%**
Operating Expense						
Salaries & Benefits	$637,670	$753,183	$927,429	$1,141,986	$1,406,181	4.25%
General Administration	$397,772	$465,337	$566,154	$688,812	$838,046	4.00%
Aviation Services	$181,757	$212,630	$258,697	$314,744	$382,934	4.00%
Interest on Debt Service	$186,100	$147,500	$87,100	$9,600	N/A	N/A
Total Operating Expenses	**$1,403,299**	**$1,578,650**	**$1,839,380**	**$2,155,142**	**$2,627,161**	**3.36%**
Net Operating Income	**$1,344,752**	**$1,494,501**	**$1,672,248**	**$1,943,806**	**$2,088,463**	**2.34%**
Non-Operating Costs						
Debt Service Principal	$174,600	$213,200	$273,600	$351,100	N/A	N/A
Local Share Capital Costs	$338,000	$395,412	$481,079	$585,306	$712,115	4.00%
Total Non-Operating Costs	**$512,600**	**$608,612**	**$754,679**	**$936,406**	**$712,115**	**1.75%**
Total Net Revenues	**$832,152**	**$885,889**	**$917,569**	**$1,007,400**	**$1,376,348**	**2.68%**

City Plus FBO Management Option: 2018-2037

This option considers the City control of the Airport with assistance from an FBO that is contracted to provide aviation services to Airport users, along with airport management services for the City. Savings from this option are primarily from labor costs, in that no duplication of labor hours occurs from having both the FBO and City personnel stationed at the Airport. As the FBO must have personnel at the Airport to conduct business, cross-utilization of these personnel can occur relative to Airport management. As mentioned previously, it is believed that this option is restricted to the post-2017 period, unless the existing FBO contracts are purchased by the City. It is possible that negotiations could occur that would permit FBO management in the 2012 to 2017 period, however, the outcomes of such negotiation are subject to a great deal of speculation.

Table 15 presents the pro forma for the City Plus FBO Management Option. As shown, a flat fee for FBO management services was estimated to begin in 2018 at $342,100 (representing $250,000 in 2010 current dollars), increased by price inflation. However, this number would likely be negotiated through a Request for Proposals process during the 2017 timeframe, coinciding with the replacement of FBO agreements.

Table 15 - City Plus FBO Management of PAO (2018-2037)

YEAR	2018	2022	2027	2032	2037	Av Growth Rate/Yr
Operating Revenues						
355 Space Aircraft Apron	$720,125	$778,887	$842,445	$947,636	$1,024,963	1.88%
86 Space FBO Apron	$167,040	$180,670	$195,413	$219,813	$237,750	1.88%
Hangar/Office Rentals	$1,199,100	$1,402,777	$1,706,693	$2,076,453	$2,526,323	4.00%
Fuel Flowage	$111,000	$111,000	$111,000	$111,000	$111,000	0.00%
Transient Revenue	$29,000	$29,000	$29,000	$29,000	$29,000	0.00%
Other Facility Revenue	$17,300	$17,300	$17,300	$17,300	$17,300	0.00%
Total Operating Revenue	**$2,243,565**	**$2,519,634**	**$2,901,851**	**$3,401,202**	**$3,946,336**	**3.01%**
Operating Expense						
FBO Management Fee	$342,100	$400,209	$486,915	$592,407	$720,753	4.00%
General Administration	$397,772	$465,337	$566,154	$688,812	$838,046	4.00%
Aviation Services	$181,757	$212,630	$258,697	$314,744	$382,934	4.00%
Total Operating Expenses	**$921,629**	**$1,078,176**	**$1,311,766**	**$1,595,963**	**$1,941,733**	**4.00%**
Net Operating Income	**$1,321,936**	**$1,441,458**	**$1,590,085**	**$1,805,239**	**$2,004,603**	**2.22%**
Non-Operating Costs						
Local Share Capital Costs	$338,000	$395,412	$481,079	$585,307	$712,115	4.00%
Total Net Revenues	**$983,936**	**$1,046,046**	**$1,109,006**	**$1,219,932**	**$1,292,488**	**1.45%**

The only change in this option relative to the City Management Option is the lower cost of on-airport personnel. In this case, the FBO should be able to perform these services for significantly less than it would cost the City to provide through its employees. Cost savings to the FBO are based primarily upon the cross-utilization of management personnel (which are already attending the Airport during business hours). Cumulative net revenues over the 2018 to 2037 period are estimated to total $22,646,400.

Third Party Management Option: 2012-2037

The Third Party Management Option could take the form of either management only or an all-inclusive master lease of the entire Airport. If Third Party Management is used in the 2012-2017 period, it would likely involve the management-only scenario, as the existing FBO leases or obligations may prevent a master lease of the entire Airport. Under the management-only scenario, a third party contractor would manage and operate the airport with their employees. Services would include all airport operations and procedures, community outreach, asset management, property management, maintenance and repairs, tenant administration, marketing and promotion of the Airport, development and construction management, airport planning, grant submittals, processing and adherence, fueling, and all other services required to operate the airport. The City would make all policy and leasing decisions. Payment to the Contractor would involve the payment of all costs plus a percentage of gross revenues (usually in the 5 to 10 percent range). For this business plan, it was assumed that the Contractor would provide labor for the Airport management and operation, rather than having City employees operate the Airport. Table 16 presents the pro forma for the short-term Third Party Management option. As shown, cumulative net revenues to the City for this option total $816,200 for the period.

Table 16 - Third Party Operation of PAO: 2012-1017

YEAR	2012	2013	2014	2015	2016	2017	Av Growth Rate/Yr
Operating Revenues							
Aircraft Storage	$569,125	$591,890	$615,566	$640,189	$665,796	$692,428	4.00%
Lease Revenue (FBOs)	$134,900	$134,900	$157,200	$202,400	$202,400	$202,400	8.45%
Fuel Flowage	$111,000	$111,000	$111,000	$111,000	$111,000	$111,000	0.00%
Transient Revenue	$31,400	$31,400	$31,400	$31,400	$31,400	$31,400	0.00%
Other Facility Revenue	$17,300	$17,300	$17,300	$17,300	$17,300	$17,300	0.00%
Total Operating Revenue	**$863,725**	**$886,490**	**$932,466**	**$1,002,289**	**$1,027,896**	**$1,054,528**	**4.07%**
Operating Expense							
3rd Party Labor	$270,400	$281,216	$292,465	$304,163	$316,330	$328,983	4.00%
3rd Party Fee	$86,373	$88,649	$93,247	$100,229	$102,790	$105,453	4.07%
General Administration	$209,576	$217,959	$226,678	$235,745	$245,175	$254,982	4.00%
Aviation Services	$134,300	$139,672	$145,259	$151,069	$157,112	$163,397	4.00%
Total Operating Expenses	**$700,649**	**$727,496**	**$757,649**	**$791,206**	**$821,407**	**$852,815**	**4.01%**
Net Operating Income	$163,076	$158,994	$174,817	$211,083	$206,489	$201,713	4.34%

Table 16 - Third Party Operation of PAO: 2012-1017							
YEAR	2012	2013	2014	2015	2016	2017	Av Growth Rate/Yr
Non-Operating Expenses							
Local Share Capital Costs	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	0.00%
Total Net Revenues	**$113,076**	**$108,994**	**$124,817**	**$161,083**	**$156,489**	**$151,713**	**6.05%**

For the long term (2018-2037), the Third Party Management option could involve a master lease for the entire Airport. In this regard, a third party contractor would typically be responsible for all Airport operations, operational costs and employees, community outreach, airport planning, grant preparation and local grant match contribution for federal and State financial assistance, financing and redevelopment of existing revenue producing facilities, marketing and promotion of the Airport, tenant administration and retention, property management, asset management, and fueling. Under this scenario, the Contractor would collect all revenues and pay a minimum base rent to the City with a percentage rent option as well. In this regard, the City could expect between 70 and 80 percent of the pro forma net revenues to be paid at year-end after all accounting for revenues and expenses has been made or audited. Leases of this kind are typically set for a minimum 25 years and longer if a substantial investment is required. They would also need Federal Aviation Administration and State Aeronautics approval for this option.

For this analysis, the long-term City Plus FBO Management pro forma was used as a means of projecting Contractor revenues to the City. In this regard, it was assumed that a check for 75 percent of the projected net operating revenues would be written to the City each year. While negotiations may be able to increase the percentage, it was assumed that conservative approach was needed. Thus, for the period 2018-2037, checks totaling $16.98 million would be written to the City by the Third Party Management company.

5.3 *Summary of Financial Performance Options*

The previous section presented a number of different management and facility options along with their financial performance. To better compare each option, a summary table was developed that shows the important economic measures of each alternative. Again, it is understood that there are other criteria besides financial performance for selecting a preferred alternative for PAO. Thus, non-economic factors may well determine the future course of the Airport's management and operation. Table 17 presents a summary of total net revenues for each of the management options.

Table 17 - Summary of Financial Performance Options: Total Net Revenues			
MANAGEMENT OPTION	2012-2017	2018-2037	Total Net Revenues
Baseline City Management	-$129,200	$13,678,500	$13,549,300
Additional Hangar/Apron	-$43,800	$20,500,700	$20,456,900
City Plus FBO Management	N/A	$22,646,400	$22,646,400
Third Party Management	$816,200	$16,984,800	$17,801,000

As shown, the City Plus FBO Management option produces the greatest surplus of net revenues over the entire period. The Baseline City Management option has the lowest total net revenues of the four options. Even with net losses for two of the options in the 2012 to 2017 period, the 2018 to 2037 period provides more than enough revenues to offset these initial losses.

A summary of pros and cons to the City relative to each option was developed to condense the positive and negative factors associated with the four alternative management structures presented here. Tables 18 and 19 present these factors by alternative and by Airport operator.

Table 18 – Summary of Pros and Cons for All Options	
Pros	**Cons**
City Operation of the Airport (Baseline City Management Option)	
1) Greater control of all factors, relative to County control of Airport 2) Positive net revenues over long term 3) Monitor and control investment in capital assets. 4) Ability to respond to Airport users and resident neighbors.	1) Responsibility for all finances and management of the Airport 2) Must deal with all staffing issues. 3) Airport can become political issue 4) Potential financial risk
Additional Hangar/Apron	
1) Highest revenue stream of all options	1) Potential change of Airport viewshed
City Plus FBO Management	
1) Lower labor costs 2) Higher net revenues relative to 3rd Party Management and Baseline Projections 3) FBO responsibility for technical aviation issues.	1) Less control of day-to-day management function.
Third Party Management	
1) Indirect responsibility for operating the Airport. 2) Airport operates as a profit center, providing periodic payments to City. 3) May represent lowest financial risk of all options.	1) Least amount of control over day-to-day operation and management of Airport. 2) Dependent upon financial stability and strength of 3rd Party Operator.

Table 19 – Summary of Pros and Cons by Factor and Airport Operator				
Factor/Operator	**County**	**City**	**FBO/City**	**3rd Party**
General Fund Benefit	None	None	None	None
20 Yr. FAA Obligation	City	City	City	City
Lease Term	2017	N/A	TBD	TBD
Control over Fees	None	Complete	Complete	Limited
Control over Revenue	None	Complete	Complete	Limited
Control over Expenses	None	Complete	Complete	Limited
General Fund Risk	None	Limited/Loan	Limited/Loan	Limited/Loan/3rd Party
Planning Control	Complete	Complete	Complete	Complete
Reinvestment	Status Quo	Yes	Yes	Yes
Management Control	None	Complete	Limited	Limited
Income/Loss Projections	None	Complete	Limited	Limited

5.4 FAA Policy on Revenue Diversion

Airports receiving Federal Assistance must restrict their use of airport revenue for strictly prescribed airport purposes (Title 49 U.S. Code 41707(b), 47133). When airport revenue of a federally assisted airport is used for other than airport capital costs and operations, with few exceptions, it is generally considered an unlawful airport revenue diversion. The FAA issued a policy statement on this issue, which went into effect February 16, 1999. According to the policy, any airport that receives Federal financial assistance must sign assurances, as part of the Grant Agreement, that the revenue generated by the operator will be used only for purposes related to the airport. The assurance also prohibits the diversion of airport revenue to non-airport use. The policy statement tends to offer general guidance, with only limited discussion of the application of the airport revenue-use restriction to specific situations.

