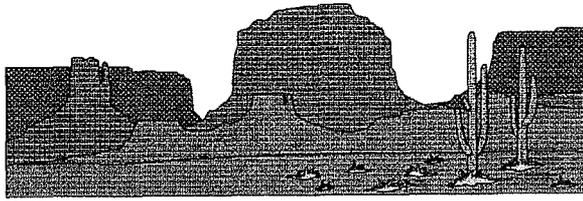


ESTIMATES OF DEVELOPMENT COSTS



DOUGLAS MUNICIPAL AIRPORT MASTER PLAN

CHAPTER IX: ESTIMATES OF DEVELOPMENT COSTS

9.0 INTRODUCTION

Future development at Douglas Municipal Airport as foreseen by this study covers a twenty year period. Development items are grouped into three phases. Phase I is short-term (0 - 5 years), Phase II is intermediate-term (5 - 10 years), and Phase III is long-term (10 - 20 years). Preliminary cost estimates are included for each item in the Capital Improvement Program and are based on the recommended facility requirements discussed in Chapter V. The phasing of projects assists the airport sponsor in budgetary planning for construction improvements which are needed to provide safe and functional facilities for aviation demands. Phased development schedules also assist the airport sponsor in contingencies and construction. The following tables assume that the State of Arizona will provide approximately 90.0 percent of the funding for eligible projects (up to \$500,000 per project) at Douglas Municipal Airport. Local funding must provide the remaining 10.0 percent or more of the total cost. Tables IX-1, IX-2 and IX-3 provide a summary which lists the phased development and projects for each phase. Table IX-4 provides a brief justification for each project along with the year of proposed completion.

**TABLE IX-1
PRELIMINARY ENGINEER'S COST ESTIMATES - (0 TO 5 YEARS)
DOUGLAS MUNICIPAL AIRPORT**

ITEM	TOTAL COSTS	STATE SHARE	SPONSOR SHARE
Apron access for T-hangars and utility extensions	\$515,000	\$463,500	\$51,500
Widen Runway 3/21 - Phase I	\$510,000	\$459,000	\$51,000
Widen Runway 3/21 - Phase II	\$465,000	\$418,500	\$46,500
Overlay Runway 3/21	\$425,000	\$382,500	\$42,500
Extend parallel taxiway	\$420,000	\$378,000	\$42,000
TOTAL PROJECT COSTS (0 - 5 years)	\$2,335,000	\$2,101,500	\$233,500

**TABLE IX-2
PRELIMINARY ENGINEER'S COST ESTIMATES - (6 TO 10 YEARS)
DOUGLAS MUNICIPAL AIRPORT**

ITEM	TOTAL COSTS	STATE SHARE	SPONSOR SHARE
Install ASOS; Light and mark "D" Hill and border patrol tower	\$117,000	\$105,300	\$11,700
Acquire avigation easements for Runway 3/21's RPZ's (Approximately 12 acres)	\$12,000	\$10,800	\$1,200
Relocate city street and relocate fencing outside of ROFA	\$162,000	\$145,800	\$16,200
Environmental Assessment for crosswind Runway 13/31	\$35,000	\$31,500	\$3,500
Acquire land for Runway 3/21 extension (approximately 10 acres) and Runway 13/31 (Approximately 100 acres)	\$110,000	\$99,000	\$11,000
TOTAL PROJECT COSTS (6 - 10 years)	\$436,000	\$392,400	\$43,600

**TABLE IX-3
PRELIMINARY ENGINEER'S COST ESTIMATES - (11 TO 20 YEARS)
DOUGLAS MUNICIPAL AIRPORT**

ITEM	TOTAL COSTS	STATE SHARE	SPONSOR SHARE
Construct fencing around airport property for crosswind runway	\$35,000	\$31,500	\$3,500
Construct Runway 13/31 (4,600' x 60')	\$1,104,000	\$500,000	\$604,000
Install REILs on Runway 3/21, install airfield signs, and remove and replace segmented circle with lighted wind cone	\$186,000	\$167,400	\$18,600
Extend Runway 3/21 (360' x 75')	\$200,000	\$180,000	\$20,000
Construct runup pad at end of Runway 21	\$48,000	\$43,200	\$4,800
Construct aircraft parking apron - Phase I (new terminal area)	\$278,000	\$250,200	\$27,800
Construct aircraft parking apron - Phase II	\$300,000	\$270,000	\$30,000
Construct terminal, executive hangar, and U.S. Customs buildings	\$570,000	\$500,000	\$70,000
Construct access for conventional hangars and construct three conventional hangars	\$626,000	\$500,000	\$126,000
Relocate rotating beacon	\$50,000	\$45,000	\$5,000
Overlay Runway 3/21 and taxiway to 25,000 pounds SWG	\$578,000	\$500,000	\$78,000
Install Nondirectional beacon	\$90,000	\$81,000	\$9,000
TOTAL PROJECT COSTS (11 - 20 years)	\$4,065,000	\$3,068,300	\$996,700

