

SECTION 8

**FINANCIAL PLAN AND
ECONOMIC IMPACT**



SECTION 8 FINANCIAL PLAN AND ECONOMIC IMPACT

INTRODUCTION

This section contains a financial plan that supports the implementation of the Fullerton Municipal Airport Master Plan capital improvements. It identifies the estimated capital costs and timing of the proposed development, and describes the financing plan to implement the improvements.

CAPITAL COST ESTIMATES AND PHASING

Table 8-1 presents the estimated capital improvement costs and phasing of the Airport Master Plan development, described in Section 7. Costs are shown in 2003 dollars. All construction costs include 25 percent for engineering studies, surveys, design, and construction administration as well as an allowance of 20 percent for contingencies.

Costs are shown for three phases of development: Phase 1A (2004 – 2005), Phase 1B (2006 – 2008), and Phase 2 (2009 – 2013). There is no development scheduled for Phase 3 (2014 – 2023). Although airport improvements are planned according to these phases, development at the airport will not occur unless warranted by demand. The timing of future construction will also depend on the availability of FAA grants and other sources of funding.

The following conditions and assumptions apply to the cost estimates:

- New apron and taxiway pavement on the north side is estimated on the basis of 4 inches of asphalt concrete pavement over 8 inches of crushed aggregate base material and 12 inches of sub-base.
- Hangar construction costs are estimated to be \$30 per square foot of building, which includes the foundation, building, and electrical service as well as engineering, construction administration, and the allowance for contingencies.



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**Table 8-1
Schedule of Master Plan Improvements and Estimated Costs
Fullerton Municipal Airport [a]**

Project	Quantity [b]	Unit Cost [c]	Estimated Cost	Schedule for Phase 1
Phase 1A Improvements (2004-2005)				
1. Reconstruct pavement at northwest ramp				2003
a. AC removal/ structural excavation	120,000 SF	\$1	\$120,000	
b. Paving / striping / tiedowns	120,000 SF	\$4	\$480,000	
c. PCC drainage swale	1,050 LF	\$10	<u>\$11,000</u>	
Total project			\$611,000	
2. Construct 2 washracks on south side				2003
a. AC removal/ structural excavation	2,800 SF	\$1	\$3,000	
b. Oil-water separator, inlet & auto rain valve	2 EA	\$0	\$0	
c. Paving	3,445 SF	\$6	\$21,000	
d. 6-inch sewer with cleanouts- w/ trenching	250 LF	\$60	\$15,000	
e. Water service with 1-inch piping w/trenching	2 EA	\$5,000	\$10,000	
f. Drainage pipe	2 EA	\$5,000	<u>\$10,000</u>	
Total project			\$59,000	
3. Construct 38 hangars in northwest corner and area between Air Combat and Ray's				2003-5
a. AC removal/ structural excavation	100,730 SF	\$1	\$101,000	
b. Utilities	1 LS	\$61,000	\$61,000	
c. Paving / striping	82,000 SF	\$4	\$328,000	
d. PCC drainage swale	1,200 LF	\$10	\$12,000	
e. Hangar construction	51,000 SF	\$30	\$1,530,000	
f. Security gate / fencing modifications	1 LS	\$14,000	<u>\$14,000</u>	
Total project			\$2,046,000	
4. Relocate wind speed instrument near northeast ramp	1 LS	\$5,000	\$5,000	2004
5. Install runway distance remaining signs for Runways 6 & 24	4 EA	\$7,000	\$28,000	2004
Subtotal Phase 1A			<u>\$2,749,000</u>	



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**Table 8-1 (Continued)
Schedule of Master Plan Improvements and Estimated Costs
Fullerton Municipal Airport [a]**

Phase 1B Improvements (2006-2008)				
6. Rehabilitate pavement at northeast ramp				2006
a. AC removal/ structural excavation	36,380 SF	\$1	\$36,000	
b. Paving / striping / tiedowns	36,380 SF	\$4	\$146,000	
Total project			\$182,000	
7. Construct 14 hangars to replace the 2 north-south rows of wooden T-hangars				2006-7
a. Building demolition	10,300 SF	\$14	\$144,000	
b. AC removal/ structural excavation	76,700 SF	\$1	\$77,000	
c. Utilities	100 LF	\$90	\$9,000	
d. Paving / striping	61,170 SF	\$4	\$245,000	
e. Hangar construction	25,830 SF	\$30	\$775,000	
Total project			\$1,250,000	
8. Acquire avigation easements for runway protection zone (RPZ) areas				2008
a. Runway 6	1 LS	\$58,000	\$58,000	
b. Runway 24	1 LS	\$38,000	\$38,000	
Total project			\$96,000	
9. Replace VASI on Runway 24 with PLASI/PAPI	1 LS	\$65,000	\$65,000	2008
Subtotal Phase 1B			\$1,593,000	
Phase 2 Improvements (2009-2013)				
10. Develop FBO/corporate site in northeast area				
a. AC removal/ structural excavation	33,860 SF	\$1	\$34,000	
b. Utilities	100 LF	\$120	\$12,000	
c. Hangar construction	8,060 SF	\$30	\$242,000	
d. Paving / striping	25,800 SF	\$4	\$103,000	
d. Fencing	1 LS	\$18,000	\$18,000	
Total project			\$409,000	



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**Table 8-1 (Continued)
Schedule of Master Plan Improvements and Estimated Costs
Fullerton Municipal Airport [a]**

