



Chapter Eight:

Financial Implementation Plan

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CHAPTER EIGHT: FINANCIAL IMPLEMENTATION PLAN

The purpose of the financial implementation plan is twofold: first it is required by the FAA to identify capital projects for the airport, when the projects are anticipated to occur, the amount of FAA Airport Improvement Program (AIP) grant funds expected, and the amount and sources of local share funding required; and secondly, to provide Renton Municipal Airport with an approach to financing the development program selected during the master planning process. Although comprehensive, the financial plan remains tentative in nature; changing demands, activity levels, cost inflation, and legislation can greatly change the optimal plan from one year to the next. Because of this, any financial implementation plan requires frequent re-examination and periodic adjustment as conditions warrant. It should be understood that this financial plan is provided as an overview of future local capital funding requirements, does not address maintenance projects, and is not intended to be an operating budget for the airport.

A financial analysis, such as the this one prepared for Renton Municipal Airport, is highly dependent upon historical financial data and aviation demand forecasts. Historical data used in this analysis is described throughout this chapter. The remaining sections present the preliminary estimates of probable capital costs associated with the airport development program, the forecast of airport expenses and probable revenues, and proposed program financing.

The remainder of this chapter is organized in the following manner:

- Methodology;
- Capital Improvement Program;
- Forecast of Expenses and Revenues;
- Financial Plan; and
- Recommendations.

8.1 METHODOLOGY

Determining the financial implications of the master plan capital improvement program begins with a description of the specific development items, and the assignment of each item to one of three development phases:

Phase I (Short-Range): FY 1997- FY 2001

Phase II (Mid-Range) : FY 2002- FY 2006; and

Phase III (Long-Range): FY 2007 - FY 2016.

The current costs of each capital improvement item was then estimated and totaled by development phase. Preliminary cost estimates were made by applying current unit costs for each of the various elements to the number of units described in the master plan. Federal, local, and private shares of all costs were then computed using a variety of assumptions.

Airport financial records, together with the property inventory, were examined to develop an historical picture of actual and potential revenue production. These revenues, then, using projected future year rates and charges, were forecast throughout the planning period. Toward the end of this chapter, projected revenues and expenses are compared with regard to the overall feasibility of the Capital Improvement Program.

Annual cash flows were prepared in order to assess the cumulative effects of forecast revenues, expenses, and capital development. Subsequently, the need for capital improvement financing was determined, followed by a review and recommendation of financing methods.

8.2 CAPITAL IMPROVEMENT PROGRAM

The land and planned facilities needed to meet forecast aviation demand were previously described in Chapter 4, Facility Requirements and graphically depicted on the Airport Layout Plan (ALP) shown in Chapter 7, Airport Development Plans.

The Capital Improvement Program (AIP) details both timing and cost for the three development phases. An overview of total probable costs for the 20 year planning period is provided in Exhibit 8-1, and a preliminary estimate of probable costs for each phase are identified on the following pages.

EXHIBIT 8-1: CAPITAL IMPROVEMENT COST OVERVIEW: 20 YEARS

	Federal Cost	Local Cost	Private Cost	Total Cost
PHASE 1 (1997-2002)				
1997	\$505,000	\$45,000	\$ 0	\$550,000
1998	\$151,875	\$696,875	\$ 0	\$848,750
1999	\$1,540,125	\$180,125	\$ 0	\$1,720,250
2000	\$ 0	\$ 0	\$ 0	\$ 0
2001	\$1,134,000	\$ 207,000	\$ 450,000	\$1,791,000
2002	\$ 1,212,750	\$ 134,750	\$ 0	\$ 1,347,500
SUBTOTAL	\$4,543,750	\$1,263,750	\$450,000	\$6,257,500
PHASE II (2003-2007)	\$585,000	\$227,000	\$ 0	\$812,000
PHASE III (2008 -2016)	\$2,565,000	\$653,000	\$ 0	\$3,218,000
20-YEAR CAPITAL IMPROVEMENTS	\$7,693,750	\$2,143,750	\$450,000	\$10,287,500

Each development item was estimated directly from the Airport Layout Plan using accepted engineering practice at a level of detail normally associated with project planning. Only aviation-related capital development is described; major repair and replacement programs associated with leasehold maintenance and improvement must be continually reviewed on a case by case basis with present and prospective tenants.