The FAA relies upon several means for monitoring compliance with its revenue use requirements and interpreting those requirements:

- The sponsor's annual auditing report on revenue use required by statute.
- Single audit reports as authorized.
- Investigations prompted by third-party complaints pursuant to 14 CFR, Part 16.
- Department of Transportation, Office of Inspector General Audits
- Publicly available FAA Chief Counsel and DOT General Counsel Opinions.
- Guidance letters issued by Airport Division Staff based on specific fact situations presented by operators.

Information on the application of the airport revenue-use requirements to a specific situation is developed through these monitoring activities. Thus, information pertaining to revenue diversion cannot be found at a central location, but is contained in all of the above sources. It is important to remember that revenue diversion is typically "alleged" and not an obvious finding in most cases. Cases such as these require in-depth investigations conducted by FAA and, when required or requested, by the Office of Inspector General (OIG) within the Department of Transportation.

The origin of this policy was with airlines that believed it was unfair to charge them high rates that created surplus revenues which were then spent off the airport on non-aviation projects. A lawsuit at Los Angeles International Airport helped define cost structures that were permitted and those that were not. For example, an airport sponsor cannot give excess land to its own parks department for athletic fields. Rather, market rates have to be charged and applied to airport revenues.

For Palo Alto, the concept of revenue diversion is important, since there is likely to be a significant surplus net revenue stream for the long term future. This money can be reinvested in the Airport's infrastructure. For example, revenue producing hangars can be reconstructed when they reach the end of their useful life. A new/replacement terminal building can be developed with this money. Other projects, as needed, could be funded from this surplus as well.

5.5 FAA Policy on Airport Land Release or Airport Closure

If the City desired to release some of the Airport property (but not close the Airport), they would first have to examine the funding stream that has come through both the State of California and the FAA to determine the number and size of grants received by the Airport. Any land purchased with an FAA grant is "obligated" to the FAA for airport use. As part of the Federal grant assurances and associated regulations, all property that has been included as part of the airport property, cannot be sold or used for non-aviation purposes without a formal approval by the FAA. This policy has several purposes but is primarily intended to protect property acquired for a public airport from being arbitrarily diverted from public use. In fact, all that is required for airport property to be subject to this federal obligation is that the property has been depicted on a federally approved Airport Layout Plan (ALP). The property in question need not be acquired with federal funds to be federally obligated.

Per FAA Order 5190.6A, Airport Compliance Requirements:

> *Any property described as part of an airport in an agreement with the United States or defined by an Airport Layout Plan (ALP) is considered to be "dedicated" or obligated for airport purposes by the terms of the agreement.*

Notwithstanding this federal policy, FAA will allow property to be used for non-aviation purposes or sold outright for airport-compatible developments upon completing a formal FAA land release process. Thereafter the property may be used "or disposed of" for non-aeronautical uses. Briefly, the requirements of the land release are summarized below:

FAA Land Release

A formal request is submitted to the FAA, which may be in the form of a letter with accompanying documentation. In the case of PAO, the request would include the following:

- What specifically is being requested (long-term lease, release for sale, etc.).
- Why the release is requested (i.e., such as economic development).
- A justification of why the property is not needed for airport purposes.

- The specific properties involved, with an illustration.
- How the property was acquired by the Airport.
- The present condition and use of the property.
- Anticipated future use after disposal.
- The current Fair Market Value (FMV), per appraisal.
- How the property sale revenues will be used for Airport needs (certify compliance with FAA's Revenue Use Policy, dated 2/16/99). Sale revenue may not be diverted for other City purposes.
- Provide a comparison of the relative advantage or benefit to the Airport or City from the sale, as opposed to retention for rental income.

ALP Update (Pen & Ink Change)

As the release of the property is a change to the ALP, an ALP update must also be submitted for FAA/CalTrans review and approval. As part of this submission, the formal airport property map would also be updated, indicating the final date of the release or sale of the affected parcels. A boundary survey is typically required.

Environmental Approval

In coordination with FAA, an environmental review may also be applicable (e.g., federal Categorical Exclusion or Environmental Assessment). If the FAA agrees with the justification to release the property for the overall public benefit, the proposal will be published in the Federal Register for comment. After receiving public comment, and assuming the FAA determines that the land is not needed for present or foreseeable airport purposes, the release would be complete. Note that the City may be required to document how the proceeds from the sale or lease of the property is retained by the City exclusively for funding airport needs, as well as other obligations that may be established in the release. Release of airport property is common for locations that have reasonable airspace protection (i.e., from local zoning) and that can be realistically shown to be surplus to the airport's needs through the airport planning process or other justification. It is not uncommon for a land release request to require over a year to execute, depending on its complexity.

Airport Closure

The closure of a public-use airport can be a time consuming and costly legal challenge for a municipal airport owner. This is particularly true for airports that have:

- Accepted land from a federal program,
- Purchased property using FAA funding, or
- Taken a federal grant for airport improvements within the last twenty years.

The FAA requires a thirty day notice of intent to close a facility. During this time, the FAA will perform a review of the proposed closure to determine if the airport sponsor is obligated to keep

the airport open and operating, per the grant assurances outlined in the Airport Improvement Program (AIP) and/or any deed restrictions existing for federally deeded property.

FAA Grant Assurance Requirements

It is the policy of the FAA to not approve the closure of an airport that has accepted federal funds (AIP grants) or is under a deed restriction from the Federal Surplus Property Act. In fact, according to the Airport Compliance Division of the FAA, they have never approved an airport closure under those circumstances and no airport owner has been successful in closing their facility without FAA approval.

Airport owners who have accepted AIP funding are obligated to the federal government to comply with the grant assurances outlined in each AIP grant. Typically, the assurances of the AIP grants last for twenty years. However uses of AIP funds for property acquisition obligate the grantee indefinitely (i.e., the requirement does not expire). Below is an excerpt from the FAA's "Airport Grant Assurances" as they relate to the duration and applicability of the obligations agreed to by the airport owner (i.e. airport sponsor) when they accept federal funding:

B. Duration and Applicability.
1. Airport development or Noise Compatibility Program Projects Undertaken by a Public Agency Sponsor. The terms, conditions and assurances of the grant agreement shall remain in full force and effect throughout the useful life of the facilities developed or equipment acquired for an airport development or noise compatibility program project, or throughout the useful life of the project items installed within a facility under a noise compatibility program project, but in any event not to exceed twenty (20) years from the date of acceptance of a grant offer of Federal funds for the project. However, there shall be no limit on the duration of the assurances regarding Exclusive Rights and Airport Revenue so long as the airport is used as an airport. There shall be no limit on the duration of the terms, conditions, and assurances with respect to real property acquired with federal funds. Furthermore, the duration of the Civil Rights assurance shall be specified in the assurances.

As noted, there is no limit to the duration of these obligations on property that was purchased with AIP funds. Additionally, Section C, Paragraph 19 of this document further make public airport closure infeasible per regulation, stating:

C. Sponsor Certification. The sponsor hereby assures and certifies that:
19. Operation and Maintenance.
a. The airport and all facilities which are necessary to serve the aeronautical users of the airport, other than facilities owned or controlled by the United States, shall be operated at all times in a safe and serviceable condition and in accordance with the minimum standards as may be required or prescribed by applicable Federal, state and local agencies for maintenance and operation. It will not cause or permit any activity or action thereon which would interfere with its use for airport purposes.

These assurances obligate an airport sponsor to keep the airport open at all times and not allow any action that would interfere with its use as a public-use airport. By the virtue of this assurance, the airport owner has agreed to keep the airport open to be used as an airport for the applicable duration of the obligation.

Repayment of Grant and Revenue Diversion

In addition to the grant assurances, the grant agreement does not have provisions for repayment of federal monies in order to cancel the grant and associated terms and conditions. Per FAA policy, because of the important role that each airport has in the NPIAS, the FAA would not support any effort to rescind the contract (grant) obligations. An additional obligation of an airport owner is that any money earned by the sponsor operating the airport can only be spent on the airport. Publicly owned airports cannot "divert" their revenue off of the airport. The FAA Airport Compliance Division has stated that if an airport is closed without FAA approval, any revenues earned on or from that property are considered airport revenues and must be paid back to the FAA. In other words, if the FAA denies permission to close the airport, they will consider it to be airport property no matter what the use is. If the land is sold, the sponsor could be obligated to repay the FAA up to three times the sale price. Below, US Code, Title 49, 47107 and 47133 dictate the procedures and penalties of revenue accountability and diversion:

Sec. 47107. Project grant application approval conditioned on assurances about airport operations.
(n) Recovery of Illegally Diverted Funds.--
(1) In general.--Not later than 180 days after the issuance of an audit or any other report that identifies an illegal diversion of airport revenues (as determined under subsections (b) and (l) and section 47133), the Secretary, acting through the Administrator, shall—
(A) Review the audit or report;
(B) Perform appropriate fact finding; and
(C) Conduct a hearing and render a final determination concerning whether the illegal diversion of airport revenues asserted in the audit or report occurred.
Sec. 47133. Restriction on use of revenues
(a) PROHIBITION- Local taxes on aviation fuel (except taxes in effect on December 30, 1987) or the revenues generated by an airport that is the subject of Federal assistance may not be expended for any purpose other than the capital or operating costs of--
(1) the airport;
(2) the local airport system; or
(3) any other local facility that is owned or operated by the person or entity that owns or operates the airport that is directly and substantially related to the air transportation of passengers or property.
(5) PENALTY FOR DIVERSION OF AVIATION REVENUES- The amount of a civil penalty assessed under this section for a violation of section 47107(b) of this title (or any assurance made under such section) or section 47133 of this title may be increased above the otherwise applicable maximum amount under this section to an amount not to exceed 3 times the amount of revenues that are used in violation of such section.'.

Landmark Airport Closure (Meigs Field)

There have been cases in the past where airport sponsors chose to disregard federal requirements and closed their airport without FAA permission. Perhaps the most well publicized closure is "Meigs Field," which was closed by the City of Chicago in 2003 without approval. In this particular instance, the airport was not obligated via grant assurances as it had not received AIP funding within the durations outlined above. Additionally, Meigs Field, like PAO, was not federally deeded property, so there were no deed restrictions applicable. The City of Chicago did however close the airport without providing notice to the FAA. Based upon that violation, the FAA levied a fine against the City of Chicago of $33,000, which was the maximum penalty at that time ($1,100 per day for thirty days).

In addition, the FAA also fined the City $1 million for diverting airport revenue by using airport money to pay the contractors for the demolition of the runway. Records indicate that the city spent an additional $550,000 on legal fees disputing the fines. In total, the closing of Meigs Field cost the City of Chicago over $1.6 million. If the airport was obligated by grant assurances (such as the case with PAO) the FAA would have ordered the City of Chicago to reopen the Airport at the city's expense. Note that due to the national publicity and outcry from airport and pilot groups that continued for years, Congress increased the fine for Failure to Notify the FAA of Airport Closure from the previous $1,100 per day to $10,000 per day. The regulation is entitled the "Meigs Legacy Amendment."

6. RECOMMENDED OPTIONS

THE RECOMMENDED OPTIONS FOR PAO MANAGEMENT AND operation have been reduced to two, after discussions with City staff. These two options were determined to be the most likely scenarios and they present a contrast to each other in terms of costs and City involvement. This section summarizes the attributes of each option, along with probable implementation tasks and costs.

6.1 Description of Options

Upon the completion of the analysis of management alternatives, discussions were held with City staff concerning the reduction of four alternatives to a final two options. The City was interested in seeing the differences between having the City operate the Airport and having a third party firm operate PAO. Of course, there is a third option – do nothing - that would default to having the County operate the Airport as it has for more than 40 years.