11. Construct 14 hangars in Ray's Flying Club area			
a. Building demolition	2,920 SF	\$14	\$41,000
a. AC removal/ structural excavation	46,430 SF	\$1	\$46,000
c. Utilities	100 LF	\$90	\$9,000
d. Paving / striping	46,430 SF	\$4	\$186,000
e. Hangar construction	20,100 SF	\$30	\$603,000
Total project			\$885,000
12. Rehabilitate northside access road and provide turn-around area			
a. AC removal/ structural excavation	19,000 SF	\$1	\$19,000
b. Paving / striping	19,000 SF	\$5	\$95,000
c. Fencing	1 LS	\$14,000	\$14,000
Total project			\$128,000
13. Construct 22 hangars to replace the two east-west rows of wooden hangars and replace aircraft maintenance area			
a. Building demolition	23,150 SF	\$14	\$324,000
b. AC removal/ structural excavation	116,000 SF	\$1	\$116,000
c. Utilities	1 LS	\$73,000	\$73,000
d. Paving / striping	114,900 SF	\$4	\$460,000
e. Hangar construction	36,000 SF	\$30	\$1,080,000
f. Wash rack	1 EA	\$13,000	\$13,000
g. PCC Wash rack paving	1,600 SF	\$6	\$10,000
Total project			\$2,076,000
Subtotal Phase 2			\$3,498,000
Total Master Plan Improvements			
Total of all Master Plan improvements			\$7,840,000

[a] Estimated by P&D Consultants.

[b] SF = square feet; SY = square yards; LF = linear feet; AC = acres; EA = each; LS = lump sum..

[c] Includes 25 percent of base costs for design and construction management services and an allowance of 20 percent of base costs for contingencies.



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- Costs of new hangars on the north side are based on the following dimensions:
 - T-hangars: a clear door width of 41.5 feet, a clear door height of 12.0 feet, a depth of 33.0 feet, a wing depth of 21.0 feet, and a tail width of 21.0 feet.
 - Small rectangular hangars (7 in Phase 1A and 10 in Phase 2): a clear door width of 41.5 feet, a clear door height of 12.0 feet, and a depth of 33.0 feet.
 - Larger rectangular junior executive hangars (14 in Phase 1B and 12 in Phase 2): a clear door width of 44.5 feet, a clear door height of 14.0 feet, and a depth of 41.0 feet.
 - Corporate hangars are 65 feet by 62 feet.
- The mix of new hangars on the north side is the following.
 - Phase 1A: 30 T-hangars and 7 small rectangular hangars.
 - Phase 1B: 14 larger rectangular junior executive hangars.
 - Phase 2: 14 T-hangars, 12 larger rectangular junior executive hangars, 10 small rectangular hangars, and two corporate hangars.

FUNDING SOURCES

FAA Airport Improvement Program (AIP)

The FAA's Airport Improvement Program (AIP) provides funding for planning, construction, or rehabilitation at public airports. The AIP was established by the Airport and Airway Improvement Act of 1982. The AIP provides funding from the Airport and Airway Trust Fund for airport development, airport planning, noise compatibility planning, and carrying out noise compatibility programs.

The Trust Fund concept guarantees a stable funding source whereby users pay for the services they receive. Taxes or user fees are collected from the various segments of the aviation community and placed in the Trust Fund. These taxes include an 8 percent tax on airline tickets, a 5 percent tax on freight waybills, a \$3 international departure fee, a \$0.12 and \$0.14 per gallon tax on general aviation gasoline and jet fuel, respectively, and a \$0.05 and \$0.01 per pound tax on tires and tubes, respectively.

The Airport and Airway Improvement Act of 1982, as amended, authorized the use of monies from the Airport and Airway Trust Fund to make grants under the Airport Improvement Program. The following amounts are authorized for the AIP:



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Year	Authorization Amount (Billions of Dollars)
2001	3.2
2002	3.3
2003	3.4
2004	3.4

Reauthorization will be necessary for funding after 2004.

Under the Act, the authorization for funds not obligated in a fiscal year carries forward to future fiscal years unless the Congress takes specific action to limit such amounts. During the annual appropriations process, Congress may also limit the funding for grants to an amount that differs from the above authorization.

Projects eligible for AIP funding consist of: capital outlays for land acquisition; site preparation; construction, alteration, and repair of runways, taxiways, aircraft parking aprons, and roads within airport boundaries (except for access to areas providing revenue, such as parking lots and aviation industrial areas); construction and installation of lighting, utilities, navigational aids, and aviation-related weather reporting equipment and safety equipment required for certification of an airport facility; security equipment required of the sponsor by the Secretary of Transportation; limited terminal development at commercial service airports; and equipment to measure runway surface tension. Grants may not be made for the construction of hangars, automobile parking facilities, buildings not related to the safety of persons in the airport, landscaping or art work, or routine maintenance and repair. Technical advisory services are also provided.

The Airport Improvement Program provides a maximum federal share of 90 percent (95 percent for small hub and smaller airports through 2007) for all eligible projects at the airport. Because of the large number of projects competing for AIP funds, not all eligible projects can be funded.

General aviation airports may be publicly or privately-owned to receive AIP grants, but must be included in the National Plan of Integrated Airport Systems (NPIAS). There are presently 139 general aviation and 36 reliever airports in the State that are contained in the current NPIAS and which compete for the AIP funds. Although an average of \$150,000 in AIP grant funds was available for each general aviation airport in 2003 only a small number of reliever and general aviation airports actually received grants. Proposed grant projects must compete with all other projects in the State on the basis of need. The funds for AIP are distributed in accordance with provisions contained in the 1982 Act.

California Aid to Airports Program (CAAP)

The CAAP provides three types of grant funding: annual grants, acquisition and development grants (A&D), and a portion of the non-federal portion of FAA AIP grants (AIP Match).



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The annual grants are used to fund pre-approved, eligible projects and/or operations and maintenance of public-use general aviation airports (commercial service and reliever airports are not eligible). The funds are a fixed amount of \$10,000 annually and may be accrued for a maximum of five years with no matching requirements. Grants can be used for airport and aviation services such as fencing, lighting, navigation aids, land acquisition, parking and tie downs, noise monitoring, and obstruction/hazard removal. Funds can also be used for servicing of general obligation or revenue bonds issued to finance airport capital improvements and for operation and maintenance purposes. They may also be used as the local match for a federal grant.

