Chapter Seven
CAPITAL IMPROVEMENT PLAN

Through the evaluation of the facility requirements, identification of the Master Plan Concept, and the development of the Airport Layout Plan, the improvements needed at the Mulino Airport over the next 20-year period have been determined. The Capital Improvement Plan (CIP) provides the basis for planning the funding of these improvements. The planned phases of development are in the 5-, 10- and 20-year time frames.

CAPITAL IMPROVEMENT PROJECTS

The CIP develops both the timeline for airport improvements and estimated costs for those improvements. The plan is divided into three phases: Phase I: present-2012; Phase II: 2013-2017; and Phase III: 2018-2027. The development phases for buildings and pavements are also shown on the Airport Layout Plan (ALP).

Below is the anticipated plan for the Airport to meet projected demand. Funding for these projects has not yet been committed and the actual costs may vary depending upon final construction costs. The date of implementation may also vary due to funding availability.

Phase I (2007-2012)

Phase I is the first five years of the planning period, through 2012. Phase I development projects are further broken down into specific years. Projects in this phase include:

2007

- Begin projects detailed in the Port and ODA management agreement, which include: the fuel facility upgrade, two rows of T-hangars, and drainage improvements. These projects will be completed within Phase I.

2008

- Pavement maintenance (crack and fog seal).
- Remove obstructions on Port property.

2009

- Relocate helicopter landing facility to interim location.
- T-hangar development of one row, with potential of 12 T-hangar units.
- Taxilane extensions to serve new hangars and hangar development areas (approximately 50' x 275' extension with two taxilanes, approximately 30' x 300' and 30' x 250').

2010

- Acquisition of avigation easements and removal of obstructions within approach.

2011

- Installation of Automatic Weather Observation System (AWOS).
- Pavement maintenance (crack and fog seal).

2012

- T-hangar development of one row, with potential of 12 T-hangar units.
- Taxilane extensions to serve new hangars and hangar development areas (approximately 50' x 140' extension with one taxilane, approximately 30' x 200').
- Acquisition of avigation easements and removal of obstructions within transitional surfaces.

Phase II (2013-2017)

Phase II is the second five years of the planning period, 2013-2017. Projects during this phase include:

- Install non precision approach to Runway 32 with minimums not lower than ¾ mile, which does not have a cost since there is no installation of ground-based equipment is necessary.
- Installation of Runway End Identifier Lights (REILs) and instrument approach lighting system.
- New maintenance building.
- Additional taxilane access from the parallel taxiway to the aircraft storage area (approximately 35' x 400').
- Relocate access taxiway to Runway 32 threshold (approximately 50' x 400').
- Apron expansion of 12,500 square yards to accommodate larger transient aircraft tiedowns.
- Fencing upgrade.
- New access road connecting areas of development to Mulino Road, approximately 2,700 feet.
- Install taxilane edge lights and electrical vault.
- Master Plan update.

- Pavement maintenance (2014 and 2017), including crack and fog seal.

Phase III (2018-2027)

Phase III is the last ten years of the planning period, 2018 – 2027. Projects falling within this timeframe include:

- Additional vehicle parking area, approximately 15 parking spaces.
- Pavement Maintenance (2020, 2023, and 2026), including crack seal, fog seal, slurry seal, and overlay.
- Development of attached or detached conventional hangars for up to 72 conventional hangars, depending on hangar size and spacing.

PROJECT COSTS

A list of improvements and costs over the next 20 years are included in **Table 7A**. All costs are estimated in 2006 dollars. Total project costs include construction, temporary flagging and signing, construction staking, testing, engineering, administration, and contingency, as applicable. Power utilities are included in all new hangar projects. No water service cost was added for the hangar developments.

FUNDING SOURCES

The Mulino Airport is part of the National Plan of Integrated Airport Systems (NPIAS), and is eligible to receive federal Airport Improvement Program (AIP) funding. Currently, small general aviation airports, like Mulino, receive $150,000 in annual entitlements from the AIP and are eligible for discretionary AIP funding grants. Therefore, the majority of funding for airport improvement projects is likely to come from the Federal Aviation Administration (FAA). For projects eligible for FAA AIP funding, the FAA may fund up to 95% of the total project cost. The airport owner must contribute the remaining amount. The legislation currently authorizing the AIP and the taxes that fund the program expire September 30, 2007. The annual entitlement amount, the percentage of matching funds required, and project eligibility criteria may soon change. AIP funding is available for most capital projects, but at this time it is difficult to receive funding for revenue-producing items such as hangars.

The Mulino Airport is designated as a Core airport by the State of Oregon. As such, the Airport is eligible for the State-sponsored Financial Aid to Municipalities (FAM) discretionary grant and Pavement Maintenance Program (PMP). Currently, FAM Grants are awarded annually for an amount not-to-exceed $25,000 for projects including planning, development and capital improvement. The PMP consists of annual funds of up to $1,000,000 dedicated to preserving and maintaining pavements at eligible Oregon airports.