Renton Municipal Airport
Development Summary
(1997-2001)

1997

1. Runways and Taxiways
 - Reconstruct Southeast Taxiway and Dust Cover (350'x60')
 - Install D-Bright radar equipment for Control Tower (Facilities & Equipment Cost) *

1998

1. Seaplane Facilities Renovation
 - Conduct Environmental Assessment
2. Runways and Taxiways
 - Displace north threshold
 - Relocate north PAPI's
 - Install new REIL's
 - Install new air/ground pilot controlled lighting
 - Mark runway with 400' displaced threshold to Runway 15
3. Terminal Area Development
 - Acquire and locate temporary structure for US Customs
 - Parking Lot Repair
 - Fencing and Landscaping
4. Other
 - Construct aircraft washing facility
 - Rehabilitate pavement around City Hangar
 - Conduct Land Use Compatibility Study
 - Cedar River Dredging

1999

1. Runways and Taxiways
 - Reconstruct Taxiway Alpha
 - Mill out ruts & repave Runway 15-33 where Boeing aircraft cross runway
2. Other
 - Conduct Drainage Study for the airfield
3. Seaplane Facilities Renovation
 - Reconstruct seaplane dock area
 - Construct 3 new finger docks
 - Reconstruct seawall
 - Rehabilitate floating dock

2000 *No Projects*

* Funds for radar equipment come from Airways Facilities & Equipment Programs.

2001

1. Airfield Improvements
 - East Side
 - Recontour grassy areas
 - Relocate/adjust catch basins
 - Remove and realign taxiways to Runway 15-33
2. Other
 - Cedar River Maintenance
 - Construct aboveground fuel storage facility

2002

1. Runways and Taxiways
 - Rehabilitate south end of runway
 - Westside
 - Recontour grassy areas
 - Relocate/adjust catch basins
 - Remove and realign taxiways to Runway 15-33

**Renton Municipal Airport
Development Summary
(1997-2002)**

Year	Item	Private Cost	Local Cost	FAA Cost	Total
1997	Reconstruct SE Taxiway & Dust Covers	\$ 0	\$45,000	\$405,000	\$450,000
	Install D-bright Radar Equip.	\$ 0	\$ 0	\$100,000 *	\$100,000
1998	Conduct Land Use Compatibility Study	\$ 0	\$ 50,000	\$ 0	\$ 50,000
	Displace North Threshold - Relocate PAPI's - Install New REIL's - Install New Threshold Lights - Install Pilot Control Lighting - Mark Runway - Mark Surface Roadway	\$ 0	\$11,875	\$106,875	\$118,750
	Construct Aircraft Wash Facility	\$ 0	\$87,500	\$ 0	\$87,500
	Conduct EA for Seaplane Facilities	\$ 0	\$ 5,000	\$ 45,000	\$ 50,000
	Temporary Structure for US Customs	\$ 0	\$ 75,000	\$ 0	\$ 75,000
	Parking Lot Repair (2" Overlay)	\$ 0	\$ 25,000	\$ 0	\$ 25,000
	Ornamental Fencing and Landscaping	\$ 0	\$ 15,000	\$ 0	\$ 15,000
	Rehab. Pavement at City Hangar	\$ 0	\$ 62,500	\$ 0	\$62,500
	Cedar River Dredging	\$ 0	\$365,000	\$ 0	\$ 365,000
	1999	Reconstruct Taxiway Alpha	\$ 0	\$86,750	\$780,750
Reconstruct Seaplane Beaching Area		\$ 0	\$79,375	\$714,375	\$793,750
Mill/Ruts & Repave Rwy 15-33		\$ 0	\$ 9,000	\$ 0	\$ 9,000
Conduct Drainage Study		\$ 0	\$ 5,000	\$45,000	\$50,000
2001	East Side Drainage Improvements	\$ 0	\$126,000	\$1,134,000	\$1,260,000
	Cedar River Maintenance	\$ 0	\$ 81,000	\$ 0	\$ 81,000
	Construct Fuel Storage Facility	\$450,000	\$ 0	\$ 0	\$450,000
2002	Rehab. South End of Runway	\$ 0	\$ 8,750	\$78,750	\$87,500
	West Side Drainage Improvements	\$ 0	\$126,000	\$1,134,000	\$1,260,000
	TOTAL - PHASE 1	\$450,000	\$ 1,263,750	\$ 4,543,750	\$ 6,257,500

* Funds for radar equipment come from Airway Facilities and Equipment Program.