Acquisition and development grants provide discretionary funds for airport projects included in the adopted State Transportation Improvement Program (STIP). The STIP is a five-year capital improvement program for which any publicly-owned, public-use airport may apply. Under the “true” five-year STIP, the funding period is the first year, and the remaining four years are “committed to” to the extent that funds are available. In prioritizing project submittals, the Division of Aeronautics uses the “STIP Project Evaluation Matrix” and an Airport Rating form.

Acquisition and development grants can be used to fund any capital improvements on an airport and for aviation purposes with runway maintenance projects receiving the highest priority for funding. Additionally, funds can be used for servicing general obligation or revenue bonds issued to finance airport capital improvements and for the local matching portions of federal Airport Improvement Program grants. Funds cannot be used for operations or maintenance. Grants range from \$10,000 to \$500,000.

Total acquisition and development grant funding was \$2.1 million in fiscal year 2000 for 13 grants (an average of \$161,500). The current estimates of acquisition and development grants are as follows:

Year	Grant Amount
2001	\$6.8 million
2002	\$2.2 million
2003	\$1.9 million
2004	\$1.3 million
2005	\$1.0 million

There are 173 general aviation (including reliever) airports in California competing for these funds. Therefore the average funding per airport is approximately \$11,000 in fiscal year 2003, decreasing to \$5,800 in fiscal year 2005. The State’s fiscal year ends on June 30 (as opposed to September 30 for the federal government).

The California Transportation Commission annually established a local matching requirement which ranges from 10 to 50 percent of the non-Federal funded portion of the project cost. Since 1977/78, recipients have provided a minimum match of 10 percent of eligible project costs for acquisition and development projects.



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A third type of grant became effective October 1, 1994 and relates to AIP projects funded after this date. As explained previously, FAA AIP grants will typically cover 90 percent of eligible project costs for general aviation airports, which prior to October 1, 1994 left 10 percent of the project costs to be borne by the airport sponsor. The new state grants will provide five percent of the FAA grant to be used as part of the sponsor's matching share. This translates into 4.5 percent of typical project costs, which reduces the sponsor's matching share to 5.5 percent. It is expected that a total of \$1.5 million will be available for these grants, and it is noted that with the introduction of this program the amount available for Acquisition and Development grants has been reduced. Since the total funds available from the State essentially is fixed, it was necessary to change the distribution among the different grant programs. The amount available for A&D grants was reduced to accommodate the new AIP match program.

In addition to grants-in-aid, the CAAP provides financial assistance in the form of low interest loans, repayable over a period not to exceed 25 years. Two types of loans are available: Revenue Generating Loans and Matching Funds loans. The interest rate for these loans is based on the most recent issue of State of California bonds sold prior to approval of the loan.

Funds from Revenue Generating Loans may be used for any projects not eligible for funding under other programs and which are designed to improve airport self-sufficiency. Loans of this type cannot be used for 'land banks,' automobile access roads, and auto parking facilities to accommodate airlines. The loan amounts are based upon an analysis of each individual application, after a public hearing is held, and subject to availability of funds. Matching Funds loans may be used for securing Federal AIP grants, and the loan amount equals the sponsor's share (5.5 percent) of project costs required to match a federal grant. Requests for Matching Funds loans are given highest priority. Total loan funding in fiscal year 2002 was \$2.56 million, and specific project funding ranged from \$25,000 to \$500,000. The budget for fiscal year 2003 is \$3.1 million; however, current State budget concerns would make it seem very unlikely that the full budgeted amount would be distributed.

Private Capital

Private funding is often available for certain airport improvements, including aircraft hangar construction. As per existing City policy, a private developer would be required to pay the City five percent of gross revenues, and at the end of the lease period the ownership of the hangars would revert to the City. This would make private development non-competitive with the region's market supply.

Airport Revenues and City Funds

In the past the airport has generated revenue through leases, administrative and miscellaneous (mainly special events, landing and tie down fees) sources. Although in previous years the airport has had net annual revenues averaging between \$20,000 and \$30,000, in recent years the airport has sustained losses in net revenues. As indicated previously, that could be reversed when the airport charges, which have not been increased in several years are adjusted to market rates. If the airport is



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sustaining net revenue and once again becomes a net revenue source for the City, the City can be used to fund some of the capital improvements.

PROJECT COST SHARES

Total public investment is estimated to be approximately \$7.9 million, in 2003 dollars, for all three phases of the planning period. There are no private investment items included in this plan.

Table 8-2 presents the capital budget, in which an analysis of the public investment construction costs in the three planning periods is provided. The table totals each year's expenditures in current (2003) dollars, and then calculates the approximate AIP, CAAP, and local funding requirements, also in current dollars. Federal assistance will be in the form of discretionary funds of the AIP and is estimated to cover 90 percent of eligible costs of the public investment. It is a reasonable expectation that federal participation will be no less than 90 percent for eligible projects.

State funds have been assumed to be a same as the recent past even though there are current budget concerns. It has been assumed the State's participation in eligible projects equals 4.5 percent of the FAA grant.

Total Federal, state and local government funding for capital improvements over all three phases of the Master Plan is estimated, in current dollars, to be:

- Federal AIP Funding - \$1.0 million
- State Funding - \$50,000
- City Funding - \$6.8 million

The majority of City funding, approximately \$6.7 million, is for hangar construction. These costs can be financed using hangar revenues to repay financing costs.