City Operation of the Airport

As described in Section 5 of this report, the City's operation of the Airport would require the implementation of the following:

- Retain an Airport Manager (preferably several months before actually taking possession of the Airport). In addition, an Assistant Airport Manager and a part time City worker would need to be assigned to the Airport, once it is under City control.
- Set up of an Enterprise Fund (or similar fund) for Airport operation, where charges from other City departments could be recorded as costs against Airport revenues. In addition, a new expense category would include Airport Operations. A discussion of Enterprise Funds is included in Section 6.2 of this report.
- The City would set up a billing system for Airport apron tenants and collect lease revenues from FBOs.

Typically, many municipal airports have unelected airport boards or advisory/oversight groups that function to advise or assist in managing the Airport and its operations. These advisory groups vary widely in authority and complexity. Some have complete operational control of their airports while others are advisory only. Prior to the City of Palo Alto taking back PAO, it is recommended that an advisory group be formally chartered that would report to the City in an advisory capacity. The Joint Community Relations Committee already exists and may provide the structure or basis for the City's formal advisory board. These positions are usually appointed with staggered terms and usually represent a cross-section of airport users and stakeholders. Most have a good knowledge of aviation, business, government, and the community.

Revenues and expenses generated from this management option were estimated in previous sections and it was found that operating revenue surpluses were positive for both the 2012-2017 and 2018-2037 periods ($231,700 and $23,743,500, respectively). However, when non-operating costs are added, there is a cumulative net deficit for the 2012-2017 period for PAO

of -$129,200. For the longer term (2018-2037), total net revenues (which include non-operating costs) were estimated at $13,678,500. Refinements to these numbers are provided in this section to include potential start-up costs and one-time expenditures.

Third Party Management of the Airport

Third party management of an airport is sometimes called "airport privatization," depending upon how inclusive of services the agreement or lease is. Under this option at PAO, the City would still retain ownership of the Airport, however, it would not be involved significantly with the day-to-day operation of the facility. For the near term (2012-2017) it is envisioned that a third party would be retained to operate the Airport for the City. Because of existing lease agreements with current FBOs it may not be possible or cost-effective to lease the entire Airport to a third party. However, for the longer term (2018-2037), this management model would be expanded to involve full third party leasing of the Airport with payments to the City, but with an allowance for profits to a third party operator from leases and rents.

For this business plan, it was assumed that the Contractor would provide labor for the Airport management and operation, rather than having City employees operate the Airport. As such, cumulative net revenues to the City for this option were forecast to total $816,200 for the 2012-2017 period. For the longer-term period (2018-2037), the City would receive almost $16.98 million from the Third Party Management company. Total net revenues from this option would be $17,800,900 for the entire 2012-2037 period.

6.2 Implementation Steps for City Operation of PAO

If the City decides to operate the Airport with its own staff, there are a number of implementation steps that would need to be initiated, along with some start-up cost items. This option assumes that there will be an early termination of the lease with the County and that the City will take the Airport back under its own management by 2012. The recommended steps and their approximate timing are shown in Table 20.

Table 20 – Implementation Steps: City Management Option

Action Item	Description	Milestone/Trigger Point
1 - Negotiate with County	Set date for early termination of lease w/County	Upon decision of City Council
2 - Transition books and leases	Work with County to set up administration	3 months before Airport takeover
3 - Retain Airport Manager	Hire professional airport manager	2 months before Airport takeover
4 - Arrange for mowing	Decide to either pay City or buy mower	2 months before Airport takeover
5 - Retain administrative worker	Hire administrative worker to manage Airport accounting	1 month before Airport takeover
6 - Retain Other Airport Staff	Hire assistant manager and part time worker	2 weeks before Airport takeover
7 - Provide Office Furniture	If needed, furnish Airport Manager's office	1 week before Airport takeover

As shown, the first step involves a negotiation with the County to set the date of the early termination of the lease. This requires a City Council decision and County concurrence. Assuming that is completed, the next milestone is a transition of the accounting system at three months prior to the transition date for Airport management. That transition would involve setting up an Enterprise Fund for the Airport, with accounts similar to those used by the County. In addition, lease agreements used by the County for their tenants could be used after minor changes for City lease language and standard provisions.

At two months prior to taking back the Airport, a professional airport manager (Accredited Airport Executive), would be hired. During that time, the AAE would become acclimated to the position, observe the County operation of the Airport, and develop an Airport Operations Manual for the facility. Although not required for general aviation airports like PAO, an Airport Operations Manual should be developed that would spell out daily, monthly, and annual responsibilities of personnel and City administration, show contact names and numbers, and describe emergency and security procedures. Later, at one month prior to the takeover, an administrative person could be hired to keep the books for the Airport, send out invoices, and coordinate with the City regarding the Airport accounting system. The month prior to start-up would be used for training, development of letterhead (if needed), set up for utilities, and reporting to FAA.

At two months prior to taking back the Airport, the City should decide whether to have existing park staff mow the Airport or purchase a mower for Airport personnel. This early decision is needed since the potential purchase of mowing equipment requires advance notice for funding and acquisition. It is not unusual for Airport management and staff of small airports to participate in mowing activities. However, with the golf course next door, which requires frequent mowing and grooming, perhaps an arrangement can be made with Open Space and Parks Division staff to mow the Airport. Currently, there are about eight acres of open property along Embarcadero Road and several acres to either side of the runway and taxiway that would require periodic mowing. Some airport sponsors provide municipal equipment for their airport staff to use in mowing airport property. The decision to mow the Airport with Airport staff would require the acquisition of mowing equipment – which would be the most significant cost of transition. Mowing equipment for this size facility can cost between $15,000 and $20,000. The equipment does not have to be new.

Finally, the hiring of an assistant manager and part time staff worker could occur two weeks prior to start-up. Training for these positions can be accomplished relatively quickly. In addition, the office used by County personnel will need re-equipping once it is vacated. Therefore, a computer, telephone, and other office furniture and equipment would need to be provided. It is not known whether any of these items are already available from the City, but total costs for new equipment would be less than $5,000.

Start-up Costs

Overall, start-up costs are estimated to be $25,000 or less for the City's operation of PAO. These costs would include mowing machinery (tractor and mower) and office equipment/furniture. If labor costs are factored in, the early employment of the Airport

management and administrative staff could add another $35,000 to the cost. Overall start-up costs would be less than $60,000, much of which could be absorbed in the pro forma. For example, the budgeted non-operating expenses of $50,000 for that first year could be devoted toward start-up costs. For 2012, the pro forma budgets $840,600 for operational expenses. Start-up costs, including salaries and benefits, would total roughly 7 percent or less of this budgeted amount.

Revenues and Expenses

Under the City Management Option, a revenue and expense pro forma was developed using the assumptions developed in Section 5 of this report. Year-by-year totals of revenues and expenses are presented in Table 21.

Table 21- Summary of City Management Pro Forma: 2012 - 2037

Year	Operating Revenues	Operating Expenses	Non-Operating Capital Expenses	Total Net Revenues
2012	$863,725	$840,628	$50,000	-$26,903
2013	$886,490	$875,495	$50,000	-$39,005
2014	$932,466	$911,810	$50,000	-$29,344
2015	$1,002,289	$949,632	$50,000	$2,657
2016	$1,027,896	$989,024	$50,000	-$11,128
2017	$1,054,528	$1,030,052	$50,000	-$25,524
2018	$2,243,565	$1,205,988	$338,000	$699,577
2019	$2,291,529	$1,255,822	$351,520	$684,187
2020	$2,376,898	$1,307,717	$365,581	$703,600
2021	$2,428,776	$1,361,758	$380,204	$686,814
2022	$2,519,635	$1,418,035	$395,412	$706,188
2023	$2,575,746	$1,476,639	$411,229	$687,878
2024	$2,672,484	$1,537,668	$427,678	$707,139
2025	$2,733,174	$1,601,221	$444,785	$687,168
2026	$2,836,209	$1,667,403	$462,576	$706,230
2027	$2,901,851	$1,736,323	$481,079	$684,448
2028	$3,011,633	$1,808,095	$500,323	$703,216
2028	$3,082,631	$1,882,836	$520,335	$679,460
2030	$3,199,645	$1,960,669	$541,149	$697,827
2031	$3,276,437	$2,041,723	$562,795	$671,919
2032	$3,401,202	$2,126,130	$585,307	$689,765
2033	$3,484,260	$2,214,030	$608,719	$661,511
2034	$3,617,339	$2,305,568	$633,068	$678,703
2035	$3,707,174	$2,400,893	$658,390	$647,891
2036	$3,849,169	$2,500,164	$684,726	$664,280
2037	$3,946,335	$2,603,542	$712,115	$630,678

6.3 Implementation Steps for Third Party Operation of PAO

Third party operation of PAO could occur in two distinct ways. The first would involve keeping the existing leases with the County and its tenants in place until 2018. At that time, the City could negotiate with a third party for operation of the Airport. The second option would be an early termination of the lease agreement with the County and retention of a third party operator for the Airport. For the first option, no analysis is needed for the 2010-2017 period. For the second option, there are strategies needed for both the short and long term periods. Thus, this analysis assumes an early termination in order to present potential methods of operating the Airport using a third party management firm.

Assuming the City opts for third party management of PAO in the short term, it would require a two-step process. The first step would involve operation of the Airport from the time that the lease with the County is terminated until the end of 2017. It is assumed that the existing FBOs still would hold the same or similar lease terms with the City that they now hold with the County. Once those leases expire in 2017, the City has exclusive claim to all hangars and other revenue-producing facilities on the Airport. At that time, a second set of leases could be negotiated with on-Airport FBOs and a third party airport operator. These new leases should consider shorter renewal or renegotiation periods, giving the City flexibility to change terms and conditions more frequently in concert with market conditions. Table 22 presents a summary of the implementation steps associated with this management option.

Table 22 – Implementation Steps: Third Party Management Option

Action Item	Description	Milestone/Trigger Point
Negotiate with County	Set date for early termination of lease w/County	Upon decision of City Council
Negotiate with current FBOs	Transition revenues to City	6-9 months prior to takeover
Solicit 3rd Party Operator	Issue RFP for 3rd Party Operator	6-9 months prior to takeover
Operate Airport through 2017	Gauge working relationship, financial performance	From takeover date through 2017
Issue new RFP	Expand 3rd Party Operator scope	January 2017

Because the terms and responsibilities associated with a third party operator are subject to negotiation, the City can be as involved or non-involved in the operation of the Airport as desired. It is suggested that oversight of the facilities be retained by the City under any agreement, such that capital re-investment, when needed, can be assured.

Start-up Costs

If mowing the facility is included in the Third Party Management agreement, then there would be no equipment acquisition start-up costs for the City under this option. The City would need to set up accounting systems to accommodate the Airport and the revenues and expenses that would be associated with the City's responsibilities under a negotiated agreement. However, if most of those responsibilities were given to a third party operator, the City would simply account for surplus revenues generated at the Airport.

Revenues and Expenses

Under the Third Party Management Option, a revenue and expense pro forma was developed using the assumptions developed in Section 5 of this report. Year-by-year totals of revenues and expenses are presented in Table 23. The column "Total Net Revenues" describes the Airport's projected financial production, while the "Total to City" shows the portion of Total Net Revenues that would accrue to the City after paying the Third Party Operator.