Other funding may come directly from the airport owner.

Table 7A. Mulino Airport Proposed Capital Improvement Projects (present – 2027)

	Project Description	Total Cost	Funding Source: Airport Owner (5%)	FAA* (95%)	ODA** (95%)	Private
Phase I (2007-2012)						
2007						
1	Fuel Facility Upgrade	$ 86,000	$ 86,000	$ -	$ -	$ -
2	T-hangar Development	$ 1,200,000	$ 1,200,000	$ -	$ -	$ -
3	Drainage Improvements	$ 61,000	$ 61,000	$ -	$ -	$ -
2008						
1	Pavement Maintenance (crack and fog seal)	$ 72,000	$ 3,600	$ -	$ 68,400	$ -
2	Obstruction Removal (on Port property)	$ 60,000	$ 3,000	$ 57,000	$ -	$ -
2009						
1	Helicopter Landing Facility Relocation	$ 169,000	$ 8,450	$ 160,550	$ -	$ -
2	T-hangar Development (one row)	$ 900,000	$ 45,000	$ 855,000	$ -	$ -
3	Taxilane Extensions to Service New T-hangars (50' x 275', 30' x 300', 30' x 250')	$ 483,000	$ 24,150	$ 458,850	$ -	$ -
2010						
1	Easement Acquisition and Obstruction Removal (Part 77 Approach Surfaces)	$ 447,000	$ 22,350	$ 424,650	$ -	$ -
2011						
1	AWOS Installation	$ 223,000	$ 11,150	$ 211,850	$ -	$ -
2	Pavement Maintenance (crack and fog seal)	$ 72,000	$ 3,600	$ -	$ 68,400	$ -
2012						
1	T-hangar Development (one row)	$ 900,000	$ 45,000	$ 855,000	$ -	$ -
2	Taxilane Extensions to Service New T-hangars (50' x 140', 30' x 200')	$ 208,000	$ 10,400	$ 197,600	$ -	$ -
3	Easement Acquisition and Obstruction Removal (Part 77 Transitional Surfaces)	$ 63,000	$ 3,150	$ 59,850	$ -	$ -
	Subtotal Phase I	**$ 4,944,000**	**$ 1,526,850**	**$ 3,280,350**	**$ 136,800**	**$ -**
Phase II (2013-2017)						
1	Install REILs and Instrument Approach Lights	$ 627,000	$ 31,350	$ 595,650	$ -	$ -
2	New Maintenance Building	$ 275,000	$ 13,750	$ 261,250	$ -	$ -
3	Taxilane Access from Parallel Taxiway to Aircraft Storage Area (35' x 400')	$ 198,000	$ 9,900	$ 188,100	$ -	$ -
4	Relocate Access Taxiway at Runway 32 Threshold (50' x 400')	$ 692,000	$ 34,600	$ 657,400	$ -	$ -
5	Apron Expansion (12,500 SY)	$ 318,000	$ 15,900	$ 302,100	$ -	$ -
6	Fencing Upgrade	$ 879,000	$ 43,950	$ 835,050	$ -	$ -
7	Access Road - (2,700')	$ 1,206,000	$ 60,300	$ 1,145,700	$ -	$ -
8	Taxilane Edge Lights and Electrical Vault	$ 421,000	$ 21,050	$ 399,950	$ -	$ -
9	Master Plan Update	$ 150,000	$ 7,500	$ 142,500	$ -	$ -
10	Pavement Maintenance - crack and fog seal (2014 and 2017)	$ 230,000	$ 11,500	$ -	$ 218,500	$ -
	Subtotal Phase II	**$ 4,996,000**	**$ 249,800**	**$ 4,527,700**	**$ 218,500**	**$ -**
Phase III (2018-2027)						
1	Vehicle Parking (40' x 120' approximately 15 spaces)	$ 60,000	$ 3,000	$ 57,000	$ -	$ -
2	Pavement Maintenance - crack, fog, slurry seal, and overlay (2020, 2023, and 2026)	$ 2,189,000	$ 109,450	$ -	$ 2,079,550	$ -
3	Conventional Hangar Development	$ 7,290,000	$ -	$ -	$ -	$ 7,290,000
	Subtotal Phase III	**$ 9,539,000**	**$ 112,450**	**$ 57,000**	**$ 2,079,550**	**$ 7,290,000**
	Cumulative Total =	**$ 19,479,000**	**$ 1,889,100**	**$ 7,865,050**	**$ 2,434,850**	**$ 7,290,000**

** Eligibility for FAA funding does not insure that funds will be available or granted for the project.*

*** Oregon Department of Aviation (ODA) Pavement Maintenance Program (PMP). Eligibility for PMP funding does not insure that funds will be available or granted for the project.*

- All cost estimates are in 2006 dollars. Costs for avigation easements and obstruction removal based from Mulino Obstruction Removal Report (2005) and adjusted to 2006 dollars using the Bureau of Labor Statistic's Consumer Price Index Calculator.