HISTORICAL REVENUES AND EXPENSES

Airport operating revenue and expense projections (2004 to 2023) have been prepared based on historical and budgeted data provided by the City of Fullerton. These projections should be regarded as planning estimates. Utilizing historical records to forecast operating revenues and expenses implies that past management practices will be applied in the future. Table 8-3 presents an historical breakdown of operating revenues and expenses over the past five years for the airport. The net results of the receipts and disbursements indicate the airport net revenue has varied from a low of an \$81,639 loss estimated for 2003 to a high of \$31,610 in FY2000. This range of net revenues equates to an average of a \$28,000 loss per year over the five-year period. Having below market rates and charges could have caused this. Rates and charges are analyzed later in this section.



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**Table 8-2
Estimated Costs and Funding Sources
Fullerton Municipal Airport**

Project	Estimated Cost	Federal Funding	State Funding	Local Funding
Phase 1A Improvements (2004-2005)				
1. Reconstruct pavement at northwest ramp	\$611,000	\$549,900	\$27,495	\$33,605
2. Construct 2 washracks on south side	\$85,000			\$85,000
3. Construct 38 hangars in northwest corner and area between Air Combat and Ray's	\$2,046,000			\$2,046,000
4. Relocate wind speed instrument near northeast ramp	\$5,000	\$4,500	\$225	\$275
5. Install runway distance remaining signs for Runways 6 & 24	\$28,000	\$25,200	\$1,260	\$1,540
Subtotal Phase 1A	\$2,775,000	\$579,600	\$28,980	\$2,166,420
Phase 1B Improvements (2006-2008)				
5. Rehabilitate pavement at northeast ramp	\$182,000	\$163,800	\$8,190	\$10,010
6. Construct 14 hangars to replace the 2 north-south rows of wooden T-hangars	\$1,250,000			\$1,250,000
7. Acquire avigation easements for runway protection zone (RPZ) areas	\$96,000	\$86,400	\$4,320	\$5,280
8. Replace VASI on Runway 24 with PLASI/PAPI	\$65,000	\$58,500	\$2,925	\$3,575
Subtotal Phase 1B	\$1,593,000	\$308,700	\$15,435	\$1,268,865
Phase 2 Improvements (2009-2013)				
9. Develop corporate site in northeast area	\$409,000			\$409,000
10. Construct 14 hangars in Ray's Flying Club area	\$885,000			\$885,000
11. Rehabilitate northside access road and provide turn-around area	\$128,000	\$115,200	\$5,760	\$7,040
12. Construct 22 hangars to replace the 2 east-west rows of wooden hangars and replace aircraft maintenance area	\$2,076,000			\$2,076,000
Subtotal Phase 2	\$3,498,000	\$115,200	\$5,760	\$3,377,040



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**Table 8-2 (Continued)
Estimated Costs and Funding Sources
Fullerton Municipal Airport**

Project	Estimated Cost	Federal Funding	State Funding	Local Funding
Phase 3 Improvements (2014-2023)				
No Master Plan projects identified for Phase 3				
Total Master Plan Improvements				
Total of all Master Plan improvements	\$7,866,000	\$1,003,500	\$50,175	\$6,812,325

**Table 8-3
Pro Forma Statement of Cash Receipts and Disbursements
Fullerton Municipal Airport, FY2000 to FY2004**

	FY 2000	FY 2001	FY 2002	FY 2003 ¹	FY 2004 ²
SOURCE OF FUNDS					
1. Rents	\$ 41,897	\$ 42,040	\$ 49,525	\$ 52,000	\$ 53,015
2. Fixed Base Operators	\$ 299,920	\$ 300,000	\$ 301,886	\$ 309,000	\$ 345,000
3. Hangar Rent	\$ 501,894	\$ 502,000	\$ 504,501	\$ 503,000	\$ 580,373
4. Tie-Downs	\$ 85,190	\$ 85,000	\$ 56,042	\$ 55,000	\$ 42,500
5. Visiting Aircraft Parking	\$ 4,035	\$ 2,500	\$ 1,415	\$ 2,500	\$ 2,500
6. Field Use Fees	\$ 3,550	\$ 3,000	\$ 980	\$ 1,000	\$ 1,000
7. General Concessions	\$ 2,190	\$ 2,000	\$ 1,538	\$ 1,500	\$ 1,500
8. Car Parking Fees	\$ 4,902	\$ 5,000	\$ 7,397	\$ 7,000	\$ 9,340
9. Miscellaneous	\$ 8,028	\$ 6,000	\$ 5,973	\$ 3,000	\$ 5,500
Total Operations Revenue	\$ 951,606	\$ 947,540	\$ 929,257	\$ 934,000	\$1,040,728
USE OF FUNDS					
<u>Operating Costs</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>
1. Salary and Benefits	\$ 290,206	\$ 286,180	\$ 284,355	\$ 341,820	\$ 383,180
2. Maintenance & support	\$ 632,695	\$ 626,750	\$ 699,679	\$ 670,819	\$ 693,620
3. Capital Outlay	\$ 5,531	\$ 3,000	\$ 17,599	\$ 3,000	\$ 4,500
Total Use of Funds	\$ 928,432	\$ 915,930	\$1,001,633	\$ 1,015,639	\$1,081,300
Ending Balance:	\$ 23,174	\$ 31,610	\$ (72,376)	\$ (81,639)	\$ (40,572)

¹Estimated

²Budgeted

Sources: CIC Research, Inc.; City of Fullerton, Fullerton Airport.



PROJECT REVENUES AND EXPENSES

A pro forma statement of cash receipts and disbursements was prepared for 2004 to 2023. The historical operating costs and revenues were first converted to 2003 dollars and then averaged, with significant outliers removed, in order to identify base year costs and revenue and trends in revenue/cost changes. The base year figures were projected over 20 years utilizing airport operation forecasts described in Section 4. FY2004 and FY2005 budgets prepared by the airport management were utilized for those years as they were available. The above-mentioned methodology was utilized for all revenues and operating costs. Since all revenues/costs are presented in terms of current (2003) dollars, no adjustment for inflation has been done. Any changes reflect changes in operations or trends in costs/revenues rather than inflation.

