



BISBEE MUNICIPAL AIRPORT

Bisbee, Arizona

AIRPORT MASTER PLAN - 1999

FINANCIAL ANALYSIS / ECONOMIC DEVELOPMENT

INTRODUCTION

This Financial Analysis section contains two parts, the Capital Improvement Program and the Financial Program. The Capital Improvement Plan is based upon the Airport Facility Requirements discussed in Section 3 and the Airport Layout Plans and refined Development Phasing Plan as discussed and presented in Section 6.

CAPITAL IMPROVEMENT PROGRAM

The Capital Improvement Program consists of (1) three terms of development: Short Term - Immediate Term Subset, 1999-2002; Short Term, 2002-2005; Intermediate Term, 2006-2010; and Ultimate Term, 2011-2020, and (2) cost estimates of improvements proposed in the Master Plan Study. The Short Term - Immediate Term Subset projects are those which are required to correct deficiencies for reasons of safety or when a feature was found to be not able to fulfill its design function at the present levels of demand. The projects in the Short, Intermediate, and Ultimate Terms are presented in a time period as to when demand may justify development. These projects should be reviewed and moved forward as the need arises. The cost estimates, while based on approximate quantity takeoffs and unit costs, are prepared in current dollars, and are to be used for planning purposes only.

Proposed Improvements

The proposed general improvements recommendations are listed on pages 3-20 through 3-22. The expanded and phased improvement plan is presented on pages 6-4 through 6-9.

In addition to facility improvements, pavement maintenance construction projects have been programmed to provide guidance for Pavement Management.

Cost Estimates and
Funding Sources

Approximate costs in 1999 dollars for the proposed facility improvements are shown in the following four tables. The project costs are for planning purposes only. The total cost for each improvement is broken down into potential funding shares for eligible projects. The FAA share is 91.06%, the Arizona State share is 4.47% and the Local (City) share is 4.47%. Items that would not be eligible for FAA funds are indicated with an FAA match of zero (0) dollars. In these cases, if the project is eligible for ADOT-Aeronautics Division funds, the State match is 90%. In cases where the project is not eligible for FAA or ADOT-Aeronautics funds, it is assumed the City of Bisbee will pay 100% of the development cost.

CAPITAL IMPROVEMENT PROGRAM - 1999-2020

Funding Sources: FAA, ADOT, & Sponsor

SHORT TERM - IMMEDIATE TERM SUBSET 1999-2002

	Estimated Cost and Funding Source			
	Total	FAA	State	Local
1. Decommission and remove the existing NDB. (2000)	\$1,000	\$0	\$900	\$100
2. Acquire Avigation Easements for the existing approaches to Runways 35 and 20. (2000)	\$17,000	\$16,000	\$500	\$500
3. Prepare engineering construction plans and specs for pavement overlay of all existing airside pavements, including Runway 17-35, Parallel Taxiway A, Connector Taxiways A-1 through A-6, and the Aircraft Parking Apron, and for shoulder regrading as required. (2000)	\$46,000	\$42,000	\$2,000	\$2,000
4. Overlay all existing airside pavements, including Runway 17-35, Parallel Taxiway A, Connector Taxiways A-1 through A-6, and the Aircraft Parking Apron (2" Asphaltic Concrete). Regrade the runway and taxiway shoulders as required to provide a maximum of 1.5" from the pavement edge to the shoulder. (2001)	\$567,000	\$516,000	\$25,500	\$25,500
5. Provide engineering services during construction. (2001)	\$57,000	\$52,000	\$2,500	\$2,500
6. Prepare engineering construction plans and specifications for upgrading the Terminal Area water service and supply system. (2002)	\$1,500	\$0	\$1,400	\$100
7. Construct new facilities to upgrade the Terminal Area water service and supply system. (2002)	\$15,000	\$0	\$13,500	\$1,500
8. Provide engineering services during construction. (2002)	\$1,500	\$0	\$1,400	\$100
TOTAL - SHORT TERM - IMMEDIATE TERM SUBSET	\$706,000	\$626,000	\$47,700	\$32,300

CAPITAL IMPROVEMENT PROGRAM - 1999-2002

Funding Sources: FAA, ADOT, & Sponsor

SHORT TERM 2002-2005

	Estimated Cost and Funding Source			
	Total	FAA	State	Local
1. Prepare an Environmental Assessment for improvement and extension of Runway 2-20. (2002)	\$40,000	\$37,000	\$1,500	\$1,500
2. Upgrade the Terminal Area sewer system. (2002)	\$8,000	\$7,000	\$500	\$500
3. Upgrade the Terminal Area electrical and telephone system. (2002)	\$5,000	\$4,600	\$200	\$200
4. Prepare engineering construction plans and specifications for installation of a Jet-A fuel storage and delivery system, and for an automated card controlled system for the 100LL and Jet-A fuel systems. (2002)	\$20,000	\$0	\$0	\$20,000
5. Construct the new Jet-A fuel storage and delivery system and card control systems. (2002)	\$125,000	\$0	\$0	\$125,000
6. Provide engineering services during construction. (2002)	\$13,000	\$0	\$0	\$13,000
7. Acquire fee land and Avigation Easements for the improved and extended Runway 2-20. (2003)	\$29,000	\$26,000	\$1,500	\$1,500
8. Prepare engineering construction plans and specifications for paving and extension of Runway 2-20 (3,900' x 60') with design to accommodate 12,500# SWG aircraft. Include paved turnarounds and taxiways as shown on the ALP. Include relocation of Swan Road, placing power lines in the Runway 2 approach underground, and the guidance signage as required. (2003)	\$40,000	\$36,000	\$2,000	\$2,000
9. Prepare engineering construction plans and specifications for construction of a new paved Taxiway A-2 extension to Runway 20 (35' pavement width), with design to accommodate 12,500# SWG aircraft. (2003)	\$8,000	\$7,000	\$500	\$500