Table 23 - Summary of Third Party Management Pro Forma: 2012 – 2037

Year	Total Revenues	Total Expenses	Total Net Revenues	Total to City
2012	$863,725	$750,649	$113,077	$113,077
2013	$886,490	$777,496	$108,994	$108,994
2014	$932,466	$807,648	$124,818	$124,818
2015	$1,002,289	$841,206	$161,083	$161,083
2016	$1,027,896	$871,406	$156,490	$156,490
2017	$1,054,528	$902,814	$151,714	$151,714
2018	$2,243,565	$1,259,629	$983,936	$737,952
2019	$2,291,529	$1,310,014	$981,515	$736,136
2020	$2,376,898	$1,362,415	$1,014,484	$760,863
2021	$2,428,776	$1,416,911	$1,011,865	$758,899
2022	$2,519,635	$1,473,588	$1,046,048	$784,536
2023	$2,575,746	$1,532,531	$1,043,215	$782,411
2024	$2,672,484	$1,593,832	$1,078,652	$808,989
2025	$2,733,174	$1,657,586	$1,075,588	$806,691
2026	$2,836,209	$1,723,889	$1,112,320	$834,240
2027	$2,901,851	$1,792,845	$1,109,006	$831,755
2028	$3,011,633	$1,864,559	$1,147,074	$860,306
2028	$3,082,631	$1,939,141	$1,143,491	$857,618
2030	$3,199,645	$2,016,706	$1,182,938	$887,204
2031	$3,276,437	$2,097,375	$1,179,062	$884,296
2032	$3,401,202	$2,181,270	$1,219,932	$914,949
2033	$3,484,260	$2,268,521	$1,215,740	$911,805
2034	$3,617,339	$2,359,261	$1,258,077	$943,558
2035	$3,707,174	$2,453,632	$1,253,542	$940,157
2036	$3,849,169	$2,551,777	$1,297,392	$973,044
2037	$3,946,335	$2,653,848	$1,292,487	$969,365

6.4 Accounting/Funding Overview

A fund is a group of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. The two main categories of funds that municipalities use are Governmental Funds and Proprietary Funds. The governmental fund category includes the general fund, special revenue funds, capital projects funds, debt service funds and permanent funds. The proprietary fund category includes enterprise and internal service funds.

The focus of this section is on enterprise funds and how they differ from general funds, since that is the type required for the Airport. In this regard, an enterprise fund is used to account for a business-like activity within a government, while the general fund is the primary operating fund of a governmental unit.

General Fund

The general fund is the primary governmental fund type. Government Accounting Standards Board (GASB) Codification, Section 1300.104a states that the purpose of a general fund is "to account for all financial resources except those required to be accounted for in another fund." In most governments, the general fund is a very active fund and can become quite complex due to the range of activities, such as administration of the various branches of government. General funds have all the characteristics of governmental funds. Revenues are generally recognized when measurable and available. Expenditures are recognized when the liability is incurred.

A governmental entity can have only one general fund for financial reporting purposes. If several such funds exist, they are usually combined into one fund for financial reporting purposes, as long as they are all part of the general government. Most general funds are required by statute to have a budget approved by the legislative body. The approved budget sets the nature and scope of financial operations by setting amounts for sources of revenues and for purposes of expenditures and provides the legal authorization for expenditures.

Enterprise Fund

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 created as a means to ensure that no tax dollars go towards providing for the annual operating cost and future capital improvements of the activity that is operated as such. Communities who accept this general law statute do so with the intent that user fees will be set at appropriate levels to cover the activity's operating cost and capital improvements. The theory behind this practice is that the users of these services should pay for all costs, as they are the ones who use it.

Enterprise funds are no longer solely used to account for governmental activities that are like commercial activities. As defined by GASB 34, enterprise funds may be used to report any activity for which a fee is charged to external users for goods and services. The need for an enterprise fund is triggered if any one of the following criteria is met.

- The activity is financed with debt that is secured solely by a pledge of the net revenues from fees and charges of the activity. Debt that is secured by a pledge of net revenues from fees and charges and the full faith and credit of a related primary government or component unit – even if that government is not expected to make any payments – is not payable solely from fees and charges of the activity. (Some debt may be secured, in part,

by a portion of its own proceeds but should be considered as payable "solely" from the revenues of the activity.)

- Laws or regulations require that the activity's costs of providing services, including capital costs (such as depreciation or debt service), be recovered with fees and charges, rather than with taxes or similar revenues.

- The pricing policies of the activity establish fees and charges designed to recover its costs, including capital costs.

State unemployment compensation funds, turnpike authorities, lotteries, airports, and public colleges and universities are examples of activities that may be accounted for as enterprise funds. Once it is determined that an activity should be accounted for in an enterprise fund, a separate fund should be established for each distinct service provided by the governmental unit. Separate accounting entities facilitate the measurement of costs incurred to deliver each service. Segment information disclosure may also be required for enterprise funds.

Some communities have actually established enterprise fund operations that are not self-supporting and are supported by taxes to a certain degree. This mainly happens when fees are set too low and revenues taken in do not cover operating expenses and/or capital improvements. Conversely, some communities opt not to establish enterprise funds and allow any surplus generated to be added to its general fund surplus and used to fund other operations not associated with the activity. This practice is not permitted at airports that have grant assurance covenants with the FAA because of its ban on revenue diversion (see Section 5.4).

If the City decides to operate the Airport, an enterprise fund would be used to account for Airport revenues and expenditures. By law, an "enterprise" fund is self-sustaining, meaning that all expenditures must be directly related to the operation, maintenance, repair, and management of the City's Airport. Revenues to the Airport enterprise fund would be kept separate from other municipal funds and uses and cannot be co-mingled with funds for any other activities.

Internal Service Fund

An internal service fund is created to provide goods or services to other funds, departments or agencies of the primary government and its component units, or to other governments, on a cost-reimbursement basis. For PAO, services provided to the Airport enterprise fund from other units of City government would be reimbursed on a cost basis. Thus, if mowing of Airport property is provided by the Open Space and Parks Division, a reimbursement to that Division would be made from the Airport Enterprise Fund and charged to the Aviation Services account.

6.5 Feasibility of Management Options Summary

Revenue surpluses over the entire forecast period are estimated to total $13,549,200 for the City Management Option and $17,800,900 for the Third Party Management Option. It should be noted that all of these revenue surpluses must be reinvested in the Airport according to FAA revenue diversion policy directives. That is, after paying all expenses, the City cannot use surplus revenues to invest in non-Airport activities. It should also be noted that the current FAA regulations permit recovery of costs up to six years previous. Thus, if surplus revenues are generated under the City Management Option in year 2018, the City is permitted to recover losses back to year 2012. Given this policy both options appear feasible. The City Management Option would require an ability to absorb roughly $130,000 in losses for the first six years of operation, followed by repayment and revenue surpluses from that point forward. It is believed that the Third Party Management Option would be self-supporting from its inception.

Appendix A:
Detailed Survey Results

Appendix A - Survey of Airport Users

In early April, 2009, an Airport User Survey was developed and mailed to aircraft owners that based their aircraft at Palo Alto Airport (Figure A-1). Approximately 500 surveys were distributed. Prior to this mailing, the Airport User Survey was launched via www.Zoomerang.com so that respondents could either complete and mail in the survey or complete it online. The online survey was administered via web link from the home page of the City of Palo Alto website (www.cityofpaloalto.org). Surveys were requested to be returned by May 1st. During this period, a total of 145 visits were recorded on www.Zoomerang.com and 64 surveys were completed. Additionally, 78 hard copy surveys were submitted, for a total of 142 responses to the Airport User Survey. A total of 19 different cities and towns within California were represented in the responses.

AIRPORT USER SURVEY

1. Please list type of aircraft (specify make & model)

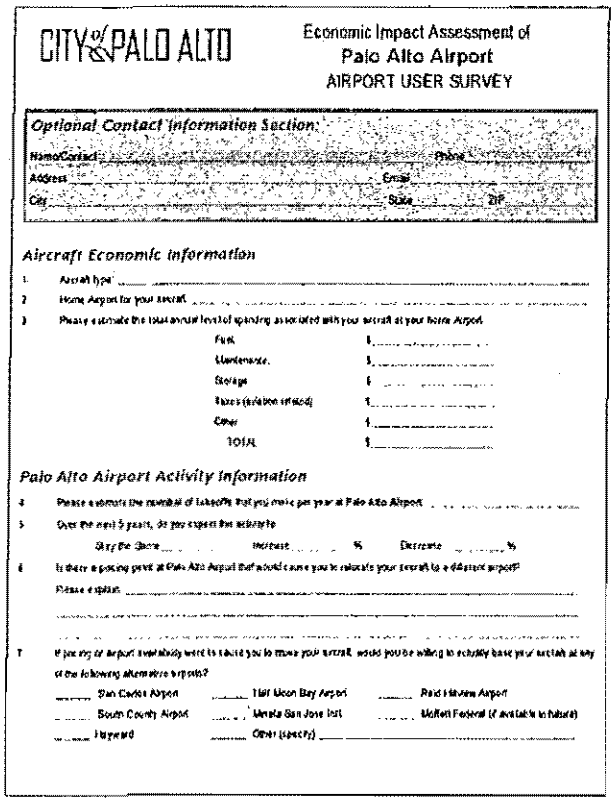
A total of 129 based aircraft owners at Palo Alto Airport responded to this question. Aircraft types included 148 single-engine aircraft and 9 multi-engine aircraft for a total of 157 aircraft (some respondents owned multiple aircraft). Nine other user surveys were submitted by users that do not base their aircraft at PAO. They represented an additional 9 single engine aircraft, to bring the total number of aircraft represented to 166.

2-3. Please estimate the total annual level of spending associated with your aircraft at your home airport:

Using the cumulative totals for several expense categories, the average annual spending per PAO based aircraft respondent included:

- $6,706 Annually for Fuel
- $5,999 for Maintenance
- $3,052 for Storage
- $2,350 for Aviation Related Taxes
- $2,276 for "Other."
- TOTAL = $20,893

Combining all averages from these categories results in an average annual aircraft spending of $20,893 (fuel, maintenance, storage, aviation-related taxes, and other) for the 129 respondents to this question. Total spending for the 129 respondents to this question equaled $3,280,135. Some respondents did not specify annual spending breakdown by category as specified in the survey, providing just total annual spending.



CITY of PALO ALTO

Economic Impact Assessment of
Palo Alto Airport
AIRPORT USER SURVEY

Optional Contact Information Section:

Name/Contact: _____ Phone: _____

Address: _____ Email: _____

City: _____ State: _____ ZIP: _____

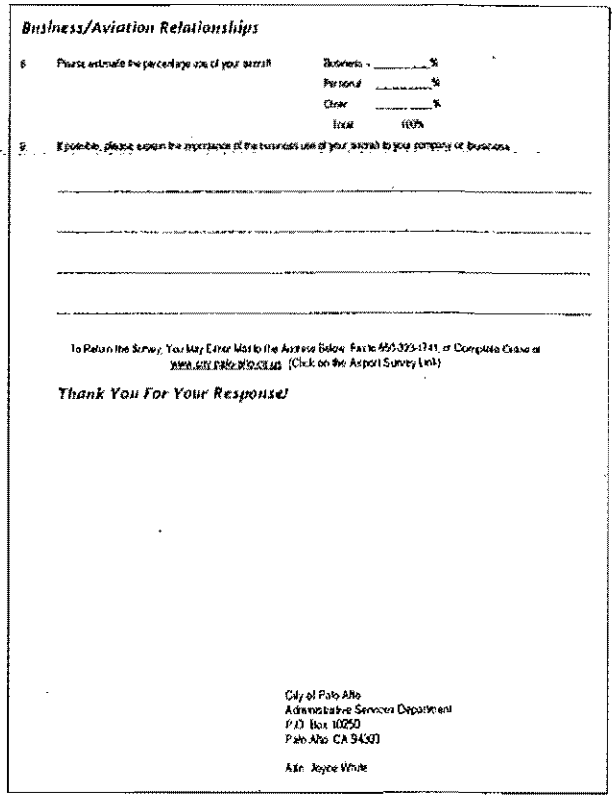
Aircraft Economic Information

1. Aircraft type: _____
2. Home Airport for your aircraft: _____
3. Please estimate the total annual level of spending associated with your aircraft at your home Airport

Fuel	$
Maintenance	$
Storage	$
Taxes (aviation related)	$
Other	$
TOTAL	$

Palo Alto Airport Activity Information

4. Please estimate the number of takeoffs that you make per year at Palo Alto Airport: _____
5. Over the next 5 years, do you expect the activity to
   Stay the Same _____ Increase _____ % Decrease _____ %
6. Is there a policy at Palo Alto Airport that would cause you to relocate your aircraft to a different airport?
   Please explain: _____
7. If you or airport ownership were to cause you to move your aircraft, would you be willing to actually base your aircraft at any of the following alternative airports?
   _____ San Carlos Airport _____ Half Moon Bay Airport _____ Reid-Hillview Airport
   _____ South County Airport _____ Venida San Jose Intl _____ Moffett Federal (if available to future)
   _____ Hayward _____ Other (specify) _____



Business/Aviation Relationships

8. Please estimate the percentage use of your aircraft: Business _____%; Personal _____%; Other _____%; Total 100%
9. If possible, please explain the importance of the business use of your aircraft to your company or business.