The land and building space available for lease by the City was assumed to remain the same throughout the forecast period.

The above-mentioned methodologies were utilized in preparing the projection of cash receipts and disbursements (2003 dollars) presented in Table 8-4. The pro forma statement identifies cost receipts derived from operations and federal, State and local funds. The cost disbursements include operating costs and the public's share of capital costs.

Estimated project cash receipts range from a low of \$1.3 million to a high of \$2.4 million. Revenue from airport rents leases are estimated to increase slightly (approximately 2% per annum), because rents are estimated to increase at a greater rate than inflation, as they have in the past. It is also assumed that hanger, tie-down and other fees and rates will be adjusted to compensate for inflation. The bulk of revenue will be derived from operating revenue, which totals roughly \$26.1 million over the 20-year forecast period, compared to roughly \$7.9 million in Federal, State and local funds.

In terms of cash disbursements, capital improvement costs are projected to total roughly \$7.9 million over the 20-year period. Operating costs are projected to total about \$23.5 million, which amounts to a total cost (capital and operating costs) of \$30.4 million over the next 20 years. In contrast to recent historical trends, and reflecting an increase in rates charged, and replacement of older, lower revenue wooden hangers with modern higher revenue hangers, net cash flows are projected to become positive in 2009 and remain positive for the remainder of the forecast period. Annual net cash flows are projected to average about \$124,000 throughout the 20-year period.

Federal, State and local funding sources will provide the needed funds for the identified capital improvements. One method for local funding could be municipal lease financing as that is available for hangar construction. In this method, the City would be able to finance up to \$10 million worth of equipment and projects without entering the secondary market, while reaping the rewards of lower interest payments available to tax-free municipal bonding.



**Table 8-4
Pro Forma Statement of Cash Receipts and Disbursements
For Airport Operation and Funding of the Capital Improvement Plan
Fullerton Municipal Airport
(2003 Dollars)**

	Fiscal Year									
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<u>SOURCE OF FUNDS</u>										
1. Rents	\$53,000	\$54,000	\$56,000	\$58,000	\$60,000	\$63,000	\$65,000	\$68,000	\$70,000	\$73,000
2. Fixed Base Operators	\$345,000	\$345,000	\$345,000	\$345,000	\$345,000	\$345,000	\$345,000	\$345,000	\$345,000	\$345,000
3. Hangar Rent	\$580,000	\$580,000	\$600,000	\$623,000	\$652,000	\$680,000	\$703,000	\$730,000	\$767,000	\$812,000
4. Tie-Downs	\$43,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
5. Visiting Aircraft Parking	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
6. Field Use Fees	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
7. General Concessions	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
8. Car Parking Fees	\$9,000	\$9,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$11,000	\$11,000	\$11,000
9. Miscellaneous	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$7,000	\$7,000	\$7,000
10. FAA Funds	\$550,000	\$30,000	\$0	\$164,000	\$0	\$145,000	\$0	\$0	\$115,000	\$0
11. State Funds	\$27,000	\$1,000	\$0	\$8,000	\$0	\$7,000	\$0	\$0	\$6,000	\$0
12. Local Funds	<u>\$801,000</u>	<u>\$684,000</u>	<u>\$682,000</u>	<u>\$635,000</u>	<u>\$625,000</u>	<u>\$9,000</u>	<u>\$409,000</u>	<u>\$885,000</u>	<u>\$7,000</u>	<u>\$1,038,000</u>
Total Sources of Funds:	\$2,420,000	\$1,765,000	\$1,755,000	\$1,905,000	\$1,754,000	\$1,321,000	\$1,594,000	\$2,102,000	\$1,384,000	\$2,342,000
<u>USE OF FUNDS</u>										
1. Capital Improvement Plan (Public Investment)	\$1,378,000	\$715,000	\$682,000	\$807,000	\$625,000	\$161,000	\$409,000	\$885,000	\$128,000	\$1,038,000
2. Salary and Benefits	\$383,000	\$397,000	\$405,000	\$414,000	\$423,000	\$433,000	\$442,000	\$452,000	\$462,000	\$472,000
3. Maintenance & Support	\$694,000	\$708,000	\$708,000	\$708,000	\$708,000	\$708,000	\$708,000	\$708,000	\$708,000	\$708,000
4. Operations	<u>\$5,000</u>	<u>\$5,000</u>	<u>\$5,000</u>	<u>\$5,000</u>	<u>\$5,000</u>	<u>\$5,000</u>	<u>\$5,000</u>	<u>\$5,000</u>	<u>\$5,000</u>	<u>\$5,000</u>
Total Use of Funds:	\$2,460,000	\$1,825,000	\$1,800,000	\$1,934,000	\$1,761,000	\$1,307,000	\$1,564,000	\$2,050,000	\$1,303,000	\$2,223,000
NET CASH FLOW FOR THE YEAR	-\$40,000	-\$60,000	-\$45,000	-\$29,000	-\$7,000	\$14,000	\$30,000	\$52,000	\$81,000	\$119,000
ENDING BALANCE	-\$40,000	-\$100,000	-\$145,000	-\$174,000	-\$181,000	-\$167,000	-\$137,000	-\$85,000	-\$4,000	\$115,000



Table 8-4 (Continued)
 Pro Forma Statement of Cash Receipts and Disbursements
 For Airport Operation and Funding of the Capital Improvement Plan
 Fullerton Municipal Airport
 (2003 Dollars)