**Renton Municipal Airport
Development Summary**

**Phase Two
(2003-2007)**

1. Runways and Taxiways
 - Slurry Seal Runway 15-33
 - Slurry Seal Taxiways A & B
 - Slurry Seal Apron Areas

2. Other
 - Cedar River Maintenance

Renton Municipal Airport
Development Summary

Phase Two
(2003 -2007)

Item	Private Cost	Local Cost	FAA Cost	Total
Slurry Seal and Mark Pavements	\$ 0	\$65,000	\$585,000	\$650,000
Cedar River Maintenance	\$ 0	\$ 162,000	\$ 0	\$ 162,000
Total	\$ 0	\$ 227,000	\$ 585,000	\$ 812,000

**Renton Municipal Airport
Development Summary**

**Phase Three
(2007-2016)**

1. Runways and Taxiways
 - Apply 2" Nominal Overlays all Runway, Taxiway, and Apron Areas to Restore Crown and Grade
 - Apply Runway, Taxiway and Apron Markings

2. Terminal Area Development
 - Acquire use of Lessee Property (Restaurant)
 - Conduct Terminal Area Study
 - Remove temporary facility
 - Extend sanitary sewer line

3. Other
 - Cedar River Maintenance

**Renton Municipal Airport
Development Summary**

**Phase Three
(2008-2016)**

Item	Private Cost	Local Cost	FAA Cost	Total
Overlay Airport and Mark Pavements	\$ 0	\$278,750	\$2,508,750	\$2,787,500
Cedar River Maintenance	\$ 0	\$ 243,000	\$ 0	\$243,000
Conduct Terminal Area Study	\$ 0	\$6,250	\$56,250	\$62,500
Acquire use of Lessee Property	\$ 0	\$25,000	\$ 0	\$25,000
Extend Sanitary Sewers	\$ 0	\$100,000	\$ 0	\$100,000
Total	\$ 0	\$ 653,000	\$ 2,565,000	\$ 3,218,000

Construction/development units were calculated using accepted units and levels of detail. Unit costs for 1995 were then applied to produce total costs, by item. After subtotaling all costs, a 25 percent allowance for professional services fees and construction contingencies was added prior to developing the phase total cost.

The total projected cost was then allocated to local, private, and federal shares based on current eligibility criteria. In items that are eligible for federal funds, the federal government will generally pay 90 percent of project costs and the airport sponsor will pay the remaining ten percent. Items such as hangars facilities have been assumed to be financed by FBO's and other private sources. It is possible, however, that the Renton Municipal Airport could finance hangar construction and lease space to aircraft owners at a rate that is sufficient to amortize construction costs. A typical amortization period for hangars is 20-30 years.

8.3 EXPENSE AND REVENUE ANALYSIS

In order to determine the financial condition of Renton Municipal Airport and to assess the feasibility of implementing the capital improvement program previously developed, it is necessary to perform an airport financial analysis. This analysis will examine the historical airport operating expenses and revenues and project these annually through the year 2016. Expenses and revenues can then be compared, and any surpluses can be applied toward the capital development program. The analysis will also examine the current fee and lease structure to determine the possibility of re-negotiating contracts and/or leases in an attempt to maximize airport revenues.

8.3.1 Introduction

The purpose of the financial section is to analyze the Renton Municipal Airport's future budget by identifying the degree of financial resources needed to satisfy capital development and normal operating expenditures and revenues. An objective is to identify future levels of local subsidies necessary to supplement projected airport revenue sources. The financial analysis for the Renton Municipal Airport coincides with the requirements identified in the facility requirement section, and further outlines steps necessary to effectively implement the capital development program in an efficient and timely manner.

This financial plan examines the relationship between airport revenues and expenditures, funding sources, and airport lease rates and fees to arrive at revenues to be applied towards capital expenditures identified in the airport development program. Financial summary tables used to calculate the following financial information are attached at the end of this chapter.

8.3.2 Financial Approach

The financial approach is based on the development of a multi-year capital development program and an assessment of historic and projected annual revenues and expenses. The financial plan describes methods to expand and improve airport facilities and maintain a financial condition that complies with city regulations and the Federal Aviation Administration. The financial analysis has been assembled in the following sections:

- ◆ Funding Sources and Options
- ◆ Airport Capital Development Costs
- ◆ Existing Structure of Airport Rates and Charges
- ◆ Projected Airport Revenues and Expenses
- ◆ Summary of Financial Plan
- ◆ Economic Impacts and Transportation Benefits of Renton Municipal Airport.

8.3.3 Funding Sources and Options

A combination of federal airport grants, user charges, and local funds will be used at the Renton Municipal Airport over the 20-year planning period to implement the proposed airport development plan. The primary source of airport funds will be provided by FAA Airport Improvement Program (AIP) grants. The following section describes the primary source of these funds and their contribution to the airport development plan.