- Total costs include construction, temporary flagging and signing, construction staking, testing, engineering, administration, and contingency, as applicable.

To better understand the purpose of these projects, it is useful to further break down the CIP by project type. The capital needs at the Airport can be categorized as follows: capacity, demand, environmental, maintenance, and safety.

Capacity. Projects that increase the capacity of the Airport in an effort to reduce congestion or delay are included within this category.

Demand. Many of the capital projects identified within the Master Plan are demand driven. While these projects are indicated within specific phases of development, the actual implementation of the projects will be justified by future activity levels.

Environmental. The Port has an environmental policy of achieving its mission through responsible environmental stewardship. Projects within this category integrate this policy into the Port's decision-making process.

Maintenance. It is imperative to maintain and preserve existing infrastructure and previous capital investments. Maintenance for the Airport's pavement areas is on a 3-year rotation, consistent with ODA's PMP schedule.

Safety. Safety is of utmost importance at the Airport. All projects are designed in accordance with FAA design standards. Projects within this grouping are considered necessary for the safety and protection of people and aircraft both on and off airport property.

Table 7B shows how project costs are allocated by project type.

Table 7B. Capital Improvement Projects by Type

Project Description	Project Type	Total Cost
Phase I (2007-2012)		
T-hangar Development	Capacity	$ 1,200,000
Capacity Subtotal		***$ 1,200,000***
Fuel Facility Upgrade	Demand	$ 86,000
T-hangar Development (one row)	Demand	$ 900,000
Taxilane Extensions to Service New T-hangars (50' x 275', 30' x 300', 30' x 250')	Demand	$ 483,000
T-hangar Development (one row)	Demand	$ 900,000
Taxilane Extensions to Service New T-hangars (50' x 140', 30' x 200')	Demand	$ 208,000
Demand Subtotal		***$ 2,577,000***
Drainage Improvements	Environmental	$ 61,000
Environmental Subtotal		***$ 61,000***
Pavement Maintenance (crack and fog seal)	Maintenance	$ 72,000
Pavement Maintenance (crack and fog seal)	Maintenance	$ 72,000
Maintenance Subtotal		***$ 144,000***
Obstruction Removal (on Port property)	Safety	$ 60,000
Helicopter Landing Facility Relocation	Safety	$ 169,000
Easement Acquisition and Obstruction Removal (Part 77 Approach Surfaces)	Safety	$ 447,000
AWOS Installation	Safety	$ 223,000
Easement Acquisition and Obstruction Removal (Part 77 Transitional Surfaces)	Safety	$ 63,000
Safety Subtotal		***$ 962,000***
Phase I Total		**$ 4,944,000**
Phase II (2013-2017)		
Taxilane Access from Parallel Taxiway to Aircraft Storage Area (35' x 400')	Capacity	$ 198,000
Apron Expansion (12,500 SY)	Capacity	$ 318,000
Capacity Subtotal		***$ 516,000***
New Maintenance Building	Demand	$ 275,000
Access Road - (2,700')	Demand	$ 1,206,000
Master Plan Update	Demand	$ 150,000
Demand Subtotal		***$ 1,631,000***
Fencing Upgrade	Maintenance	$ 879,000
Pavement Maintenance - crack and fog seal (2014 and 2017)	Maintenance	$ 230,000
Maintenance Subtotal		***$ 1,109,000***
Install REILs and Instrument Approach Lights	Safety	$ 627,000
Relocate Access Taxiway at Runway 32 Threshold (50' x 400')	Safety	$ 692,000
Taxilane Edge Lights and Electrical Vault	Safety	$ 421,000
Safety Subtotal		***$ 1,740,000***
Phase II Total		**$ 4,996,000**
Phase III (2018-2027)		
Vehicle Parking (40' x 120' approximately 15 spaces)	Demand	$ 60,000
Conventional Hangar Development	Demand	$ 7,290,000
Demand Subtotal		***$ 7,350,000***
Pavement Maintenance - crack, fog, slurry seal, and overlay (2020, 2023, 2026)	Maintenance	$ 2,189,000
Maintenance Subtotal		***$ 2,189,000***
Phase III Total		**$ 9,539,000**

Project Totals		***Project Costs***	***Percent of Total Cost***
Capacity Total		$ 1,716,000	8.8%
Demand Total		$ 11,558,000	59.4%
Environmental Subtotal		$ 61,000	0.3%
Maintenance Total		$ 3,442,000	17.6%
Safety Subtotal		$ 2,702,000	13.9%
Cumulative Total		$ 19,479,000	100.0%

As Table 7B highlights, the majority (59.4%) of the CIP projects are demand driven. Maintenance (17.6%) and safety (13.9%) projects represent the second and third highest percent of total cost estimates, respectively.