Section 7: Financial Analysis / Economic Development

	Total	FAA	State	Local
10. Prepare engineering construction plans and specifications for construction of a paved access road and automobile parking for 36 cars. (2003)	\$2,000	\$0	\$1,800	\$200
11. Construct paved and extended Runway 2-20 (3,900' x 60'). (2004)	\$539,000	\$491,000	\$24,000	\$24,000
12. Provide engineering services during construction. (2004)	\$54,000	\$5,000	\$500	\$500
13. Construct new paved Taxiway A-2 extension to Runway 20 (35' pavement width). (2004)	\$95,000	\$87,000	\$4,000	\$4,000
14. Provide engineering services during construction. (2004)	\$10,000	\$9,000	\$500	\$500
15. Construct new paved access road and automobile parking for 36 cars. (2004)	\$18,000	\$0	\$16,000	\$2,000
16. Provide engineering services during construction. (2004)	\$2,000	\$0	\$1,800	\$200
17. Prepare engineering construction plans and specifications for construction of a Medium Intensity Taxiway Lighting (MITL) system for all taxiways serving Runway 17-35. (2004)	\$20,000	\$18,000	\$1,000	\$1,000
18. Construct the MITL system for all taxiways serving to Runway 17-35. (2005)	\$235,000	\$214,000	\$10,500	\$10,500
19. Provide engineering services during construction. (2005)	\$23,500	\$21,500	\$1,000	\$1,000
20. Prepare architectural and engineering plans and specifications for construction of a 5-place T-shade structure, a new 1,375 sf Terminal Building, rehabilitation of Quonset Storage Building #2 and Hangar Building #4, and demolition of Hangar Building #3. (2005)	\$14,000	\$0	\$3,000	\$11,000
21. Construct the new 5-place T-shade structure and Terminal Building. Rehabilitate Quonset Storage Building #2 and Hangar Building #4, and demolish Hangar Building #3. (2005)	\$170,000	\$0	\$36,500	\$133,500

Section 7: Financial Analysis / Economic Development

	Total	FAA	State	Local
22. Provide engineering services during construction. (2005)	\$17,000	\$0	\$2,000	\$15,000
23. Prepare architectural and engineering construction plans and specifications for extension of security fencing around hangar development sites, construction of a new fenced airport campground with restroom/shower building, 3 campsites, security lighting and potable water. (2005)	\$5,000	\$0	\$4,500	\$500
24. Construct the new campground and security fence extension. (2005)	\$60,000	\$0	\$55,000	\$5,000
25. Provide engineering services during construction. (2005)	\$6,000	\$0	\$5,500	\$500
TOTAL - SHORT TERM	\$1,558,500	\$963,100	\$173,800	\$373,600

CAPITAL IMPROVEMENT PROGRAM - 1999-2020

Funding Sources: FAA, ADOT, & Sponsor

INTERMEDIATE TERM - 2006 -2010

	Estimated Cost and Funding Source			
	Total	FAA	State	Local
1. Prepare engineering and architectural construction plans and specifications for grading and drainage of 3 private hangar lots and an FBO hangar site (for private development), construction of a 4-place Tee Hangar structure and construction of paved hangar access taxiways and a new FBO Ramp. (2006)	\$13,000	\$0	\$0	\$13,000
2. Grade and drain the hangar development areas and FBO development site. Construct 4-place Tee Hangar structure and new paved hangar access taxiways and an FBO Ramp. (2006)	\$160,000	\$0	\$0	\$160,000
3. Provide engineering services during construction. (2006)	\$16,000	\$0	\$0	\$16,000
4. Prepare engineering construction plans and specifications for widening Runway 17-35 15' (5,900' x 75') and strengthening of Runway 17-35 and serving taxiway pavements to accommodate 30,000# SWG aircraft. (2007)	\$14,000	\$13,000	\$500	\$500
5. Widen and Strengthen Runway 17-35 and serving taxiway pavements. (2007)	\$180,000	\$164,000	\$8,000	\$8,000
6. Provide engineering services during construction. (2007)	\$18,000	\$17,000	\$500	\$500
7. Construct new MIRL and MITL systems on Runway 2-20 and its serving taxiways. (2010)	\$250,000	\$228,000	\$11,000	\$11,000
8. Provide engineering services during construction. (2010)	\$25,000	\$23,000	\$1,000	\$1,000
9. Prepare engineering construction plans and specifications for crack sealing, seal coating, and pavement marking of all pavements in the airfield. (2010)	\$17,000	\$0	\$15,000	\$2,000
10. Crack seal, seal coat, and mark all pavements in the airfield. (2010)	\$206,000	\$0	\$185,000	\$21,000