	Fiscal Year									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
SOURCE OF FUNDS										
1. Rents	\$74,000	\$76,000	\$77,000	\$79,000	\$80,000	\$82,000	\$84,000	\$85,000	\$87,000	\$89,000
2. Fixed Base Operators	\$345,000	\$345,000	\$345,000	\$345,000	\$345,000	\$345,000	\$345,000	\$345,000	\$345,000	\$345,000
3. Hangar Rent	\$836,000	\$861,000	\$887,000	\$914,000	\$941,000	\$969,000	\$998,000	\$1,028,000	\$1,059,000	\$1,091,000
4. Tie-Downs	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
5. Visiting Aircraft Parking	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
6. Field Use Fees	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
7. General Concessions	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
8. Car Parking Fees	\$11,000	\$11,000	\$12,000	\$12,000	\$12,000	\$12,000	\$13,000	\$13,000	\$13,000	\$13,000
9. Miscellaneous	\$7,000	\$7,000	\$8,000	\$8,000	\$8,000	\$8,000	\$9,000	\$9,000	\$9,000	\$9,000
10. FAA Funds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11. State Funds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
12. Local Funds	\$1,038,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Sources of Funds:	\$2,367,000	\$1,356,000	\$1,385,000	\$1,414,000	\$1,442,000	\$1,472,000	\$1,505,000	\$1,536,000	\$1,569,000	\$1,603,000
USE OF FUNDS										
1. Capital Improvement Plan (Public Investment)	\$1,038,000									
2. Salary and Benefits	\$477,000	\$482,000	\$488,000	\$493,000	\$499,000	\$504,000	\$510,000	\$515,000	\$521,000	\$527,000
3. Maintenance & Support	\$708,000	\$708,000	\$708,000	\$708,000	\$708,000	\$708,000	\$708,000	\$708,000	\$708,000	\$708,000
4. Operations	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Total Use of Funds:	\$2,317,000	\$1,195,000	\$1,201,000	\$1,206,000	\$1,212,000	\$1,217,000	\$1,223,000	\$1,228,000	\$1,234,000	\$1,240,000
NET CASH FLOW FOR THE YEAR	\$50,000	\$161,000	\$184,000	\$208,000	\$230,000	\$255,000	\$282,000	\$308,000	\$335,000	\$363,000
ENDING BALANCE	\$165,000	\$326,000	\$510,000	\$718,000	\$948,000	\$1,203,000	\$1,485,000	\$1,793,000	\$2,128,000	\$2,491,000

Source: CIC Research, Inc



RATES AND CHARGES

A survey of other airports' fees was conducted to establish current market rates and charges for general aviation services. Eleven airports within a 25 nautical mile radius of Fullerton Municipal were surveyed. The results of this rates and charges survey are presented in Tables 8-5 and 8-6. The identified revenue sources include: hangar rents, tiedown fees, fuel flow fees, landing charges and tenant leases. From this survey, it was determined that Fullerton Airport had significantly lower charges in several categories since rates there have remained constant for several years.

Currently, hangar rents are \$205 for a wooden T-hangar (about \$.24 per sq. ft.), \$305 for a metal T-hangar hangar, \$412 for a 38 ft. by 30 ft. rectangular hangar, and \$700 for a 54 ft by 49 ft executive hangar.

It is recommended that hangar rents be increased immediately by approximately 15 percent to make them comparable to other hangar rents in the area. In addition, it is recommended that fuel flowage fees be increased from \$.04 a gallon to \$.06, and vehicle parking fees raised to \$25 per month from \$19 per month. The pro forma statement of cash receipts and disbursements in Table 8-4 is based on these new rates taking effect in 2003.

Annual rate increases tied to an inflation measure (such as the Consumer Price Index) should be incorporated into future financial planning. A rate survey could be done periodically (every four years or so) to ensure that the Fullerton Airport's charges are market rates.

ECONOMIC IMPACT OF FULLERTON MUNICIPAL AIRPORT

In this study an input-output model of the Orange County economy was used. Input/output analysis is a technique developed to analyze and quantify the economic interrelationships of the sectors that make up a region's economy. Furthermore, input-output models differentiate between external spending going to economic base industries (direct impacts), and then track the effects on local serving industries. These impacts on local serving industries are measured by their sales to the economic base industries (indirect impacts) and the sales of local industries that service household consumption (induced impacts). The term "input/output" refers to this interrelationship where the inputs of one industry (i.e., the purchases of materials and labor necessary to produce a good or service) must be purchased from the outputs of other industries (i.e., the sales of other industries and labor that are supplying the inputs).¹

The interdependence of businesses, agriculture, households, and institutions within Orange County is embodied in the requirements for production that each business, farm, household, or institution must have to survive and produce output.

¹ For a discussion see William H. Miernyk, *The Elements of Input-Output Analysis*, New York, Random House, 1965.



**Table 8-5
Comparison of Hangar Rates and Charges
For Several Southern California Airports**

	Long Beach			Compton / Woodley Airport			John Wayne		
	Description/ Dimensions/ Sq Ft.	Price Per Month	Price Per Sq Ft Monthly	Dimensions/Sq Ft.	Price Per Month	Price Per Sq Ft Monthly	Dimensions/Sq Ft.	Price Per Month	Price Per Sq Ft Monthly
T-Hangars	All Depends on Location		\$.85-\$.95	37.6 ft. wid. X 30.5 ft. deep ~\$900 sq. ft. 54 ft. wid. X 44.4 ft. deep ~\$1090 sq. ft.	\$249	\$0.28	40 ft wid. X 20 ft deep ~\$800 sq ft	\$193	\$0.24
Rectangle	All		\$0.95						