8.3.4 Federal Aviation Administration Funding

The Airport and Airway Improvement Act of 1982, as amended, provides the authority to grant monies for specific airport planning and development projects at the Renton Municipal Airport. This Act, and its reauthorizations, currently enables the FAA to distribute discretionary and entitlement AIP funds for eligible airport projects throughout the planning period. AIP monies are collected from aviation-user supported taxes (airline passenger tax, aircraft fuel and part sales) and deposited in the Airport and Airways Trust Fund, with none of the AIP money originating from general tax collection.

As a reliever airport, a majority of the projects identified in the Renton Municipal Airport capital development plan are eligible for AIP funds. AIP reliever set aside grants will be required for a substantial portion of the airport capital development costs; therefore, it is assumed a program similar to the AIP will be in place throughout the planning period.

Exhibit 8.2 summarizes the total eligible FAA funds estimated to be distributed for the Renton Municipal Airport development program for each planning phase. FAA funding for the airport has been estimated at 90% of AIP eligible project costs.

EXHIBIT 8.2 Total Projected FAA Grants For Implementing The Capital Development Program Renton Municipal Airport			
FAA Eligible Grants	Phase I AIP Project Costs	Phase II AIP Project Costs	Phase III AIP Project Costs
Total FAA Funds	\$4,543,750	\$585,000	\$2,565,000

Note : Estimated projects costs are based on the 1995 Airport Master Plan Cost Requirements, and are presented in 1995 dollar amounts for all planning periods.

Source: Bucher, Willis & Ratliff, Estimates AIP Funds; August, 1996.

8.3.5 Local Funding

Local funding provides for operating and maintenance expenses and capital airport development costs. The Renton Municipal Airport financial plan assumes that local funds will continue to be used for temporary financing of certain capital development projects. Local funds normally assume ten percent of eligible project costs.

Historic revenues and expenditures information was provided by the City and reviewed for the past three years. Over this period, the airport has operated with an average net airport operating income (revenues minus expenditures) of approximately \$365,000. It should be noted that all revenues collected by the airport must be utilized for capital or operating expenses that benefit the airport.

Exhibit 8.3 summarizes the total local funds estimated by phase during the planning period for the Renton Municipal Airport.

EXHIBIT 8.3 Total Projected Local Funds For Implementing the Capital Development Program Renton Municipal Airport			
Estimated Project Cost	Phase I Project Costs	Phase II Project Costs	Phase III Project Costs
Total Local Funds	\$1,263,750	\$227,000	\$653,000

Note: Estimated projects costs are based on the Airport Master Plan Cost Requirements, and are presented in 1995 dollars for all planning periods.

Source: Bucher, Willis & Ratliff, Estimated Local Funds; August, 1996.

The following describes the different types of funding mechanisms available to publicly-owned airports. At Renton, because of the amount of leased property, these funding options should not be necessary.

General Obligation (GO) Bonds: General obligation bonds are a debt financing method by which airport funds are generated through the issuance of bonds, backed by the full faith and credit and taxing-power of the issuing governmental agency and community. This type of bond is generally used only for major construction or capital improvement projects and normally offsets the required costs not collected through general purpose tax revenues. The bonds are guaranteed and serviced out of general resources (based tax receipts and other revenue) of the issuing entity and not necessarily from the airport-generated revenues. With the phasing of improvements over a twenty-year planning horizon, and with the continuation of the Federal and State programs, the local share required for any one improvement project has been minimized so that the use of general obligation bonds may not be required.

Revenue Bonds: Revenue bonds are a debt financing method in which airport development is financed by revenue generated by users of the airport. The issuance of revenue bonds for smaller commercial service/general aviation airports is generally not recommended due to the limited types and amounts of available revenue derived from the airport activity to retire such bonds in a timely and secure manner.

Fixed Based Operator (FBO) Revenues: Facilities are currently leased to the FBO's for normal operation of aircraft services. To provide a more favorable financing condition, many airport sponsors arrange airport agreements for the FBO to provide services in lieu of payment.

Bank Loans: Bank loans are considered a short-term financing instrument typically used for projects other than major capital improvements. Construction of hangars and some of the lower cost improvements can be financed with bank loans. The major disadvantage to this method is higher interest rates associated with bank loans versus other debt financing for short-term instruments.

City Funds: Depending upon the situations, city airports often compete with other city services (highways and streets, public works, health, utilities, parks and recreation, etc.) for general obligation and revenue funds. However, unlike some city services, airports have several means of generating self-sufficient revenue through various types of commercial and private lease agreements, sales and services.