	Estimated Cost and Funding Source			
	Total	FAA	State	Local
11. Provide engineering services during construction. (2010)	\$21,000	\$0	\$19,000	\$2,000
TOTAL - INTERMEDIATE TERM	\$920,000	\$445,000	\$240,000	\$235,000

CAPITAL IMPROVEMENT PROGRAM - 1999-2020

Funding Sources: FAA, ADOT, & Sponsor

ULTIMATE TERM - 2011 -2020

	Estimated Cost and Funding Source			
	Total	FAA	State	Local
1. Prepare engineering construction plans and specifications for installation of Precision Approach Slope Indicators (PAPIs) on the Runway 2 and 20 approaches. (2012)	\$3,500	\$3,100	\$200	\$200
2. Construct the new PAPI installations on Runways 2 and 20. (2012)	\$40,000	\$36,000	\$2,000	\$2,000
3. Provide engineering services during construction. (2012)	\$4,000	\$3,600	\$200	\$200
4. Prepare engineering and architectural plans and specifications for grading and drainage of 2 private hangar lots, construction of a 4-place Tee Hangar structure, and construction of paved hangar access taxiways. (2015)	\$10,000	\$0	\$0	\$10,000
5. Grade and drain the hangar development areas. Construct new paved hangar access taxiways. (2015)	\$80,000	\$0	\$0	\$80,000
6. Provide engineering services during construction. (2015)	\$5,000	\$0	\$0	\$5,000
7. Prepare engineering construction plans and specifications for crack sealing, seal coating, and pavement marking of all pavements in the airfield. (2015)	\$17,000	\$0	\$15,000	\$2,000
8. Crack seal, seal coat, and mark all pavements in the airfield. (2015)	\$206,000	\$0	\$185,000	\$21,000
9. Provide engineering services during construction. (2015)	\$21,000	\$0	\$19,000	\$2,000
10. Prepare engineering construction plans and specifications for crack sealing, seal coating, and pavement marking of all pavements in the airfield. (2015)	\$17,000	\$0	\$15,000	\$2,000

Section 7: Financial Analysis / Economic Development

	Total	FAA	State	Local
11. Crack seal, seal coat, and mark all pavements in the airfield. (2020)	\$206,000	\$0	\$185,000	\$21,000
12. Provide engineering services during construction. (2020)	\$21,000	\$0	\$19,000	\$2,000
TOTAL - ULTIMATE TERM	\$630,500	\$42,700	\$440,400	\$147,400

FINANCIAL
PROGRAM

Benefits

The benefits provided by a general aviation airport to a community vary depending on many factors such as airport size, services and facilities offered, location, type and amount of air traffic and role within the overall airport system. Yet having an airport is no guarantee to its owner that it will generate positive economic impacts. General Aviation airports can become a burden when they require subsidies to operate. On the other hand, General Aviation airports that have political support for economic growth and business opportunities and which are supported by a strong local economy can contribute significantly to the economic well-being of a community.

General Aviation is the single largest segment of air transportation in the United States. General Aviation includes business, recreational and personal transportation, medical evacuation, law enforcement, firefighting, mail and express deliveries, agricultural flying, and others. Oftentimes, the success of a General Aviation airport is a matter of finding specific roles or niches within the community and in the overall airport system. Once these specific markets are identified they must be aggressively pursued.

Economically, the benefits of a General Aviation airport to a community are difficult to assess. General Aviation airports create jobs directly at the airport and indirectly within the community. They generate consumer spending and sales and personal property taxes. Growth of the airport will lead to more money being spent in the community.

Financing
Airport
Development

The key to successful development of the airport is a sound financial program. This program must provide a feasible economic operation, provide for development of facilities which meet demand, and provide for a self-sustaining operation within a reasonable amount of time. Revenues must help offset the annual cost of capital investment, maintenance and operations.

Airport revenues do not have to cover all annual costs as long as supplementary funds for airport development can be obtained. There are several sources of financing available for airport improvements. These include the Federal Aviation Administration's (FAA) Airport Improvement Program (AIP), the Arizona Department of Transportation-Aeronautics Division, revenue bonds, general obligation bonds, private investment, leasebacks, and taxes.

FAA funds are available for a number of types of projects, including planning, Environmental Assessment, land acquisition, and design and construction of most airside improvements. Airports are eligible for federal assistance if they are included in the National Plan of Integrated Airport Systems (the "NPIAS"). The Bisbee Municipal Airport is listed on the NPIAS. The FAA's percentage share for projects in

Arizona is 91.06%.