	El Monte			Brackett			Chino		
	Dimensions/Sq Ft.	Price Per Month	Price Per Sq Ft Monthly	Dimensions/Sq Ft.	Price Per Month	Price Per Sq Ft Monthly	Dimensions/Sq Ft.	Price Per Month	Price Per Sq Ft Monthly
T-Hangars	40 ft wid. X 29 ft deep ~865 sq ft	\$353	\$0.41	38 ft wid. X 31 ft deep ~765 sq ft	\$260.00	\$0.34	41 ft wid. X 20 ft deep ~976 sq ft	260	\$0.27
	42 ft wid. X 36 ft deep ~1057 sq ft	\$335	\$0.32	41 ft wid. X 32 ft deep ~1013 sq ft	\$380.00	\$0.38	Mini T ~450 sq ft	130	\$0.29
	53 ft wid. X 44 ft deep ~1654 sq ft	\$630	\$0.38				46 ft wid. X 22 ft deep ~1300 sq ft	380	\$0.29
							Full & Mini combined ~1600 sq ft	420	\$0.26
							42 ft wid. X 21 ft deep ~1050 sq ft	300	\$0.29
							Larger Mini-T ~600 sq ft	195	\$0.33
Rectangle	42 ft wid. X 36 ft deep ~1476 sq ft	\$551	\$0.37						

	Zamperini Airport		Ontario	Santa Monica Municipal
	Description	Price Per Sq Ft Monthly	No- T's	Hangars Individually Owned
T-Hangars	None Available	\$0.34		Ground Lease @\$105 per hangar site
Rectangle			\$0.80 to \$1.25 per sq ft	



**Table 8-6
Comparison of Tie-Down and Other Rates and Charges
For Several Southern California Airports**

	Long Beach	Compton / Woodley Airport	John Wayne	El Monte	Brackett
Outdoor Storage (Tiedown)					
Daily Range	\$5 to \$15	\$5 Single \$10 Twin	\$6 - \$16	\$5 Single \$10 Twin	\$5 Single \$10 Twin
Monthly Range	\$115 - \$125 Single \$125 & \$250 twin	\$71 Single \$131 Twin	\$140 to \$169 per month	\$60	\$72 Single \$110 Twin
Annual Range	No Discount	\$809 Single \$1493 Twin		\$684	\$864 Single \$1,320 Twin
Fuel Flow Fee					
Per Gallon of Fuel	\$.06 / gal	\$.15/gal	\$.06/gal	No FBO	Own Service/No Flow Fee
Per Gallon of Lubricant	\$.06 / gal	None	\$.10/gal	NA	
Landing Fees (Per 1,000 lbs)			NA		
Commercial Operations	No charge for small planes	No Charge		In negotiation	\$14
GA (over 12,500 lbs)	\$1.46 per thousand pounds	No Charge		No landing fees	\$17
FBO Monthly Fees					
Aviation Ground Lease (Average per Acre)	NA	NA	\$.68 to \$.81/s.f.		\$.04/s.f. on unimproved land
Office Space Lease (S.F.)	\$1.25 to \$2.50/s.f.	\$.70/s.f.	\$.66 to \$.78/s.f.	about \$1.19/s.f.	\$.34/s.f.
Aviation Space Lease (S.F.)	NA	\$.92/s.f.	NA	about \$1.09/s.f.	\$.07/s.f.

	Hawthorne	Chino	Zamperini Airport	Corona	Ontario	Santa Monica Municipal
Outdoor Storage (Tiedown)						
Daily Range	\$2.50 - \$5.00	\$5 Single \$8 Twin	\$7 Single \$15 Twin	\$3	\$30	\$7 Single \$10 Twin
Monthly Range	\$60	\$55	\$75	\$30 - \$50	\$100 to \$1,500	\$80 Single \$105 Twin
Annual Range	\$720	\$594	\$500	\$360 - \$600	NA	\$960 Single \$1,260 Twin
Fuel Flow Fee						
Per Gallon of Fuel	Northrop - 10.9% and Security - 6.5%	\$.065/gal	\$.05/gal	\$.02/gal	\$.03/gal	\$.06/gal
Per Gallon of Lubricant	No lubricant fees	NA		\$.05/gal	\$10% of gross	\$.15/gal
Landing Fees (Per 1,000 lbs)						
Commercial Operations	limited annual fee \$50 or \$7.50/landing	No Landing fees	No landing fees	None	No landing fees	No landing fees
GA (over 12,500 lbs)						
FBO Monthly Fees						
Aviation Ground Lease (Average per Acre)	NA	\$.15/s.f.	NA	\$.10/s.f.	provided by property concession dept. of airport	NA
Office Space Lease (S.F.)	\$.50/s.f.	\$.35/s.f.	NA	Don't lease bldg.	\$1.20/s.f. to \$1.27/s.f.	\$1.00/s.f.
Aviation Space Lease (S.F.)	NA	\$.20/s.f.	NA	\$.10/s.f.	NA	\$.60/s.f.



For example, businesses and farms require labor, electricity, water, transportation, finance, materials and supplies to produce goods and services. Households generally require food, water, gas, electricity, transportation, and shelter to produce labor. Institutions also require labor, basic utilities, transportation, finance, materials and supplies, to provide educational services, medical services, government, and public safety.

From the initial impact of spending, there is additional indirect economic activity generated as the effects of the spending circulate through the regional economy. The interdependence of businesses within the region generates indirect economic impacts. By identifying and measuring the inputs (purchases) of each sector of the economy, and by identifying and measuring the outputs (sales) of each sector of the economy, it is possible to build a model that simulates the interdependence of businesses and households in the local economy.

Further, with this regional input/output model it is possible to measure the total impact on the local economy of the visitor spending activity. These impacts are measured in terms of total regional sales, employment, and personal income (e.g., wage and salary income) generated directly and indirectly within the region. The input/output software used to develop Orange County Regional Economic Impact Model was *IMPLAN Pro*², a microcomputer program that aids the user in developing and analyzing regional input-output models.

To assist in a full understanding of the results of this economic analysis, it is helpful to define some terminology that is specific to input/output analysis. Key to this terminology is the differentiation between "direct" impacts, "indirect" impacts, "induced" impacts, and economic "multiplier" effects.