_____

_____

_____

_____

To Return the Survey: You May Either Mail to the Address Below, Fax to 650-329-2141, or Complete Online at www.city.palo-alto.ca.us (Click on the Airport Survey Link)

Thank You For Your Response!

City of Palo Alto
Administrative Services Department
P.O. Box 10250
Palo Alto, CA 94303

Attn: Joyce White

Figure A-1 - *Airport User Survey*

If the three flying clubs that responded were removed from the survey results (and the 23 aircraft that they represented in their answers) then the average annual spending at PAO per aircraft is reduced to $18,462. Average breakdowns by category of expenditure for non-flying club aircraft were: $5,319 per year for fuel, $5,610 for maintenance, $3,195 for storage, $1,783 for aviation related taxes and $1,957 for "other."

4-5. Estimated Yearly Takeoffs at Palo Alto Airport and expected changes in the future:

Survey responses indicated that 137 aircraft users accounted for an estimated 115,466 annual operations (57,733 takeoffs). One of the flying clubs reported having 80,000 annual operations. If all three flying clubs removed from the total, the 134 remaining respondents averaged 206 annual operations for a total of 27,466 operations.

Of these respondents, 99 indicated that their activity would remain the same over the next five years. Thirty respondents expected to increase their activity by a total of 11,200 operations over the next five years. Eleven respondents indicated that they expected their activity to decrease, and four of these are leaving PAO all together. Three respondents said that they are either going to sell their aircraft or move due to high tie-down fees. The four respondents that stated that they were

going to leave spent a combined $33,896 per year on their aircraft at PAO.

6. ***Is there a pricing point at Palo Alto Airport that would cause you to relocate your aircraft to a different airport?***

One hundred and eighteen airport users responded to this question. Six respondents indicated that there was not a pricing point that would cause them to move. The following is a sample of the different types of responses:

	Percent of Total
• If prices increase, may relocate aircraft, business, or family	28.0%
• Must stay competitive with other airports	17.0%
• Have already reached pricing point/too high	11.1%
• If increase is greater than CPI/inflation	11.0%
• Yes, there is pricing point, but unspecified	11.0%
• Will sell aircraft or already have	10.2%
• Unclear	5.9%
• Will not move - unaffected by pricing	5.1%
• Yes, but not near that level yet	5.1%

If several of these responses are combined, it becomes clear that significant changes in pricing in the future will cause the relocation of aircraft and in some cases cause businesses to move to other areas. Additionally, further price increases will cause some existing users to sell their aircraft (some already have). When these categories are taken cumulatively, approximately 77.3 percent of respondents indicated that either any increase at all, or any increase that is significant (greater than CPI/inflation or not competitive with other airports), will cause them to relocate their aircraft. Due to the overwhelming response to this question, many responses are reprinted at the end of this section verbatim.

7. ***If pricing or airport availability were to cause you to move your aircraft, would you be willing to actually base your aircraft at any of the following alternative airports?***

	Percent of Total
Moffett Federal (if available in the future)	36.9%
San Carlos Airport	26.2%
Mineta San Jose International	12.9%
Reid Hillview	9.4%
Hayward	9.0%
South County Airport	3.0%
Half Moon Bay Airport	2.6%
Other (specify):	-

There were 16 respondents that specified other airports. Three identified Livermore, two

identified Watsonville and the rest were various other facilities in other counties, cities, and states.

8. Please estimate the percentage use (Business/Personal) of your aircraft?

A total of 135 Airport users responded to this question. The Airport users indicated that 66 percent used their aircraft for personal reasons, while 32 percent used their aircraft for business reasons, and 2 percent flew for other reasons. If these responses are weighted by the number of flights flown, 83.2 percent of the flights were used for business reasons, while 16.4 percent of flights were used for personal reasons and 0.4 percent of flights were flown for other reasons.

9. If possible, please explain the importance of the business use of your aircraft to your company or business

There were 90 responses to this question. Answers included the following general categories:

	% of Responses
• Aircraft is critical. No aircraft, no business	20.0%
• Important part of business, allows good service to existing clients and opens new markets	29.9%
• Provides access to hard-to-reach places where driving is too time-intensive	15.5%
• Use aircraft to commute to/from work weekly	10.0%
• Offers time savings and increased effectiveness for executives who travel a lot	7.7%
• Aircraft offers cheaper, faster, more convenient transportation than commercial flights	6.6%
• Other miscellaneous	11.3%

Taken cumulatively, almost 90 percent of respondents to this question said their aircraft ranges from critical importance (no aircraft, no business) to a cheaper, faster, and more convenient mode than commercial travel for business.

Summary of Airport User Survey Results

In summary, there were several key points expressed as a result of the survey of Palo Alto Airport users:

- A total of $3,280,135 was spent by 129 Palo Alto Airport users on their aircraft in 2008.
  - Average annual spending per aircraft was estimated at $20,900.
- One hundred and thirty-seven aircraft users that reported an estimated 115,466 annual operations (57,733 takeoffs).

- Impact of price increases: Approximately 77 percent of respondents indicated that either any increase at all, or any increase that is significant (greater than CPI/inflation or not competitive with other airports), will cause them to relocate their aircraft.

- The top three airports that based aircraft users would consider moving to are:
  - Moffett Federal (if available in the future) 36.9%
  - San Carlos Airport 26.2%
  - Mineta San Jose International 12.9%

Business users indicated that they rely on the use of the Palo Alto Airport for:

- Convenience to their office facilities or commute to other office locations
- Conducting business at the airport.
- Providing aviation-related services which are dependent on an airport location.

Comparing the results of this Airport user survey with those from the Palo Alto Airport Association (PAAA) membership survey conducted in 1995, there are a couple of similarities. These similarities are:

- ***Terminal Facility/Services:*** The 1995 survey noted a need for a nice restaurant on the airfield or within a block for pilots and to encourage fly-ins, in addition to better restroom facilities, and enhanced services such as pilot's lounge with access to weather information where pilot's could share operations and maintenance information. Respondents to the 2009 Airport User Survey mentioned that the existing restaurant is closed too often, that restroom facilities were inadequate, and there is an overall lack of services offered at the Airport.

- ***Business Impacts of the Airport:*** The 1995 survey mentioned a number of facility improvements that are necessary to support continued and effective business use, such as: AWOS for night-time operations; ability to contact Bay Approach when the ATCT is not manned; and, a full-service FBO to serve transients. Respondents to the 2009 Airport User Survey reiterated how important pricing was, in terms of supporting the economics of aircraft use for business purposes.

Detail of Question #6 - Pricing Point

During review of the responses to the Palo Alto Airport User Survey, it became clear that pricing is a very important issue for users. Listed below are the responses to Question #6, *'Is there a pricing point at Palo Alto Airport that would cause you to relocate your aircraft to a different airport?'* This verbatim listing provides insight into attitudes of airport tenants toward pricing changes at the Airport.

- Eventually the airplane is my primary commute vehicle and Palo Alto is the best location. Palo Alto has to stay comparable to others.
- Yes would move to Palo Alto if hangar were available for $350 per month.
- Yes $125/month for a tiedown is somewhat expensive. If this increases or their charges are imposed, I would consider not using my plane for commuting to PAO.
- This airport is already more expensive than others. There are no hangars available at the airports.
- Use fees for landing and taking off or much higher tie downs would lead me to consider alternatives. Limited access to PAO would likely impact whether I do business in Palo Alto or immediately surrounding area.
- Yes the hangars rental are very high and we may move to Oregon. State taxes are out of control with the "use tax." Oregon does not have this.
- Yes, if the tie down fee increases beyond a reasonable amount.
- I currently pay $250 for my hangar in Jackson. It would be hard to justify paying more than that for a tie-down in Palo Alto.
- Closeness to home is the best feature of PAO.
- As a flight school we will move if the economic climate at PAO is not conducive to our business.
- The point at which I lose money or decide the risk isn't worth the profit.
- Tie down expenses are killing us. Please do not raise them. Alternatively, we need a volume discount.
- It's already so high that I think often about relocation.
- It is hard to provide a specific number, but if the tie-down or tax fees go up too much higher than current levels I would either relocate the airplane or sell it. I do not tie the airplane down at SJC, for example, because the fees are simply too high to be acceptable. I cannot afford to pay for even the current hangar rent at PAO, for example, and tie down the airplane in an attempt to maintain reasonable operating costs.
- My tie-down space is the single largest annual expense after maintenance. In the past 13 years I've had the plane at PAO, the cost has increased with the cost of living, which is fair enough, though expensive. However, if the cost were to be increased beyond the rate of inflation--especially in these recessionary times--I would have to look for alternatives, either relocating the plane or selling it.
- No. I am moving to the Lake Tahoe area later this year and will maintain a part-time residence in Palo Alto.
- Yes, but not sure what that point is. It depends on the options available. One option would be to sell the plane. Very undesirable!
- There is no single factor (price point) that would cause us to move. I do not think current prices are unreasonable. I wish you would spend more money on improving the airside facilities and less on security fences.
- If hangar and fuel prices increase too much above nearby airports
- A further increase in tiedown fees would likely push me to seriously consider moving the plane to San Carlos Airport.
- Tiedown is already too expensive.
- Yes, though it also depends on pricing at neighboring airports such as San Carlos and Reid

Hillview.

- Yes - very difficult.
- Yes, The hanger prices are 3x that of other regional airports. I chose PAO because it is close to home/work. I am considering moving the airplane.
- No.
- If tie-down rent went up any more, I was going to move to RHV. However, I just sold the airplane.
- Yes. While Palo Alto is the most convenient for us, there are several alternatives that are close enough to consider if the price difference is significant.
- If there was a substantial increase in storage and/or fuel costs, I would go to Moffett, if available. The other airports mentioned don't make any sense.
- Palo Alto is already a profitable airport and the city profits in many ways from the general aviation flights that are provided. Greed in the form of unwarranted fee increases would cause me to seriously seek alternative location for my plane.
- If the tie down and other fees and charges increase to an unreasonable level.
- The other local choices are San Carlos, San Jose, and Hayward. San Carlos and Hayward are slightly less expensive but farther away. San Jose is much more expensive and farther away.
- I can drive to Hollister and keep the plane in a hanger for the same price as the increased county outside tiedown rates. My new rate will be $308/mo. I plan to move my airplane outside of Santa Clara County.
- Fuel I can always buy somewhere else, but increased tiedown fees would drive me away at about 10% more than I am paying now.
- If it became much more expensive than it currently is.
- Tie-down fees are important for me as that is a fixed monthly fee.
- Yes, I'm already there. I'm in the process of making arrangements to move my airplane to either SQL (where I have a hangar with another airplane), Hayward, or Reid-Hillview.
- I'm close to it now, but if SJC and Moffett remain GA non-options, I'll probably just sell the plane rather than relocate it. Relocating anywhere else would make flying inconvenient enough that I probably wouldn't fly enough to warrant keeping a plane.
- I'm losing money now renting the plane through West Valley Flying Club so any significant increase might tip me to sell it.
- Hangars are way too expensive, when compared to other counties. 100LL fuel is also too expensive. Why is it so much cheaper at, say, Tracy or Half Moon Bay or Gustine? You're losing my fuel business by pricing it so high. Knocking about 10-20 cents per gallon off would dramatically increase business.
- I had no idea that I was spending this much, annually, on my airplane. This simple exercise, for the sake of responding to this survey, gives me pause as it is. Any meaningful price increase will see me retiring from flight.
- I don't know.
- Will move if price increases.
- There probably is, but I do not have a specific price point in mind at the moment.
- Yes. Don't know at what point I would move.
- Remaining married is fundamentally incompatible with further increases in hangar rent, and

my hangar is dominant in cost of my aircraft ownership. We are not wealthy, and this expense is a point of friction at home. If the cost were to rise substantially; I would be forced to sell this aircraft that I built myself and is the fulfillment of my life's dream.