The Arizona Department of Transportation-Aeronautics Division has two programs available to the airport sponsor: the grant program and the loan program. Under the grant program ADOT-Aeronautics Division provides a grant on a 90% ADOT/10% Sponsor basis to a Primary Airport such as Bisbee Municipal Airport, when there is no FAA participation. With an FAA grant, the State provides a 4.47% match. ADOT-Aeronautics Division grants can be obtained for planning, Environmental Assessment, land acquisition, safety and capacity enhancement, maintenance, and most landside and airside improvements.

The ADOT loan program is available to provide funds for those proposed projects which are not eligible for an ADOT grant. Three kinds of loans are available: Revenue Generating, Grant Matching, and Grant Advance. ADOT prioritizes the relative importance of project categories as: (1) hangars; (2) terminals; (3) fuel farms; (4) utility improvements; (5) office/hangar complex; (6) auto parking (revenue generating); (7) restaurant; (8) hotel; (9) recreational improvements.

Revenue bonds are sold with repayment based on income from anticipated revenues. Use of this type of financing is dependent on the ability to generate the necessary revenue. Airport revenue must first be put toward bond retirement. Meanwhile, the sponsor's borrowing capability may be inhibited while the debt is outstanding. This type of funding is typically used by large airports to fund revenue-producing projects such as air carrier runways, industrial parks and terminal buildings.

General obligation bonds are supported by the taxing power of the community. Proceeds from the sale of these bonds are used to finance public use facilities such as terminal buildings, auto parking lots, runways and taxiways. These funds cannot be used to fund exclusive use facilities such as hangars, FBO facilities, taxilanes and private aprons.

Private donations are sometimes given to the Airport sponsor. These funds should be deposited in the Airport Fund.

Leasing strategies may be available to the airport owner to develop needed facilities. A non-profit corporation could lease parts of the airport and construct improvements. Then, the corporation can lease the facilities back to the airport owner at a rate and for a duration calculated to recoup the initial investment plus interest. Although the airport owner would have a monthly payment at a relatively high interest rate, there would be no single large capital expense.

Certificates of Participation involve a lease purchase or an installment sale

arrangement. This form of leasing can be used to finance facilities or equipment over a long period. Funds for lease payments are raised on an annual appropriation basis; non-payment may result in the return of the asset or other equitable solution.

Municipal Lease Purchase Financing is a useful tax-exempt lease-purchase method for financing equipment or facilities. Under a tax-exempt lease contract the governmental body (airport sponsor) would pay the purchase price plus interest over a determined number of years, and it would have the right to purchase the asset for a nominal price at the end of the contract term. Nonpayment could result in the return of the asset or in another equitable solution.

A local sales tax may be levied directly to finance an airport or indirectly to finance Capital Improvement Projects (including an airport). A tax can generate large amounts of capital to finance projects ineligible for other sources of funds.

An airport sponsor should maintain an Airport Fund supported by revenues generated by the airport. Maintenance of the fund and reinvestment of airport-generated revenue into airport improvements is a mandatory expectation of the agencies that provide grant money for development (e.g., FAA). In addition to the Airport Fund, a sponsor may appropriate public funds for airport expenditures from the General Fund. However, this form of financing airport improvements could place constraints on money available from the General Fund to support other municipal expenses.

Financial
Program
Objectives

Currently the City of Bisbee subsidizes Bisbee Municipal Airport. This trend would be expected to continue unless the City of Bisbee embarks on an aggressive campaign of attracting and keeping revenue-producing markets at the airport and the revenue generated from these markets is sufficient to offset airport expenditures.

Airport
Revenue and
Expenditures

The City of Bisbee does maintain an "Airport Fund" for Bisbee Municipal Airport. The City has also maintained records of annual revenue and expenditures for the last five years. These records are summarized and displayed in the following tables.

Table 7a:

BISBEE MUNICIPAL AIRPORT
AIRPORT FUND REVENUES
1994-1998

Airport Revenues	FY 94/95	FY 95/96	FY 96/97	FY 97/98	FY 98/99
Gas	\$6,540.07	\$9,378.37	\$10,645.70	\$6,270.57	\$8,984.79
Rent	\$6,319.22	\$5,175.01	\$2,534.65	\$3,041.60	\$3,887.24
TOTAL REVENUES	\$12,859.29	\$14,553.38	\$13,180.35	\$9,312.17	\$12,872.03

Table 7b:

BISBEE MUNICIPAL AIRPORT
AIRPORT FUND EXPENDITURES
1994-1998

Airport Expenses	FY 94/95	FY 95/96	FY 96/97	FY 97/98	FY 98/99
Personnel Expense	(\$11,394.30)	(\$11,020.00)	(\$9,600.00)	(\$11,579.64)	(\$11,922.02)
Administrative Expense	(\$16,719.57)	(\$11,698.01)	(\$43,253.46)	(\$9,936.20)	(\$10,150.38)
Supply Expense	(\$14,824.44)	(\$12,169.22)	(\$11,723.67)	(\$11,297.30)	(\$8,556.90)
Maintenance Expense	(\$2,163.86)	(\$4,035.52)	(\$333.66)	(\$1,791.43)	(\$426.56)
Utility Expense	(\$6,588.64)	(\$5,800.23)	(\$6,032.54)	(\$4,162.33)	(\$4,260.57)
LTAF	\$19,792.92	\$25,784.20	\$66,876.96	\$27,048.00	\$25,310.12
TOTAL EXPENDITURES	(\$31,897.89)	(\$18,938.78)	(\$4,066.37)	(\$11,718.90)	(\$10,006.31)