Other Aviation-Related Revenue Sources: From a recent survey, the following additional sources of revenue and financial assistance have historically been employed, and are potential sources for local airport improvement funds. The funds may be generated through both public agencies in the form of donations, grants, leases or other means. Many of these sources are not applicable funding sources for *major* capital improvements, but may become useful during future construction phases.

- ◆ Regional Funds
- ◆ Industrial Revenue Bonds
- ◆ Non-Profit Authorizations
- ◆ Business License Tax
- ◆ Investment of Residual Funds

8.3.6 Private Financing

Private financing of airport improvements is becoming a more popular means of financing fixed-cost expenses in recent years. There are varying degrees of private sectors methods used to finance airport development. The most common include the construction of hangars and most types of terminal area improvements.

Phase I costs include several items which are not eligible for federal or state grants, but which can be financed by revenues generated by private lease agreements. Another option is to allow construction of hangars using private financing (individuals, partnerships, etc.), then apply an airport ground lease for hangar property based on a revolving-lease agreement. However, federal funding assurances for public airports sometimes stipulate that ownership of the hangars reverts back to the airport sponsor after a reasonable time period.

As is often the case with aircraft hangars, financing fees are used to repay the airport for interest and amortization of the initial investment. As such, facilities and equipment are used by tenants but financed by the airport. Often, this covers an overhead cost associated with the airport's operating budget.

8.3.7 Existing and Future Structure of Airport Rates and Charges

Rates and charges at the Renton Municipal Airport have been adjusted on the basis of the most recent budget and appropriations level. This study does not consider whether the rates and charges were reasonable, but rather used the most recent budget as a baseline to project all future expenditures and revenues. The following describes the major operating revenue-producing sources for the Renton Municipal Airport.

8.3.8 FBO Rates and Charges

There are 3 FBO's providing routine aircraft services at the Renton Municipal Airport. The airport collects a fuel flowage fee from the FBO at \$0.02 per gallon in 1996. The fuel flowage fee averages around \$6,000 per year. The amount collected from the fuel flowage fee is anticipated to increase during the planning period with the projected growth of general aviation.

8.3.9 Airport Ground Leases

Boeing leases approximately 30 acres of airport property, and other smaller tenants lease 24 acres of ground. The current commercial leases generate approximately \$600,000 per year. A T-hangar and conventional hangars are all on ground leases.

Exhibit 8.4 summarizes the distribution of local revenue in five year increments for the Renton Municipal Airport for the years 1996 through 2016.

EXHIBIT 8.4 Local Airport Operating Revenues By Major Category Renton Municipal Airport					
Major Airport Revenue Sources	Current Percent of Total Revenues	1996 Amount(\$)	2001 Amount(\$)	2006 Amount(\$)	2016 Amount(\$)
Fuel/Water/Plans	.4%	\$3,500	\$7,649	\$8,867	\$11,917
Interest	9.5%	\$75,000	\$74,402	\$100,860	\$116,243
Miscellaneous	13.6%	\$107,797	\$0	\$0	\$0
Ground Leases	76.5%	\$604,000	\$667,807	\$737,134	\$943,594

Note: Estimated projects costs are based on the Airport Master Plan Cost Requirements, and are presented in 1996 dollars for all planning periods. The percent of total revenues is based on the last available existing year of budget information.

Source: Bucher, Willis & Ratliff, Major Revenue Producers, August, 1996.

8.3.10 Airport Capital Development Costs

The airport capital development projects identified in the Cost Section for the years 1997 through 2016 are essential for the physical maintenance and upgrade of the airport. The airport development costs span the entire 20-year planning period, and have been distributed according to an increasing scale which is proportional to the demand placed on the facility.

The estimate of development costs throughout the planning period are in 1996 dollars, and the development plan is segmented into three separate phases (Phase I, II and III).

Total capital development costs for Phases I, II, III are estimated to be \$10,287,500. The estimated total local-only development cost for permanent airport financing is \$2,143,750. It should be noted that federal grants are not eligible for projects associated with the construction, alteration, or repair of the following: 1) public parking facilities for passenger automobiles; 2) hangars; 3) taxilanes; or 4) revenue producing public-use areas of the airport terminal building.

8.3.11 Projected Airport Revenues

The projection of airport operating and maintenance revenues determines to what extent money becomes available to implement certain capital development projects which are not contingent upon FAA grants. Development of these projects will require substantial capital investment beyond what is required for day-to-day operations of the airport. Revenues are assessed with the understanding that they supplement FAA grants, airport development. Revenue projections for fiscal years 1997 through 2016 are based on historical funding and finance trends, the nature of various use agreements, the anticipated impacts of inflation, facility improvements and expansions, aviation traffic increases, known changes in the market place, and when appropriate, recent comparisons with similar airport projects.