- Any landing fees will cause me to relocate. Any more rent increases may also mean that the aircraft needs to be relocated.
- Have not thought about it that way.
- Not really. I live in San Francisco and choose to keep my plane because of the tower, maintenance facilities and tie-down cost.
- Yes...not sure.
- Tie down costs above $175.
- No -- I would sell the airplane.
- No.
- Yes. High storage and fuel costs drive away owners, particularly where business expenses aren't supporting costs.
- I am currently a renter of aircraft based in Palo Alto. Palo Alto Airport rental pricing I believe is on the high end of the range in the Bay Area already. However, I would accept a modest increase in fees rather than closure of the airport.
- Very near my limit now. Reid-Hillview is slightly farther to drive, and historically maintained my plane (annual = thousands/yr, $13k last year includes an incident repair). Longer runways and drier environment.
- That "point" was reached in summer of 2007. Losses were extreme - had to sell my airplanes at the rate of 1 per year (IRS limit). Two sold in 2008 & 2009 - third going next year.
- Storage fees would have to be $100 more per month than nearby airports to make us relocate.
- Of course! I own 3 aircraft and I have already moved 2 of them to places like Watsonville and Central California. We fly because we love flying not necessarily afford it. When family financial pressures overcome the joy we find other alternatives. Everyone flies commercially. Where do we think these pilots come from? I have two sons less than 25 and they are both pilots. Why? The familiarity is passed down from generation to generation. PAO should embrace flying and look for Fed Gov support as well. Flying is a contribution to our nation - a precious resource. We need to recognize that. I have been at PAO for over 25 years - in the nineties I moved to San Carlos for two years because pricing became outrageous.
- Hard to answer -- pricing point for hangar/tie-down? For fuel? For maintenance? Or a combo of the above? The answer is YES, but I'm not sure how to quantify it.
- It is very close to that point now. I am considering a move to San Carlos due to prices and the extreme neglect that the county is showing to PAO. Runways are degenerating, increasing wear on the aircraft. We pay more for less than any other airport. Additionally, unused space on the airport needs to be developed for more hangars - which would also increase revenue for the city/county.
- We are already at the limit of hangar cost. Would consider moving to tie down if hangar costs increase. Another issue is the decline of services at Palo Alto Airport.
- Yes. Aviation is already too expensive and each cost increment pushes me closer to selling

the airplane.

- Yes, if tiedown/storage costs were to escalate from their current level or local fuel taxes were to make Palo Alto uneconomic to refuel.
- Yes but depends on pricing at other local airports.
- If you can't afford to stay you will be forced to move.
- A very small amount ok, but very large, no. Pricing very high now. If you have a pricing problem give the Airport to San Mateo County.
- Reduce fuel cost, current providers have monopoly contracts. Build more hangars to increase revenue.
- Yes if affordable hangar space became available. Yes if the tie down fees increased disproportionately or if I can't get the maintenance and services that I need.
- Yes overall expense currently high relative to use.
- You are very close to my limit.
- Yes if rent, fuel, operation fees, storage fees as well as use friendliness became untenable, we would move to a more user friendly airport.
- Difficult to say, but 8 percent is very steep.
- No.
- More than San Carlos, or reduction in service.
- If significantly more overpriced than San Jose or Reid Hillview we would move. However we like it here.
- Obviously. Is this some sort of make work project for bureaucrats? This has been done multiple times for decades since I have been at PAO.
- No-Location is important for business purposes.
- Yes. I am basically fixed income, and if I can't fit aircraft ownership into my budget, I will sell the aircraft (which would likely move it away from Palo Alto).
- It's getting close to my limit now.
- Yes. The prices are considerably higher than the rest of California.
- At this point no. The only real variable is the tie-down. It would be cheaper anywhere else but at this point is not offset by the convenience. I am considering a move to get a hangar in spite of the convenience factor.
- Taxes and parking fees are very high. If they increase more then the cost of living I will sell or move.
- Possibly; convenience is worth about 10 - 20 percent at the moment.
- Yes, if parking and fees exceed fair market value for the bay area.
- Could consider relocating if storage and other use taxes were increased by 10-20 percent over other nearby airports.
- The tie down fee, changed by the count at this time is excessive and to go up even further (8% each year) it is out of line with surrounding airports. Probably >$150 per month tiedown would make me move.
- Yes, if tie-downs exceeded San Carlos significantly, I'll relocate to San Carlos.
- I don't have another choice since I have a hangar at PAO.
- No. When I can't afford it, will sell plane and stop flying
- If fees increase to much I may move to hangar equipment in Hayward since turbine operations are permitted there.

- The $120.50 is substantial compared to other airfields. A full hangar can be gained for that elsewhere.
- This is a difficult question. Of course there always is a price that would cause me to move but we are a long way from that price.
- If I gave a price point, I might be charged that much. Palo Airport users already pay much more than other airports in the area. It should be $100 per month or less.
- No- within reason.
- Palo Alto has relatively poor asphalt surfaces, a lot of potential conflicts with birds and a regular cross-wind. If tiedown prices are raised too high the convenience of having my aircraft close will be outweighed by costs.
- Of course but I don't know what it is off hand.
- Palo Alto is relatively most convenient for me than Reid Hillview. I'm willing to pay a small premium for this convenience maybe 10 or 15 percent.
- Flying is a hobby for me now, and an expensive one so I am looking to manage expenses where I can.
- Any increase in costs at Palo Alto compared to costs and another local airport.
- Although the airport management does a good job, it has always (last 25 years personal knowledge) seemed that the city doesn't appreciated the asset that the airport represents. If some of the proposed improvements were made (i.e. new terminal, shade hangars, etc., we would be willing to accept a raise in price.
- Hayward is closer and cheaper and offers better services even a maintenance stall for owners. I can get a hangar for $214 per month.
- The parking/tiedown fee is one of the highest. If it is to be increased by 10 percent I would have to rethink about relocating.
- Hangar pricing is the big factor for me. It will either come down or I will relocated
- Definitely and it is approaching that pricing point now. $129.50 per month is simply far too much to pay and is higher than any other airport far and wide San Carlos- San Carlos tie down rates are S20 cheaper per month than Palo Alto's. I was previously at San Carlos and would go back.
- The price point has been reached. Parking at Livermore is $75 per month. Palo Alto is $129.50 per month. A few years ago there was a 2 year parking spot wait list. Now there are 30 to 40 empty spaces.
- If the fees at Palo alto were to be greater than other airports by a significant amount I would definitely relocated.
- Any increase in cost that is greater than the current CPI makes me increasingly considering moving. That said Palo Alto Airport is essential for the conduct of my business and my transportation.
- Over $200 per month and property tax would get me to ask "is it worth it" to feed the financial wants wishes of Palo Alto.
- Palo Alto Aero is an intermediary. We should pay the county and city not a private company for hangars.
- My aircraft is currently hangared. Because of that, it looks like new and most owners of new aircraft would be happy to pay fair market rent for hangar space. Other than that no.
- Probably there is, but it would depend on the alternative airports pricing.

- Convenient to home.
- If costs grew by 1.5x I would sell my plane.
- It's too expensive now.
- An increase in tie-down cost move to South County or Byron. Fuel at PAO is higher than most others.
- Yes if the tie-down fees were raised too much then it would be worth my time and move to a nearby field.
- Yes, we are pretty much there. Any significant increases.
- Yes you have already passed it my airplane is for sale.
- Yes rates are high as is. Overall price of flying is increasing while my income has dramatically decreased.
- Any increase over inflation would have me move to Half Moon Bay
- Not sure.
- Yes. Other locations within 20 miles are cheaper.

Appendix B:
Airport Community Value

Palo Alto Airport Business Plan
Airport Community Value

1. INTRODUCTION

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 Palo Alto, the value of the Airport to the community may be important in the decision-making process surrounding the early "re-acquisition" of the Airport from County management and control. Therefore, the determination of PAO'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 City's 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 IMPLAN economic modeling) and the "balance sheet" (as measured by the depreciated or useful life value of PAO assets). Previous economic impact studies have focused only on the "income" side of an airports economic value. 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 report is organized to include the following sections:

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

2. ECONOMIC ACTIVITY GENERATED BY PAO

THIS SECTION PRESENTS THE METHOD AND FINDINGS used in measuring the economic activity of PAO. In this regard, the economic activity can be measured by estimating the number of direct jobs, income, and output at the Airport. In addition, there is a ripple effect of these jobs and income on the community. Just as the nation is experiencing a negative multiplier effect of job cutbacks, individual communities experience similar processes - both positive and negative - only at a smaller scale.

2.1 The Multiplier or Ripple Effect

Previous economic impact studies show the multiplied effect 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 a new airport is built or an existing airport expands) and in a **negative** manner (when an enterprise goes out of business or an airport closes). For example, the closure of a military base has a much greater economic impact than simply the loss of direct employment or expenditures at the facility.

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.

2.2 IMPLAN Modeling

Typically, economic impact models are used to describe the flow of money from one economic sector to another. In the past, models such as the Regional Input-Output Modeling System (RIMS II) and the U.S Corps of Engineers Economic Impact Forecasting System (EIFS) were used to measure the impacts of direct spending on an area. In recent years, more complex

models have been developed, including IMPLAN and Regional Economic Modeling, Inc. (REMI), which have the ability to estimate tax revenue impacts. In all of these models, the inputs of direct jobs and direct spending are critical to the economic impact measurement process. The models trace sector-to-sector impacts and estimate the proportion of any change that is likely to circulate within the economy and the percentage that can be expected to "leak" out to other geographic regions.

The models are based on input-output tables produced by the U.S. Department of Commerce, Bureau of Economic Analysis (BEA). Input-output modeling takes into account the dependency of each economic sector on every other sector (there are 500 sectors recorded in the BEA input-output tables). Using these models, the BEA input-output tables are adjusted to take into account the structure of the local economy under study. For example, in calculating a manufacturing multiplier for one county, over 300 sectors can be involved. Each of their contributions to the multiplier is weighted by the size of the sector in terms of output. In addition, the IMPLAN databases are composed of the following components:

- Employment;
- Industry Output;
- Value Added:
  - -Employee Compensation;
  - -Proprietary Income;
  - -Other Property Type Income;
  - -Indirect Business Taxes;
- Institutional Demands;
- Personal Consumption Expenditures (PCE) - three income levels;
- Federal Government Military and Non-Military Purchases;
- State and Local Government Education and Non-Education Purchases;
- Commodity Credit Corporation;
- Inventory Purchases;
- Capital Formation;
- Foreign Exports;
- Federal, State and Local Government Sales; and,
- Inventory Sales.

For this study, the IMPLAN methodology for measuring the ripple effect of spending and economic activity at PAO was used. This method is more useful than older methods in generating both the economic impacts and the tax accounting aspects of the Airport activity. Desired outputs of the IMPLAN modeling include the following:

- ***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 dollar 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.
- ***Taxes:*** Tax revenue contribution of the aviation industry to local and State units of government in California.

These five components of the Airport's value were assessed as a part of the airport activity (IMPLAN) portion of the analysis, and represent the "income statement" for PAO.

2.3 Survey Data

Surveys of airport users and employers were conducted and documented in an earlier interim report of this Business Plan. Results of those surveys are useful as inputs to the IMPLAN model. Key findings from the surveys included the following:

- A total of $3,280,135 was spent by 129 Palo Alto Airport users on their aircraft in 2008.
- Average annual spending per aircraft was estimated at $20,900.
- A total of 77 full-time employees and 140 part-time employees were identified as direct aviation-related at the Airport.
  - Of these, 20 full-time and 114 part-time jobs involved flight training operations at the Airport.

The surveys did not estimate the number of employees working for construction companies doing capital improvement work at the Airport. They also did not include any employment generated off the Airport (hotels, restaurants, rental cars, etc.) by visitors to the area that use the Airport. These jobs are estimated by the IMPLAN model, based upon expenditure data for these activities.