Table 7c:

BISBEE MUNICIPAL AIRPORT
AIRPORT FUND REVENUES VERSUS EXPENDITURES
1994-1998

	FY 94/95	FY 95/96	FY 96/97	FY 97/98	FY 98/99
Total Revenues	\$12,859.29	\$14,553.38	\$13,180.35	\$9,312.17	\$12,872.03
Total Expenses	(\$31,897.89)	(\$18,938.78)	(\$4,066.37)	(\$11,718.90)	(\$10,006.31)
Net	(\$19,038.60)	(\$4,385.40)	\$9,113.90	(\$2,406.73)	\$2,865.72

Comparison of
Expenditures
versus
Revenues

Table 7c shows that the airport made a profit in fiscal years 1996 to 97 and years 1998 to 99. The profit in fiscal year 1996 to 97 is likely due to the large LTAF received from the State of Arizona, \$66,876.96. In years 1998 to 1999, the profit is likely due to the increase in revenues from gas and rental facilities, combined with a decrease in maintenance and supply expenses.

FINANCIAL
ANALYSIS

The preceding text described the expected development costs associated with the implementation of the twenty year Capital Improvement Program and also provided records of actual revenue and expenditures at the Airport for the last five years. Using this data and certain assumptions, airport expenditures and revenue can be estimated over the next 20 years.

Projected
Expenditures

Table 7b of Airport Fund Expenditures displayed on the preceding pages lists airport expenditures which have been broken down into Personnel Expenses, Administration Expenses, Supply Expenses, Maintenance Expenses, and Utility Expenses.

Personnel expenses include salaries, professional fees, the FBO contract and other contracts, and other closely related expenses. The FBO contract makes up about 95 percent of the personnel expenses category (which includes one half of all revenues generated through hangar and tiedown rentals). In recent years, personnel expenses have averaged approximately \$11,000. The anticipated personnel expense increase is projected to be 3 percent per year for the 20-year planning period, as shown in the cash flow analysis.

Administration expenses include telephone and fax expenses, postage, advertising, insurance, equipment and furniture, and necessary permits, and other closely related expenses. Administration expenses have been between \$9,000 and \$16,000 in the last few years, with the exception of 1997, in which a miscellaneous expense of \$30,793.85 was reported. Administrative expenses have averaged approximately 28 percent of the total expenses historically, with the exception of 1997. Administrative expenses are anticipated to increase 2percent per year throughout the planning period. This is shown in the projected airport expenses in the cash flow analysis.

Supply expenses category includes office supplies, terminal supplies, and maintenance supplies, as well as the fuel supply, safety equipment, and small tools and equipment. Supply expenses have decreased since years 1994-95. However, it is anticipated that supply expenses will increase at approximately 5 percent per year during the planning period because of the projects planned and because of increased fuel needs.

Maintenance costs include maintenance done to any of the facilities or the airfield, including pavements, shoulders, buildings, lighting, and weed control and also includes maintenance done on the NDB, which is recommended to be decommissioned. Maintenance costs have ranged from 1 to 9 percent in the last five years, which is low. This may be due to how maintenance is paid for when required at the airport. It is assumed that when maintenance needs to be done at the airport, the City of Bisbee sends workers to the airport and pays for them through a general city maintenance fund, not the airport fund. We will assume that this scenario will continue. Therefore, it is assumed that maintenance expenses will increase at a rate of 2 percent per year during the planning period.

Utility expenses are associated with the electricity, water, sewer and garbage, and gas services for the airport. Electricity makes up approximately 75 percent of the utility expense. Utility costs have averaged 11 percent in the past five years. We will assume that utility costs will increase at a rate of 3 percent per year during the planning program, as shown in the cash flow diagram.

The City of Bisbee includes the Local Transportation Assistance Fund, LTAF, in their reported expenses. This fund is lottery money given to the City by the State of Arizona. It is believed that this fund will continue to benefit the City of Bisbee. We will assume that the LTAF allocation will increase 3 percent per year during the planning program.

The five year expenditures for each category were averaged to determine the baseline for the fiscal year 1999-2000 cash flow analysis and rounded to the nearest one hundred dollars. While the category totals were similar throughout the past five years, there was one lump sum expense that was off the average, and was thus not used in determining the average for the fiscal year 1999-2000 expenses. This lump sum cost was in the administrative category and occurred in 1996-1997. A \$30,793.85 "other" expense was included in this fiscal year that does not show up in any of the other years' expenses; therefore, this number was not used in determining the baseline value.

The LTAF allocation is retained in the projected expenses, but is reported as a credit to the expense account as it has been for the past five years. The City of Bisbee should consider reporting this fund as a revenue.

Projected Airport
Revenue

A goal of the City of Bisbee should be to produce enough airport revenue to balance or exceed airport expenditures and to eliminate any City subsidy for airport expenses.