FAA Order 5100.3A, Airport Improvement Program (AIP) Handbook states that airport sponsors must provide assurances that "all revenue generated by their public-owned airport will be expended for the capital or operating costs of the airport, the local airport system, or other local facilities which are owned or operated by the sponsor and directly and substantially related to the actual air transportation of passengers or property."

An airport that has a policy to be self-sufficient is recommended to structure its fees and rates directly around the user; whereas, in a subsidized operation, the taxpayer would assume greater costs. In instances of partial subsidy, users and taxpayers divide the costs as appropriate to the short and long-term needs of the airport. Most sponsors, in effect, tend to subsidize airport expenditures and expenses because of the direct and indirect transportation and economic value of the airport to the area. At Renton Municipal Airport, with reasonable baseline fees and adjusting the user rates accordingly, the airport will continue to achieve a more positive financial position for the City without subsidy.

The following sections discuss the areas of revenue potential for the airport. The best way to accomplish this is through *reasonable* user fees which furnish steady airport revenues, but not excessive to the financial capabilities of those providing airport services.

Exhibit 8.5 lists revenue adjustment assumptions used in projecting current revenues at the Renton Municipal Airport over the 20-year planning period, in addition to comments which explain adjustments associated with the timing and duration of the capital airport development program projects.

EXHIBIT 8.5 Projected Revenue Adjustment Assumptions Renton Municipal Airport		
Factor	Annual Adjustment	Comments
FAA Grants	0%	Per Project
Fuel Fee	2%	Inflation only
Interest	3.5%	Simple compounding interest
Airport Leases	2.5%	Adjusts in certain years depending on lease

Source: Bucher, Willis & Ratliff, Revenue Adjustment Assumptions; August, 1996.

8.3.12 Projection of Total Airport Revenues

Total locally generated airport revenues grow from about \$670,000 to \$1,020,000 during the 20-year planning period. These revenues shown do not include FAA grants, but rather revenues generated by the airport only. Total airport revenues will fluctuate depending on the amount of FAA funds for any given year. The projection of total revenues is provided in the financial program tables following this section. If the Renton Municipal Airport develops as planned, with good management, revenues will be available for capital improvements.

8.3.13 Projection of Airport Leases/Rates

Areas on the airport which are not specifically required for aeronautical purposes should be utilized to generate operating revenues. Lease rates for aeronautical purposes are currently tied to the assessed property value of the structure at the airport. This rate has been as low as 11¢ per square foot and as high as 30¢. The fluctuation in the rate is difficult to predict because of depreciation and changing assessed rates.

8.3.14 Projected Airport Expenses

The expenses for fiscal year 1996 are based on the approved airport budget. The projection of expenditures for fiscal years ending 1997 through 2016 are based on a review of historical trends, the anticipated impacts of inflation, facility improvements and expansions, aviation traffic increases, and recent comparisons with similar airport projects. Normally, the number of based aircraft and level of activity is a reliable, and direct, indicator of operating expense levels.

Historic and projected annual operating expenses were prepared over the forecast period. The expenditures are based on the forecast facility requirement parameters previously listed, which contain the cost and schedule for the airport development program. The major operating expenses include those associated with airport operations, maintenance and administration.

Exhibit 8.6 lists the percent adjustment of operations and maintenance expenses used in projecting future expenses over the planning period, in addition to comments which explain adjustments and timing relevant to the airport capital development program. Expenses have been adjusted from 1996 dollars by the assumed per year inflation rate.

EXHIBIT 8.6 Expense and Expenditure Assumptions Renton Municipal Airport		
Factor	Annual Adjustment	Comments
Salary and Wages	3.0%	Beginning in 1997.
Employee Benefits	5.0%	Beginning in 1997. Retainment of all existing airport administrative and operations employees. No additional airport employees or staffing requirements during planning period.
Utilities	3.0%	Expenses are anticipated to increase proportionally.
Remodeling/Maintenance	3.0%	Beginning in 1997
Insurance/Bonds	4.0%	Beginning in 1997
Contracting Services	3.0%	Beginning in 1997
Administrative Fees	3.0%	Beginning in 1997
Vehicle/Equipment	3.0%	Beginning in 1997
Building/Structure Maintenance	5.0%	Many structures are in need of repair and maintenance in upcoming years.
Other	3.0%	Beginning in 1997

Source: Bucher, Willis & Ratliff, Airport Expense and Expenditure Assumptions; August, 1996.