Input/Output Model Terminology

Direct Impacts refer to the initial sales resulting from the spending associated with the airport. In this study we have represented the direct impacts based on employment to those businesses located at the airport.

Indirect Impacts result from the increased sales between businesses that are generated from the initial direct impact. For example, an FBO might spend a portion of the money it receives for office supplies, utilities, facilities maintenance, accounting and attorney services, and finance, etc.

Induced Impacts refer to the increased purchases by Orange County households (generated by wages and salaries paid to residents). For example, persons employed at the airport make purchases in Orange County. In addition, a part of all the indirect sales to businesses is spent for labor. As a result there is an increase in total employment and wages within the region. A large

² *IMPLAN* Minnesota IMPLAN Group. St. Paul Minnesota, May 1998. *IMPLAN (Impact and Planning)*, 1993/U.S.D.A. Forest Service, 1992.



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portion of these wages and salaries are spent for goods and services in the local area, creating an induced increase in sales.

Multiplier Effects refer to the total of all direct, indirect, and induced impacts as the initial airport-related employment and spending ripples through the local economy. As a result, a \$100 increase in spending at the airport may yield a total impact of \$230 (direct, indirect, and induced) sales within Orange County. The ratio of the total impact to the direct impact ($\$230 \div \100) yields an economic multiplier of 2.3.

For the purposes of this study, indirect and induced impacts are referred to as indirect impacts. This makes the report a little less cumbersome for the reader. The total economic impact is then the sum of the direct and indirect impacts. All economic impacts are measured in terms of total regional sales, employment, and income (wages, salaries, and proprietors' earnings).

IMPLAN Input/Output Modeling Software

The *IMPLAN Pro* input/output modeling software uses data from the 528-industry U.S. input/output model and regional employment data by industry (economic sector) representing the various types of businesses that make up the local economy. The *IMPLAN Pro* model software enables the user to regionalize the U.S. input/output model to any area of the United States down to the county level, which is the smallest level for which reliable industry specific employment data is available. For the purposes of this study, a regional economic model of Orange County was constructed. To simplify the visitor economic impact analysis, the original 528 industries were aggregated to a 26-sector model for the Orange County economy. *IMPLAN Pro* software does this by aggregating sectors with similar characteristics and removing sectors that do not exist in the Orange County economy (e.g., coal mining). Table 8-7 presents data for the total Orange County economy as presented in the *IMPLAN Pro* model.

Impact of Fullerton Airport

Businesses at the Fullerton Airport were contacted to obtain employment information. Employment data was collected in-lieu of sales data, as most businesses are hesitant to give accurate sales information. Based on the information provided by the businesses at the airport, direct employment generated at the airport in 2003 was:

Air Transportation Services	125 employees
Restaurant	<u>8 employees</u>
Total	133 employees

Although there are economic impacts associated with all business activity, the most significant impacts for a region are generated from exports, those sources of revenue that come from outside of the county region. In order to determine how much of the businesses revenues were from exports (from sources outside of Orange County), the amount of employment attributed to



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outside of the region was estimated based on the proportion of business customers from outside of Orange County.

**Table 8-7
Orange County Economic Model Sectors, 2003**

Industry	Sales (\$millions)	Income (\$millions)	Jobs
Livestock & Livestock Products	\$6.2	\$3.5	175
Agriculture	\$1,053.1	\$721.9	27,061
Mining	\$1,178.4	\$528.9	2,602
Residential Construction	\$7,593.7	\$2,053.0	46,705
All Other Construction	\$8,683.4	\$4,567.4	76,045
Manufacturing Food & Kindred Products	\$2,427.1	\$716.6	9,016
Non-Durable Goods Manufacturing	\$2,747.6	\$875.4	24,802
Durable Goods Manufacturing	\$42,778.6	\$16,454.7	212,199
Other Transportation	\$2,813.2	\$1,498.3	28,525
Local Transportation	\$377.8	\$126.8	6,454
Air Transportation	\$726.2	\$376.9	6,958
Communications	\$6,050.1	\$3,119.3	19,314
Utilities	\$2,570.1	\$1,147.7	4,847
Wholesale Trade	\$17,343.3	\$9,556.4	117,543
Other Retail Trade	\$7,232.6	\$4,563.4	136,405
Food Stores	\$1,852.0	\$1,388.4	28,817
Automotive Dealers & Service Stations	\$2,474.2	\$1,475.6	24,351
Eating & Drinking	\$4,418.5	\$2,228.7	102,529
FIRE	\$45,551.8	\$27,608.9	192,663
Hotels and Lodging Places	\$1,618.8	\$910.9	24,109
Personal Services	\$2,334.9	\$1,229.6	46,772
Other Services	\$21,025.8	\$13,917.8	267,310
Business Services	\$16,316.0	\$9,647.9	240,470
Automobile Rental and Leasing	\$416.0	\$242.9	3,251
Amusement and Recreation Services, N.E.C.	\$1,466.1	\$858.6	42,460
Other State and Local Govt. Enterprises	\$1,060.0	\$493.5	4,205
Other Federal Government Enterprises	\$130.9	\$60.0	607
Federal Government - Military	\$238.0	\$238.0	6,048
Federal Government - Non-Military	\$458.9	\$458.9	7,319
State & Local Government - Education	\$3,492.3	\$3,492.3	83,908
State & Local Government - Non-Education	\$2,918.1	\$2,918.1	44,729
Totals	\$209,615.5	\$113,752.6	1,861,440



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The following numbers of employees are estimated to have been generated from outside of Orange County in 2003:

Air Transportation Services	25 employees
Restaurant	<u>2 employees</u>
Total	27 employees

Therefore, the total economic impact to the region (Orange County), including direct, indirect, and induced, from the Fullerton Municipal Airport in 2003 was:

Total jobs	180 employees
Total sales (\$Millions)	\$18.2
Total income (\$Millions)	\$ 9.6