It is recommended that steps be taken so that fees remain competitive with Douglas Municipal Airport and Bisbee-Douglas International Airport.

In this section, certain assumptions are made about current revenue sources and new revenue sources. The assumptions made about new revenue sources generally reflect a conservative campaign of airport development and pricing structure.

Sources of revenue used in the analysis include: fuel sales; hangar, T-shade, tiedown fees; and land lease fees for private hangar development.

1. For "Landside: Hangar Fees, T-Shade Fees, and Tiedown Fees", the occupancy assumptions are illustrated on the following page.

ASSUMED HANGAR, T-SHADE and TIEDOWN OCCUPANCY
BISBEE MUNICIPAL AIRPORT 2000-2020

	Based AC	Private Hangars	City Hangars		T-Shades		Tiedowns	
			available	occupied	available	occupied	available	occupied
2000	14	1	2	2	9	9	28	2
2001	14	1	2	2	9	9	28	2
2002	14	1	2	2	9	9	28	2
2003	15	1	2	2	9	9	28	3
2004	15	1	2	2	9	9	28	3
2005	15	1	1	1	14	10	28	3
2006	15	2	6	3	14	10	28	
2007	15	2	6	4	14	10	28	
2008	16	2	6	4	14	10	28	
2009	16	2	6	4	14	10	28	
2010	16	3	6	4	14	10	28	
2011	16	3	6	4	14	10	28	
2012	16	4	6	4	14	10	28	
2013	16	4	6	4	14	10	28	
2014	16	4	6	4	14	10	28	
2015	16	4	6	4	14	8	28	
2016	16	4	6	4	14	8	28	
2017	16	4	6	4	14	8	28	
2018	16	5	6	4	14	7	28	
2019	17	5	6	5	14	7	28	
2020	17	5	6	5	14	7	28	

2. For "Landside: Land Lease Fees" there is no revenue for 2000-2005. In 2006, 3 private hangar lots will be graded and in 2015, 2 more private hangar lots will be prepared. It is assumed that a private party would lease the lots and build their own hangars. Assume the lots will lease for \$50 per month beginning in 2006 and will increase at the rate of 5% per year through 2020.
3. For "Landing Fees", a value of zero is used because currently we believe that the landing fees would be too difficult to collect and would drive away potential users of the airport. The City of Bisbee could consider imposing landing fees for commercial operations in the future, if desired.
4. For "Hangar Fees", it was assumed that each hangar will rent for \$100 per month in 2000 and that rents will increase at the rate of 5% per year throughout the planning period. In 2005, one of the hangars will be demolished and one of them will be renovated. For that year, it is assumed that two hangars will be rented for half of the year. In 2006, four additional hangars will be built and the two original hangars will be renovated.
5. For "T-shade Fees", it was assumed that each space will rent for \$50 per month in 2000 and that rents will increase at the rate of 5% per year throughout the planning period. In 2005, 5 additional T-shades will be constructed, making a total of 14 T-shades.

(The capital improvement program allows for development of either 4 additional City-owned hangars or 5 additional T-Shades.)

6. For "Tiedown Fees", it was assumed that each space will rent for \$30 per month in 2000 and that rents will increase at the rate of 5% per year throughout the planning period. It was assumed that tiedowns will be rented when a hangar or T-shade space is not available.

For years 2000 through 2002, assume 2 tiedowns are rented monthly and assume that two additional transient tiedowns are rented daily six days a month. From 2003 to 2005, assume that 3 tiedowns will be rented monthly and that 2 transient tiedowns will be rented daily, 6 times per month. From 2006 to 2020, assume there will be 2 transient tiedowns rented 6 times per month.

7. For "Quonset Storage" assume that this space will always be rented. It is assumed that the cost of renting the quonset storage space will be \$50 per month for the year 2000 and that rent will increase at the rate of 5% per year through the planning period.

8. "Fuel Flowage Fees" include revenues from AV 100LL gas and Jet A gas, to be introduced in 2002. For baseline use, use the 1999 average number of gallons used per month, 420, times 12 months, to yield 5,040 gallons per year. Assume the baseline price of fuel to be \$1.90 per gallon for AV 100LL gas and \$1.40 per gallon for Jet A gas and assume these prices will increase 5 percent per gallon per year.
9. The "LTAF Allocation" is lottery money granted to the City of Bisbee by the State of Arizona. We will assume that the City will continue to receive this grant money each year and will assume that the money increases at a rate of 3 percent per year. Assume the baseline value is the 1998-1999 LTAF Allocation. This allocation is shown as a credit under airport expenses.

Table 7d (presented on the next 4 pages) illustrates the results of the previously-described assumptions, in the cash flow analysis. The cash flow analysis shows airport revenues, expenses, and the City of Bisbee local share of the proposed Capital Improvement Projects for each year in the planning period.