8.4 NET OPERATING RATIO

Exhibit 8.7 depicts the summary and net operating ratio of projected operating revenues versus estimated operating expenses for the Renton Municipal Airport throughout the planning period. The net operating ratio simply means that in 2001 for every dollar coming in there is \$ 1.05 going out. In most cases, cities have subsidized airport operations when revenues have not been sufficient to cover operating expenses and minor capital outlays. At Renton under the present financial structure and methodology, this practice will not occur. FAA encourages airports to be financially secure as possible and states in airport sponsor assurances that "the facilities and services being provided to airport users should make the airport as self-sustaining as possible." However, based on the proposed CIP and projected revenues and expenses nearly all capital reserves will be depleted by 2016. The financial program table is shown at the end of this chapter.

EXHIBIT 8.7				
Summary - Net Operating Ratio				
Renton Municipal Airport				
Year	Projected Total Airport Revenues *	Projected Total Airport Operating and Maintenance Expenses	Surplus (Deficit)	Net Operating Ratio
Existing	\$805,516	\$ 804,426	\$1,090	.99
2001	\$1,840,042	\$1,932,524	\$(92,481)	1.05
2006	\$1,341,819	\$1,350,344	\$(8,525)	1.01
2011	\$3,337,876	\$3,617,987	\$(280,110)	1.08
2016	\$ 971,080	\$1,254,941	\$(283,861)	1.29

Note: The net operating ratio equals airport operating and maintenance expenses divided by total airport revenues.

* Includes FAA Grants

Source: Bucher, Willis & Ratliff, Net Operating Ratio, August, 1996.

8.5 IMPLEMENTATION

If the development program is implemented as scheduled, the net operating ratio for the Renton Municipal Airport is expected to decline over the planning period, primarily due to an increase of expenditures related to employee salary and benefits.

The future AIP funding levels experienced in previous years is expected to decline at least 25 percent during the next several years. AIP entitlement and discretionary grant amounts have not been adjusted for inflation. The grants have been calculated to match AIP eligible projects throughout the planning period at 90 percent of project cost.

8.6 ECONOMIC IMPACTS AND BENEFITS

Transportation plays a key role in the development of communities. The quality and availability of alternative modes of transportation between places directly affect their ability to compete for economic opportunities. Accessibility is one of the single most important variables affecting community growth and its economic vitality. Aviation is an important element in the overall transportation network.

To assess the importance of an airport, consideration must be given to the positive impacts that an airport has on its area of influence. Quantitative evidence can be cited and includes the direct impacts on employment and economic development.

Industrial development at Renton Municipal Airport is unlike most airport because of the level of economic impact of the Boeing Company has upon the region. If taken as a whole, Boeing's impact would far distort the airport's economic impact. Even though Boeing manufactures the 737 and 757 at Renton the majority of jobs are not dependant on the airport. As shown in section 1.7.1, approximately 283 jobs relate directly to pre-flight activities which are necessary to make the first flight (B-1) possible. These jobs do relate directly to the airport because they involve pre-flight activities. But in order to show the importance of the airport beyond Boeing's impact, this economic analysis will study only the impacts as they relate to FBO's, seaplane operations, individual aircraft ownership and any direct employment at the airport. This shows the benefits of small business owners and individuals at the airport to the City of Renton.

These benefits can be quantified using studies conducted by the Federal Aviation Administration; specifically, DOT/FAA Report ADA 257-658 "Estimating the Regional Economic Significance of Airports".

8.6.1 Economic Impacts

In economic impact terms, people add value to the community—either directly, indirectly, or induced through the ripple effect. Firms which do business through the airports generate economic impact in much the same way people do—they spend money. Whether large or small, an airport serves as a base for employment, a purchaser of goods and services, an inducement to industrial development, and an important link in connecting the community with the national transportation system.

Economic impacts are the regional economic activities such as employment and wealth that can be attributed directly or indirectly to the operation of the local airport. To make an informed decision concerning airport development and community priorities the economic impact of the airport must be examined.

The *direct impact* of airports is created by the flow of dollars of the providers of aviation services. These providers include airport management, fixed base operators, aerial spray operators, the corporate aviation operators, the Federal Aviation Administration, rental car agencies, flying clubs, restaurants, and other miscellaneous suppliers of aviation services at the airport.

The *indirect impacts* are the value of economic activities that occur off-site, but are attributable to the airport. These activities include service provided by travel agencies, hotels, restaurants, and retail establishments that serve both the business traveler and recreational traveler alike. Another example is a person who uses his own plane instead of taking a commercial flight for a business trip. An adequate airport expands sales areas of local companies, thereby allowing salesmen to cover larger territories.