**TABLE IX-4
CAPITAL IMPROVEMENT PROGRAM
DOUGLAS MUNICIPAL AIRPORT**

YEAR	ITEM	TOTAL COST	JUSTIFICATION
1994	Apron access for T-hangars	\$400,000	Needed to provide paved access to the T-hangars
1995	Utility extensions	\$515,000	Sewer and electricity services needed at the new T-hangar location
1996	Widen Runway 3/21 - Phase I	\$510,000	Required to accommodate existing and forecasted airport users in the design group
1997	Widen Runway 3/21 - Phase II	\$465,000	Required to accommodate existing and forecasted airport users in the design group
1998	Overlay Runway 3/21	\$425,000	Required to maintain existing airfield pavements and to strengthen the runway to 12,500 pounds SWG
1999	Extend parallel taxiway	\$420,000	Needed to provide a full length parallel taxiway to Runway 3/21
2000	Install ASOS; Light and mark "D" Hill and border patrol tower	\$117,000	An ASOS will record wind information and verify the need for a crosswind runway and its orientation
2001	Acquire avigation easements for Runway 3/21's RPZ's (Approximately 12 acres)	\$12,000	Douglas Municipal Airport should maintain control of the property included in the RPZ area
2002	Relocate city street and relocate fencing outside of ROFA	\$162,000	Required to remove penetrations to the ROFA and the RPZ
2003	Environmental Assessment for crosswind Runway 13/31	\$35,000	Required to assess potential environmental impacts of runway construction
2004	Acquire land for Runway 3/21 extension (approximately 10 acres) and Runway 13/31 (approximately 100 acres)	\$110,000	Needed to accommodate runway extension and crosswind runway construction
2005	Construct fencing around airport property for crosswind runway	\$35,000	Fencing needed to protect airport property from intrusions by animals or persons
2005	Construct Runway 13/31 (4,600' x 60')	\$1,104,000	Crosswind runway needed to provide 95 percent wind coverage

TABLE IX-4 (continued)
CAPITAL IMPROVEMENT PROGRAM
DOUGLAS MUNICIPAL AIRPORT

YEAR	ITEM	TOTAL COST	JUSTIFICATION
2007	Install REILs on Runway 3/21, install airfield signs, and remove and replace segmented circle with lighted wind cone	\$186,000	REILs provide rapid identification of the runway; Airfield signs aid in the safe and efficient movement of aircraft on the ground
2008	Extend Runway 3/21 (360' x 75')	\$200,000	Runway extension needed to accommodate aircraft in the design group B-II
2008	Construct runup pad at end of Runway 21	\$48,000	Allows aircraft to conduct pre-flight inspections without interfering in other ground traffic movement
2009	Construct aircraft parking apron - Phase I (new terminal area)	\$278,000	Aircraft parking apron should be expanded and tiedowns installed to accommodate current and forecasted local and itinerant traffic.
2010	Construct aircraft parking apron - Phase II	\$300,000	Aircraft parking apron should be expanded and tiedowns installed to accommodate current and forecasted local and itinerant traffic.
2011	Construct terminal, executive hangar, and U.S. Customs buildings	\$570,000	Relocation of terminal area closer to the runway system will require the construction and/or relocation of landside facilities
2012	Construct access for conventional hangars and construct three conventional hangars	\$626,000	Needed to meet existing and forecasted demand for itinerant and local aircraft storage
2012	Relocate rotating beacon	\$50,000	Relocation of terminal area closer to the runway system will require the construction and/or relocation of landside facilities
2012	Overlay Runway 3/21 and taxiway to 25,000 pounds SWG	\$578,000	Needed to maintain existing pavements and to strengthen runway to accommodate ultimate design group
2013	Install Nondirectional Beacon	\$90,000	Improves accuracy of flight operations

Note: All estimated costs are shown in 1994 dollars.