Table 7d: CASH FLOW ANALYSIS 2000-2020

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	2000	2001	2002	2003	2004
REVENUES					
AIRSIDE					
Landing Fees	\$0	\$0	\$0	\$0	\$0
Fuel Flowage Fees	\$9,576	\$10,102	\$10,628	\$11,154	\$11,932
LANDSIDE					
Land Lease Fees	\$0	\$0	\$0	\$0	\$0
Hangar Fees	\$2,400	\$2,520	\$2,646	\$2,778	\$2,917
T-Shade Fees	\$5,400	\$5,670	\$5,954	\$6,251	\$6,564
Tiedown Fees	\$1,080	\$1,134	\$1,191	\$1,610	\$1,690
Quonset Storage	\$600	\$630	\$660	\$700	\$730
TOTAL REVENUE	\$19,056	\$20,056	\$21,078	\$22,493	\$23,833
EXPENSES					
Personnel	(\$11,100)	(\$11,400)	(\$11,700)	(\$12,000)	(\$12,400)
Administration	(\$12,100)	(\$12,300)	(\$12,500)	(\$12,800)	(\$13,000)
Supplies	(\$11,700)	(\$12,300)	(\$12,900)	(\$13,500)	(\$14,200)
Maintenance	(\$1,800)	(\$1,800)	(\$1,900)	(\$1,900)	(\$1,900)
Utilities	(\$5,400)	(\$5,600)	(\$5,800)	(\$6,000)	(\$6,200)
LTAF Allocation	\$25,300	\$26,100	\$26,900	\$27,700	\$28,600
TOTAL EXPENSES	(\$16,800)	(\$17,300)	(\$17,900)	(\$18,500)	(\$19,100)
C.I.P (Local Share Costs)	(\$2,600)	(\$28,000)	(\$161,900)	(\$4,200)	(\$32,200)
NET	(\$344)	(\$25,244)	(\$158,722)	(\$207)	(\$27,467)

Table 7d: CASH FLOW ANALYSIS 2000-2020

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	2005	2006	2007	2008	2009
REVENUES					
AIRSIDE					
Landing Fees	\$0	\$0	\$0	\$0	\$0
Fuel Flowage Fees	\$12,710	\$13,488	\$14,326	\$15,164	\$16,002
LANDSIDE					
Land Lease Fees	\$0	\$1,800	\$1,900	\$2,000	\$2,100
Hangar Fees	\$1,458	\$4,375	\$6,126	\$6,432	\$6,754
T-Shade Fees	\$7,200	\$7,560	\$7,938	\$8,335	\$8,752
Tiedown Fees	\$1,775	\$1,440	\$1,512	\$1,588	\$1,667
Quonset Storage	\$770	\$800	\$850	\$890	\$930
TOTAL REVENUES	\$23,913	\$29,463	\$32,652	\$34,409	\$36,204
EXPENSES					
Personnel	(\$12,800)	(\$13,200)	(\$13,600)	(\$14,000)	(\$14,400)
Administration	(\$13,300)	(\$13,600)	(\$13,900)	(\$14,200)	(\$14,500)
Supplies	(\$14,900)	(\$15,600)	(\$16,400)	(\$17,200)	(\$18,000)
Maintenance	(\$2,000)	(\$2,000)	(\$2,100)	(\$2,100)	(\$2,200)
Utilities	(\$6,400)	(\$6,600)	(\$6,800)	(\$7,000)	(\$7,200)
LTAF Allocation	\$29,500	\$30,500	\$31,500	\$32,500	\$33,500
TOTAL EXPENSES	(\$19,900)	(\$20,500)	(\$21,300)	(\$22,000)	(\$22,800)
C.I.P (Local Share Costs)	(\$177,000)	(\$189,000)	(\$9,000)	\$0	\$0
NET	(\$172,987)	(\$180,037)	\$2,352	\$12,409	\$13,404

Table 7d: CASH FLOW ANALYSIS 2000-2020

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	2010	2011	2012	2013	2014
REVENUES					
AIRSIDE					
Landing Fees	\$0	\$0	\$0	\$0	\$0
Fuel Flowage Fees	\$16,840	\$17,677	\$18,766	\$19,855	\$20,944
LANDSIDE					
Land Lease Fees	\$2,200	\$2,700	\$2,700	\$2,700	\$2,700
Hangar Fees	\$7,092	\$7,446	\$7,819	\$8,210	\$8,620
T-Shade Fees	\$9,190	\$9,649	\$10,132	\$10,638	\$11,170
Tiedown Fees	\$1,750	\$1,838	\$1,929	\$2,026	\$2,127
Quonset Storage	\$720	\$840	\$840	\$840	\$840
TOTAL REVENUE	\$37,791	\$40,150	\$42,186	\$44,268	\$46,401
EXPENSES					
Personnel	(\$14,800)	(\$15,200)	(\$15,700)	(\$16,200)	(\$16,700)
Administration	(\$14,800)	(\$15,100)	(\$15,400)	(\$15,700)	(\$16,000)
Supplies	(\$18,900)	(\$19,800)	(\$20,800)	(\$21,800)	(\$22,900)
Maintenance	(\$2,200)	(\$2,200)	(\$2,300)	(\$2,300)	(\$2,400)
Utilities	(\$7,400)	(\$7,600)	(\$7,800)	(\$8,000)	(\$8,200)
LTAf Allocation	\$34,500	\$35,500	\$36,500	\$37,500	\$38,500
TOTAL EXPENSES	(\$23,600)	(\$24,400)	(\$25,500)	(\$26,500)	(\$27,700)
C.I.P (Local Share Costs)	(\$37,000)	\$0	(\$2,400)	\$0	\$0
NET	(\$22,809)	\$15,750	\$14,286	\$17,768	\$18,701