2.4 Other IMPLAN Input Data

The determination of PAO's economic impact focuses on the value of the Airport and how money spent there impacts other sectors of the local economy until the original expenditure ultimately leaves the area. While the asset value of the Airport is estimated in a later section, the estimate of expenditure impacts is described in this section. To accomplish this, the analysis utilized IMPLAN and the following methodology:

IMPLAN Model Inputs

- Input Data on Direct Impacts
  - On-airport expenditures by Users (estimated via survey averages)
  - On-airport expenditures by the County and Employers (employment, operations, and capital projects)
  - Off-airport spending by Air Travelers (rental cars, hotels, restaurants, etc.)

IMPLAN Model Outputs

- Direct and Induced Economic Impacts

- State and Local Tax Impacts

This section concludes with a summary of direct, induced, and State and local tax impacts generated by Palo Alto Airport. Additionally, non-monetary impacts of the Airport and local aviation in general are discussed.

On-Airport Spending

On-airport spending includes three primary categories: 1) the County as Airport Operator, 2) other on-airport employers, and 3) airport users. In this regard, expenditures are used for administration, maintenance, wholesale fuel purchases, employment, and capital improvements. Much of this information is included in the Airport Business Plan. There are 2.6 full-time equivalent employees working as County employees at the Airport. Operating expenses for 2008 totaled $714,500 (from County budget information). That did not include capital improvement expenditures. Since these vary from year to year, an average of the ten year Airport Capital Improvement Plan (2009-2019) was used to estimate this historical expenditure. That average worked out to $492,000 per year. Most of this money is anticipated to come from FAA grants to the Airport. Total Airport Operator spending was estimated to average $1,206,500 annually.

In addition to the Airport Sponsor, on-airport spending comes from other on-airport employers. A census of on-airport businesses (in addition to the County's employees) revealed that there are 75 full time equivalent employees and 139 part time employees. From the survey of airport users, it was estimated that each based aircraft user spends an average of roughly $20,900 annually on their aircraft activity. A portion of this money goes to on-airport businesses. Given a total of 472 based aircraft, an estimate of $9,865,000 in direct spending was calculated.

In summary, on-airport spending from each of the sources quantified in this analysis totaled $11.07 million for 2008. This total was included as an input to the IMPLAN model along with the off-airport visitor spending described in the next section.

Off-Airport Visitor Spending

Every year, air visitors to Palo Alto and the San Francisco Bay area arrive using Palo Alto Airport. These visitors spend money for rental cars, hotels, and restaurants during their trips and that spending can be attributed to their use of PAO. To estimate visitor spending, itinerant visitor trips were multiplied times the amount spent per trip.

A method for determining spending by visitors using Palo Alto Airport was developed based on a per-visitor spending estimate. Essentially, this method first estimates the number of visitors to an airport. Then, an estimated average expenditure per visitor is applied to the total number of visitors, quantifying total visitor spending. To estimate the number of general aviation visitors to PAO, it was assumed that only the actual transient pilots and passengers would be counted as visitors. General aviation surveys have estimated that the average occupancy of

general aviation aircraft is roughly 2.5 passengers per flight[1]. Since transient (itinerant) operations can contain significant numbers of local residents (leaving and coming back to the Airport), only a portion of the itinerant operations could be counted as actual visitors. Discussions with airport FBOs indicated that roughly 10 percent of total itinerant passengers could be considered overnight visitors to the Palo Alto area. The method of estimation is as follows:

- Itinerant Arrivals = Itinerant Operations/2
  (67,432/2 = 33,716 Itinerant Arrivals)
- Visitors = 0.10 times Itinerant Arrivals times 2.5
  (0.10 x 33,716 x 2.5 = 8,429)

Information taken from D.K. Shifflet & Associates, Ltd., **California 2008 Data Tables,** Prepared for California Travel & Tourism Commission[2] indicated an average visitor direct spending of $443 per trip in the San Francisco Bay area. This amount includes expenditures by visitors who spend money at local hotels, restaurants, travel agencies, and other businesses during their trips. This estimate was multiplied by the estimated number of air visitors to Palo Alto Airport. Using this method, it was estimated that $3,734,000 was expended by visitors using the Airport in 2008.

2.5 Application of Regional Multipliers

Induced economic impacts are the *multiplied effects* of the direct spending impacts. Induced impacts are created by the successive rounds of spending in the local economy until the original direct impact has been incrementally exported from the local area. Thus, the economic impacts of aviation can be felt in parts of Palo Alto's 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.

For this study, IMPLAN software was selected as the best input-output model for developing respending multipliers. IMPLAN, developed originally by the U.S. Forest Service, is a comprehensive impact system that is built on a framework of input-output accounting methodology. Since IMPLAN provides a comprehensive system, it is possible to trace impacts of change in one sector on other sectors in a more detailed fashion.

To use the IMPLAN model, the economic impact methodology first identified the direct spending and employment at Palo Alto Airport created by the operation, maintenance, and capital improvement of the facility. To this was added the direct spending of air visitors at off-airport sites such as hotels and restaurants. Armed with this information, regional respending multipliers derived from IMPLAN software were applied to the data to determine the multiplied

[1] Aircraft Owners & Pilots Association (AOPA) estimate, 2004.

[2] Source: http://tourism.visitcalifornia.com/media/uploads/files/editor/Research/2008_California_Data_Tables_-_PUBLIC_VERSION.pdf

impacts of direct spending (called induced impacts). Table 1 presents a summary of Palo Alto Airport's direct and induced economic impacts, as taken from Addendum A.

Table 1 - Direct and Induced Economic Impacts: Palo Alto Airport

ITEM		AMOUNT
Direct Impacts		
Airport-related Income*	(a)	$14,407,000
On and Off-Airport Expenditures (Total including capital costs)	(b)	$42,341,100
Airport-related Employment (Total)	(c)	183
Induced Impacts		
Induced Income Impacts	(d)	$8,001,900
Induced Direct Impacts	(e)	$21,979,900
Total Induced Employment Impacts	(f)	124
Grand Total Dollar Impacts	(b+e)	$64,321,000
Grand Total Income Impacts*	(a+d)	$22,409,000
Grand Total Employment Impacts	(c+f)	307

* 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 in Table 1, the operation of the Palo Alto Airport produces roughly $22.4 million in incomes, $64.3 million in total output, and it sustains 307 jobs.

State and Local Tax Impacts

When discussing economic impacts of aviation, many people are interested in the collective benefits to the local municipalities and the State of California. One measure of the collective local benefits involves the level of taxes paid to these local governmental units. These tax impacts were estimated by the IMPLAN model for expenditures at the State and local level. Estimated State and local tax impacts from aviation activity for Palo Alto Airport totaled $3,725,600.

In addition to these tax revenues, local jurisdictions collect taxes on the personal property value of aircraft based at their airports along with possessory interest tax on the land used by aircraft owners for storage of aircraft. Both the aircraft personal property taxes and the possessory interest taxes are distributed as follows: 1) One third to the city in which the airport is situated; 2) One third to any local school district; 3) One third to the county general fund. If the

airport is not within a city, the full amount is divided between the local school district and the county. None of this tax revenue is kept for use on an airport. For the City of Palo Alto, the reported personal property tax collections totaled $222,533 in FY 2008-2009[3]. Because the City only receives one third of the total tax collected, this indicates that total local personal property taxes generated by the Airport amounted to $667,600 this past year. The possessory interest tax collections have totaled near $100,000 per year on the Airport. The combined property tax and possessory interest local tax generation of roughly $765,000 is a subset of the total estimate of $3,725,600 for the entire Airport.

2.6 Summary of Impact Analysis

As shown in Table 1, Palo Alto Airport supports 307 jobs and $64.3 million in annual economic impact. The Airport generates over $3.7 million in State and local taxes and provides incomes of roughly $22.4 million to area residents. Addendum A presents a detailed summary of the IMPLAN economic impact respending process, by economic sector.

[3] Source: Phone conversation with Tarun Narayan with City of Palo Alto 08/19/09.

3. EXISTING VALUE OF AIRPORT PROPERTY AND FACILITIES

TWO ESTIMATES OF EXISTING AIRPORT 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. In this regard, careful records have been kept by the City regarding the depreciated value of the Airport assets. These are described in the following sections.

3.1 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 Palo Alto Airport, a significant value of the facility is related to its replacement value and current asset worth. The replacement value of Palo Alto 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 2 shows the estimation of those costs, not including the value of the property on which the current airport is located.

The property value was not included since there is a wide range of methods and assumptions that could be used in this determination. In this regard, there is not another 103-acre parcel in the area upon which to base a comparative estimate. Rather, building lots in Palo Alto for single homes can average from $1.0 to $1.5 million for less than 10,000 square feet of land. The larger the parcel is, generally the lower the per-square-foot cost. Thus, a parcel with 4,486,700 square feet would be very hard to price. Given its location adjacent to the Baylands, the Airport property would be difficult if not impossible to develop. Finally, land is not an asset that would be depreciated or have a finite or "useful life." As such, the Airport land could have a value of more than $100 million if it were possible to convert to another use.

For these reasons, land value was not included in the replacement value total. Whatever the existing value, it will not depreciate over the long term. As a result, only the facilities that have been developed on the Airport were valued in this analysis. Replacement of these on existing property would cost about $57 million (Table 2).

Table 2 – Airport Replacement Value Calculation					
	Description	Units	Measure	Cost/#	Amount
Pavement					
Runway	Length x Width	201,950	Cost/sq.ft.	$18.00	$3,635,100
Taxiway	1=Full, 2=Partial, 3=None			1	$1,615,600
Apron Area	Actual Area from Aerial	1,597,406	Cost/sq.ft.	$16.00	$25,558,496
Hangars					
Conventional Hangars	Total Square Footage	59,550	Cost/sq.ft.	$180	$10,719,000
T-Hangars	Total Units	45	Cost/Unit	$85,000	$3,825,000
Fuel System	0=None, 1=AvGas Only				
	2=AvGas & Jet A		Lump Sum	2	$500,000
Instrument Approaches	0=None, 1=Nonprecision				
	2=Precision		Lump Sum	0	$ -
Air Traffic Control Tower	0=No, 1=Yes		Lump Sum	1	$5,000,000
Non-Hangar Buildings	Total Square Feet from Aerial	19,800	Cost/sq.ft.	$300	$5,940,000
Total Replacement Value					$56,995,146

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.

3.2 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. For pavements, the useful life is much shorter at Palo Alto Airport than the 20 years which is expected at many airports due to PAO's location near tidal soils. Because of the constant movement of the soils, the life expectancy for these pavements is closer to 12-15 years than to 20 years. A re-hab of the existing runway and taxiway is planned for 2012, even though the pavement only dates back to 2001. Thus, the value of the pavement in the 11-15 year period was estimated at only 25 percent of its replacement value. For pavements over 15 years, a current value of zero was assigned.

Most of the buildings on the Airport are between 30 and 34 years old, with several dating back to the 1930s and 1940s. Even with these ages, a recent inspection of facilities by the City

revealed that they are remarkably sound and still viable for use. It was estimated that most of these facilities have at least another 10 years of useful life. Although they are listed in Table 4 as being over 15 years old, it is understood that they are significantly older than 15 years. To account for the remaining useful life in terms of replacement costs, the replacement values listed in Table 3 were decreased in accordance with the age and remaining useful life of each facility. For PAO buildings, it was estimated that the buildings still have one third of their replacement value remaining in useful life. No deprecation was assumed for the fuel system or FAA Air Traffic Control Tower since they hold their original replacement value by function. Table 3 presents the results of the current value estimate using the principles of remaining useful life.