Finally, other *induced impacts* result by applying the appropriate multipliers to direct and indirect values. For example, as the general aviation mechanic spends his paycheck, it gets distributed through the community and causes a "multiplier" effect. It is estimated that normally one dollar turns over anywhere from one to three times in the economy.

Total impacts are the sum of the direct, indirect, and induced impacts.

8.6.2 Renton Municipal Airport

Renton Municipal Airport contributes many direct economic impacts to the local economy which total approximately \$2,821,000. These direct impacts include employee payroll, income from the fuel flowage fee and income from leases at the airport.

Indirect impacts at Renton could vary widely depending on the amount of passengers using the airport and spending new dollars in the community. It is difficult to determine the amount of indirect impact because it is difficult to quantify the amount of passengers actually utilizing the airport. In part it is due to the seaplane operators not disclosing the amount of passengers and in part due to the difficulty to accurately determine the amount of business travelers using Renton. Seaplane passengers have been reasonably estimated and the result of these forecasts are contained in section 2.3.11 of this report. For this study indirect impacts use seaplane passengers only because there is proven market for this activity at Renton Municipal Airport.

It can be assumed that Renton does generate a good deal of business related travel based upon approximately 43 percent of operations are itinerant, air taxi services, rental car availability, shuttles to hotels, cab/limo services are available on a regular basis. Also, while the majority of aircraft owners at Renton Municipal Airport that returned surveys indicate that recreational flying is most prevalent, 30 percent use their aircraft for business purposes. These are all strong indicators of indirect economic impact. These indicators do reveal that business travel does occur at Renton. It would be very difficult to accurately assess this impact; therefore, a low indirect impact was included in this study.

Induced impacts are the amount of dollars turning over in the community from the amount of direct and indirect impacts. This includes the take home pay of airport employees being spent locally which goes to local business and becomes income to the business owners and their employees. As successive round of spending occur, additional income is created.

Based on these figures currently, the total *economic impact* of airport activity could be as high as \$4,981,500. Figure 8-1 shows the process for the economic impacts of each category.

To summarize, an airport's economic impact can be expected to change over time as airport activity changes. With continued growth and investment, (Private and Public) by the year 2015, this figure could increase significantly. There is no doubt that Renton Municipal Airport is a valuable and source of economic development from the Boeing Company to the many small businesses at the airport. It is important that the public and their representatives appreciate the economic significance of airports if they are to understand their value and continue to support them.

Figure 8-1

AIRPORT ECONOMIC IMPACT ANALYSIS	
DIRECT ECONOMIC IMPACT	
Item/Description	Annual Impact (1996)
Renton Municipal Airport Employee Salaries (4)	\$150,000
FAA - ATCT Employee Salaries (7)	\$280,000
FBO/Aviation Services Full-Time Employee Salaries (48)	\$1,198,080
FBO/Aviation Services Part-Time Employee Salaries (50)	\$416,000
FBO/Aviation Services Seasonal Employee Salaries (12)	\$49,920
Fuel Flowage Fee	\$7,000
Airport Leases	\$720,000
Total Direct Economic Impact (Sum of All Direct Impact Items Listed Above)	\$2,821,000
INDIRECT ECONOMIC IMPACT	
Item/Description	Value
Based Aircraft	250
Population of Renton (1990 Census)	41,688
Total Airport Operations	113,875
Percent Itinerant Operations	43%
Average Passengers per Aircraft	2.5
Total AP - Arriving Passengers (Tourists)	10,000
Ratio of Estimated Number of Visitors (0.3 to 0.7)	0.5
Estimated Number of Visitors (0.3 to 0.7) * AP	5,000
AP/Population of Region	0.12
Expenditure per Visitor (Table 3-1)	\$50
Total Indirect Economic Impact (Estimated Number of Visitors * Expenditure Per Visitor)	\$500,000
INDUCED ECONOMIC IMPACT	
Item/Description	Value
Airport Multiplier (Based on population of region) => Population is less than 100,000	0.5
Induced Impact Based on Direct Impacts	\$1,410,500
Induced Impact Based on Indirect Impacts	\$250,000
Total Induced Economic Impact	\$1,660,500
TOTAL ECONOMIC IMPACT	
Item/Description	Value
Total Direct Economic Impact	\$2,821,000
Total Indirect Economic Impact	\$500,000
Total Induced Economic Impact	\$1,660,500
Total Economic Impact	\$4,981,500