Table 7d: CASH FLOW ANALYSIS 2000-2020

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	2015	2016	2017	2018	2019	2020
REVENUES						
AIRSIDE						
Landing Fees	\$0	\$0	\$0	\$0	\$0	\$0
Fuel Flowage Fees	\$22,033	\$23,121	\$24,888	\$26,655	\$28,422	\$30,190
LANDSIDE						
Land Lease Fees	\$4,500	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
Hangar Fees	\$9,051	\$9,504	\$9,979	\$10,478	\$13,753	\$14,440
T-Shade Fees	\$9,383	\$9,852	\$10,345	\$9,505	\$9,980	\$10,479
Tiedown Fees	\$2,233	\$2,345	\$2,462	\$2,585	\$2,714	\$2,850
Quonset Storage	\$840	\$840	\$840	\$840	\$840	\$840
TOTAL REVENUES	\$48,040	\$51,661	\$54,513	\$56,062	\$61,709	\$64,799
EXPENSES						
Personnel	(\$17,200)	(\$17,700)	(\$18,200)	(\$18,700)	(\$19,300)	(\$19,900)
Administration	(\$16,300)	(\$16,600)	(\$16,900)	(\$17,200)	(\$17,500)	(\$17,900)
Supplies	(\$24,000)	(\$25,200)	(\$26,500)	(\$27,800)	(\$29,200)	(\$30,700)
Maintenance	(\$2,400)	(\$2,500)	(\$2,500)	(\$2,600)	(\$2,600)	(\$2,700)
Utilities	(\$8,500)	(\$8,800)	(\$9,000)	(\$9,300)	(\$9,600)	(\$9,900)
LATF Allocation	\$39,500	\$40,500	\$41,500	\$42,500	\$44,000	\$45,500
TOTAL EXPENSES	(\$28,900)	(\$30,300)	(\$31,600)	(\$33,100)	(\$34,200)	(\$35,600)
C.I.P (Local Share Costs)	(\$120,000)	\$0	\$0	\$0	\$0	(\$25,000)
NET	(\$106,167)	\$15,021	\$15,728	\$15,995	\$16,662	(\$7,010)

Summary of Cash
Flow Analysis

Other than the City's share of the future Capital Improvement Program, the airport's projected revenues should offset airport expenses during the 20-year planning period. In order for the City to generate more funds to cover their share of the recommended improvements, they will need to subsidize the airport with another type of fund or develop a more aggressive program for generating additional revenue at the airport.

FAR PART 139
REQUIREMENTS

The following table is a separate cost and funding source breakdown for those improvements that may be required if and when the Bisbee Municipal Airport seeks certification as an FAR Part 139 air carrier service facility.

Part 139 Improvements - Bisbee Municipal Airport

	Estimated Cost and Funding Source			
	Total	FAA	State	Local
10. Prepare construction plans and specifications for taxiway edge markings.	\$1,000	\$900	\$50	\$50
11. Construct taxiway edge markings.	\$8,500	\$7,500	\$50	\$50
12. Provide engineering services during construction.	\$1,500	\$1,300	\$100	\$100
13. Prepare engineering plans and specifications for construction of Medium Intensity Taxiway Lighting (MITL) system for all taxiways serving Runway 17-35.	\$20,000	\$18,000	\$1,000	\$1,000
14. Construct the of Medium Intensity Taxiway Lighting (MITL) system for all taxiways serving Runway 17-35.	\$235,000	\$214,000	\$10,500	\$10,500
15. Provide engineering services during construction.	\$23,500	\$21,500	\$1,000	\$1,000
16. Prepare engineering plans and specifications for Runway 17-35 Distance-to-go signage.	\$700	\$600	\$50	\$50
17. Construct Runway 17-35 Distance-to-go signage.	\$8,500	\$7,700	\$400	\$400
18. Provide engineering services during construction.	\$850	\$750	\$50	\$50
19. Prepare engineering plans and specifications for hold signs at runway/taxiway intersections.	\$1,600	\$1,400	\$100	\$100
20. Construct hold signs at runway/taxiway intersections.	\$20,000	\$18,000	\$1,000	\$1,000
21. Provide engineering services during construction.	\$2,000	\$1,800	\$100	\$100
22. Prepare engineering plans and specifications for Runway 17-35 shoulder grading.	\$1,000	\$900	\$50	\$50
23. Grade Runway 17-35 shoulders.	\$12,000	\$11,000	\$500	\$500
24. Provide engineering services during construction.	\$1,500	\$1,300	\$100	\$100
TOTAL PART 139 IMPROVEMENTS	\$337,650	\$306,650	\$15,050	\$15,050