Table 3 – Current Value Calculation

	Age of Existing Facilities				
ITEM	Square Feet 0-5 years old	S.F. 5-10 yrs	S.F. 11-15 yrs	S.F. Over 15 yrs	
Pavement					
Runway			201,950		$908,775
Taxiway			100,975		$454,388
Apron Area		798,703	798,703		$11,181,842
Hangars	(S.F. for C-hangars, # of Units for Ts)				
Conventional Hangars				59,550	$3,537,270
T-Hangars				45	$1,262,250
Fuel System	N/A				$500,000
Instrument Approaches	N/A				$ -
Air Traffic Control Tower	N/A				$5,000,000
Non-Hangar Buildings				19,800	$1,960,200
Existing Facility Value					$24,804,725

As shown, the Airport's existing facility value based upon useful life estimates is approximately $24.8 million. This is roughly 44 percent of its replacement value as estimated without land costs.

3.3 Summary of Airport Community Value

The value of Palo Alto 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, output, and total taxes generated at the Airport. This value was estimated using survey data, on-airport employment totals, annual operational and capital spending, and visitor spending averages. These inputs were used in the IMPLAN model to estimate one portion of the value of the Airport. In this regard, the Airport generates an average of $64.3 million per year and sustains over 300 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 $57.0 million and a current value of $24.8 million. Taken as a snapshot in time, the total value of the Airport could be estimated to include its annual economic activity ($64.3 million) plus its current asset value ($24.8 million). Adding these two numbers, it can be shown that **the overall value of the Airport to the community is $89.1 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. Palo Alto Airport provides access to the National Air Transportation System.

- ***Stimulation of Business:*** Businesses have indicated that airports can be an important factor in the attraction and siting of new businesses in a city. This is particularly true for businesses with over 100 employees.

- ***Aeromedical Evacuation:*** Airports often serve as bases for aeromedical evacuation teams or flight services. This life-saving function has 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.

Addendum A
Palo Alto Airport, CA Economic Impact, 2009

Employment

NAICS Aggregated Sector	*Direct*	*Indirect*	*Induced*	*Total*
Ag, Forestry, Fish & Hunting	0.0	0.0	0.1	0.1
Mining	0.0	0.2	0.0	0.2
Utilities	0.0	0.1	0.1	0.2
Construction	3.7	0.8	0.4	4.9
Manufacturing	18.0	4.5	1.0	23.5
Wholesale Trade	0.0	4.5	2.1	6.6
Retail trade	10.8	0.2	12.6	23.6
Transportation & Warehousing	101.0	11.8	0.8	113.6
Information	0.0	1.7	0.8	2.5
Finance & insurance	0.0	2.3	2.9	5.2
Real estate & rental	0.0	6.3	2.7	9.0
Professional- scientific & tech services	0.0	4.7	2.0	6.7
Management of companies	0.0	1.5	0.2	1.7
Administrative & waste services	0.0	9.0	2.1	11.1
Educational services	0.0	0.1	3.2	3.3
Health & social services	0.0	0.0	11.5	11.5
Arts- entertainment & recreation	8.8	0.4	1.9	11.1
Accommodation & food services	30.9	13.2	7.7	51.8
Other services	0.0	1.2	5.6	6.8
Government & non NAICs	10.0	2.4	1.0	13.4
Total	**183.2**	**64.9**	**58.7**	**306.8**

Multiplier: 1.67

Addendum A
Palo Alto Airport, CA Economic Impact, 2009

Income

NAICS Aggregated Sector	*Direct*	*Indirect*	*Induced*	*Total*
Ag, Forestry, Fish & Hunting	$0	$479	$4,250	$4,730
Mining	$0	$21,968	$3,046	$25,013
Utilities	$0	$58,476	$75,153	$133,629
Construction	$236,941	$38,915	$21,612	$297,468
Manufacturing	$4,752,332	$823,746	$101,882	$5,677,960
Wholesale Trade	$0	$564,298	$265,745	$830,044
Retail trade	$268,481	$9,988	$509,972	$788,441
Transportation & Warehousing	$6,648,970	$635,061	$43,276	$7,327,306
Information	$0	$293,987	$93,824	$387,811
Finance & insurance	$0	$208,952	$281,709	$490,661
Real estate & rental	$0	$287,137	$85,536	$372,673
Professional- scientific & tech services	$0	$524,006	$217,333	$741,339
Management of companies	$0	$180,850	$23,558	$204,408
Administrative & waste services	$0	$459,625	$96,041	$555,667
Educational services	$0	$4,340	$160,673	$165,013
Health & social services	$0	$18	$823,540	$823,558
Arts- entertainment & recreation	$269,763	$13,090	$61,993	$344,846
Accommodation & food services	$993,069	$325,508	$197,351	$1,515,927
Other services	$0	$56,231	$155,398	$211,630
Government & non NAICs	$1,237,486	$200,784	$72,581	$1,510,851
Total	**$14,407,042**	**$4,707,459**	**$3,294,473**	**$22,408,975**

Multiplier: 1.55

Addendum A
Palo Alto Airport, CA Economic Impact, 2009

Output

NAICS Aggregated Sector	*Direct*	*Indirect*	*Induced*	*Total*
Ag, Forestry, Fish & Hunting	$0	$2,516	$15,005	$17,520
Mining	$0	$85,724	$11,883	$97,608
Utilities	$0	$248,441	$293,706	$542,147
Construction	$492,000	$76,541	$43,624	$612,165
Manufacturing	$10,270,537	$2,409,290	$385,324	$13,065,150
Wholesale Trade	$0	$1,425,762	$671,435	$2,097,197
Retail trade	$560,107	$21,892	$1,133,572	$1,715,570
Transportation & Warehousing	$26,369,066	$1,194,478	$116,702	$27,680,246
Information	$0	$1,097,537	$384,159	$1,481,696
Finance & insurance	$0	$638,481	$836,656	$1,475,137
Real estate & rental	$0	$1,539,864	$2,009,118	$3,548,983
Professional- scientific & tech services	$0	$909,713	$401,251	$1,310,964
Management of companies	$0	$370,564	$48,270	$418,834
Administrative & waste services	$0	$1,110,456	$187,828	$1,298,284
Educational services	$0	$8,932	$258,569	$267,502
Health & social services	$0	$45	$1,396,220	$1,396,265
Arts- entertainment & recreation	$560,107	$24,055	$148,262	$732,423
Accommodation & food services	$2,742,289	$861,559	$523,031	$4,126,879
Other services	$0	$145,431	$377,274	$522,705
Government & non NAICs	$1,346,989	$428,264	$138,486	$1,913,740
Total	**$42,341,095**	**$12,599,545**	**$9,380,375**	**$64,321,015**

Multiplier: 1.52

Addendum A
Palo Alto Airport, CA Economic Impact, 2009

Tax Impact

			Empl. Comp.	Prop. Income	Household Ex	Enterprises	Ind. Bus Tax	Totals
Enterprises (Corporations)								
	Corporate Profits Tax					$527,919		$527,919
	Indirect Bus Tax: Custom Duty						$86,998	$86,998
	Indirect Bus Tax: Excise Taxes						$208,131	$208,131
	Indirect Bus Tax: Fed NonTaxes						$104,217	$104,217
	Personal Tax: Estate and Gift Tax							$0
	Personal Tax: Income Tax				$2,626,948			$2,626,948
	Personal Tax: NonTaxes (Fines- Fees							$0
	Social Ins Tax- Employee Contribution		$1,021,378	$48,631				$1,070,008
	Social Ins Tax- Employer Contribution		$1,072,579					$1,072,579
Federal Government NonDefense		Total	$2,093,956	$48,631	$2,626,948	$527,919	$399,346	$5,696,800
	Corporate Profits Tax					$128,644		$128,644
	Dividends					$204,441		$204,441
	Indirect Bus Tax: Motor Vehicle Lic						$21,762	$21,762
	Indirect Bus Tax: Other Taxes						$227,798	$227,798
	Indirect Bus Tax: Property Tax						$865,271	$865,271
	Indirect Bus Tax: S/L NonTaxes						$94,323	$94,323
	Indirect Bus Tax: Sales Tax						$1,121,686	$1,121,686
	Indirect Bus Tax: Severance Tax						$376	$376
	Personal Tax: Estate and Gift Tax							$0
	Personal Tax: Income Tax				$814,693			$814,693
	Personal Tax: Motor Vehicle License				$27,270			$27,270
	Personal Tax: NonTaxes (Fines- Fees				$160,019			$160,019
	Personal Tax: Other Tax (Fish/Hunt)				$6,209			$6,209
	Personal Tax: Property Taxes				$8,038			$8,038
	Social Ins Tax- Employee Contribution		$8,498					$8,498
	Social Ins Tax- Employer Contribution		$36,559					$36,559
State/Local Govt NonEducation		Total	$45,057	$0	$1,016,228	$333,086	$2,331,216	$3,725,586
Total			$2,122,569	$48,631	$3,643,176	$861,005	$2,730,562	$9,405,943

Environmental Site Assessment

During spring 2009 Northgate Environmental Management, Inc. (Northgate) was contracted by the City of Palo Alto to perform a Phase I Environmental Site Assessment (ESA) at the Palo Alto Airport. The Phase I ESA was done to determine if there is reason to believe any hazardous material spills have impacted soil and/or groundwater at PAO and was conducted in accordance with the American Society for Testing and Materials (ASTM) "standard practice for environmental site assessments" (ASTM Practice E 1527-05) and Unites States Environmental Protection Agency (EPA) guidelines for ESAs. The Phase I ESA included research of historical records related to past airport activities and site reconnaissance to identify potential sources of environmental contamination. In their May 1, 2009 report Northgate identified the following areas of potential environmental concern:

- Hazardous material use and storage by aircraft repair and maintenance facilities at the site including oil, aviation gas and solvents. Northgate stated that given the long history of chemical use and storage at these facilities there is the potential of hazardous materials releases to soil and groundwater at these locations.

- A fuel tank farm on the western portion of the site used to store aviation gas and diesel used by refueling businesses at PAO. In their report Northgate stated three releases are reported to have occurred at this tank farm.

- A self-service fueling station and underground piping located on the northeast corner of the Roy-Aero Enterprises (REA) sublease area. In their report Northgate stated that this area is a potential soil or groundwater contamination source area.

- An existing County hazardous materials storage area and corporation yard located on the southeast area of the site, and a former County hazardous materials storage area located on the western edge of the site. Northgate stated that given the long history and nature of hazardous materials storage areas they could not rule out the possibility of potential impacts to soil or groundwater at these locations.

- Low to moderate levels of petroleum hydrocarbon compounds present in soil and groundwater related to three former underground storage tanks (USTs) that were removed from the site in 1988 and 1989. These USTs are the subject of an open leaking underground storage tank (LUST) case under the purview of the Santa Clara Department of Environmental Health.

- Two former aboveground fuel storage tanks located on the southwestern edge of the site. Northgate stated this former fuel storage tank area represents a potential contamination source area.

- Impacts to storm water quality due to airport storm water runoff due to reported aviation gas spills and minor aircraft oil leaks.

- Low-level contamination of soil on a site-wide basis due to aircraft oil leaks, accidental releases of aviation gas during refueling and intentional dumping of gasoline samples during pre-flight inspections.

- Buildings potentially containing asbestos and lead-based paint. The Northgate report states that due to the age of the buildings at the site it is possible that lead-based paints were used in the structures in the past and it that asbestos-containing building materials were used in some the structures.

The Northgate report recommends a Phase II site investigation be conducted at PAO to evaluate potential soil and groundwater contamination at the sites discussed above. The Phase II site investigation should include soil and groundwater sampling as well as sampling at selected storm drain locations and a survey of potential asbestos and lead-based paint associated with buildings at the airport. Staff recommends Council authorize up to $150,000 to procure environmental consulting services for a Phase II site investigation to be performed in accordance with ASTM and EPA guidelines for environmental site investigations. A final report will be prepared including the results of the soil and groundwater testing, storm drain sampling and the asbestos and lead-based paint survey. The report will also include recommendations for further characterization of any soil or groundwater contamination encountered during the Phase II site investigation along with results of the storm drain sampling and asbestos and lead-based paint survey.

If significant environmental contamination is discovered at PAO based on the above described Phase II site investigation the City will need to enter into discussion with the County and its FBO's on responsibility for further risk assessment and site cleanup activities prior to the City assuming responsibility for airport operations.