Chapter Six
Development Program

CENTURY WEST
ENGINEERING CORPORATION

Florence Municipal Airport

CHAPTER SIX
FINANCIAL AND DEVELOPMENT PROGRAM

Introduction

The purpose of this chapter is to present the projects identified in the Airport Capital Improvement Program (ACIP) that have been developed and assembled based on the analyses conducted in the Facility Requirements and Development Alternatives chapters (Chapters Four and Five). The ACIP projects are summarized in **Table 6-1**.

As noted earlier in the report, the preferred development alternative selected for Florence Municipal Airport is based on maintaining design standards for small aircraft (Airplane Design Group I). Long term facility planning also reflects the addition of nonprecision instrument approach capabilities.

The preferred alternative includes airside elements (runway and parallel taxiway extensions, new taxiway access, lighting upgrades, etc.) and landside elements (main apron reconfiguration, helicopter parking, hangars, FBO related facility development areas). In addition to specific construction related activities, some projects will require environmental study. Minor pavement maintenance items such as vegetation removal and crack filling are not included in the capital improvement program, but will need to be undertaken by the City on an annual or semi-annual basis.

The ACIP lists all major projects included in the twenty year planning period addressed in the Master Plan. Individual projects for the first five years of the planning period are listed in order of priority by year. Projects for the intermediate and long-term phases of the planning period (years 6-20) are listed in order of priority but have not been assigned a year. Each project's eligibility for FAA funding is noted, based on current federal legislation and funding formulas. Specific project details are depicted on the updated airport layout plan and terminal area plan drawings contained in Chapter Seven.

A primary source of potential funding identified in this plan is the FAA's Airport Improvement Program (AIP). As proposed, approximately 95 percent of the airport's 20 year ACIP will be eligible for federal funding. Funds from this program are derived from the Aviation Trust Fund, which is the depository for all federal aviation taxes collected on such items as airline tickets, aviation fuel,

lubricants, tires, aircraft registrations, and other aviation related fees. These funds are distributed by FAA under appropriations set by Congress to all airports in the United States that have certified eligibility.

However, as noted in **Table 6-1**, the projected twenty year total for FAA eligible projects in the ACIP significantly exceeds current FAA funding levels through the non-primary entitlement program. While other types of FAA funding may be available for some projects, it is reasonable to assume that despite establishing eligibility for FAA funding, not all eligible projects are likely to be funded by FAA. As the City manages its ACIP, maximizing the use of available FAA and other outside sources of funding is assumed. However, in some cases, the limited availability of outside funds may require projects to be deferred, or funded with increased levels of City or private funding.

AIRPORT DEVELOPMENT SCHEDULE AND COST ESTIMATES

Cost estimates for each individual project were developed in 2009 dollars based on typical construction costs associated for the specific type of project. The project costs listed in the ACIP represent order-of-magnitude estimates that approximate design engineering, environmental, other related costs, and contingencies. The estimates are intended only for preliminary planning and programming purposes. Specific project analysis and detailed engineering design will be required at the time of project implementation to provide more refined and detailed estimates of the development costs.

In future years, as the plan is carried out, these cost estimates can continue to assist management by adjusting the 2009-based figures for subsequent inflation. This may be accomplished by converting the interim change in the United States Consumer Price Index (USCPI) into a multiplier ratio through the following formula:

$$\frac{X}{I} = Y$$

Where:
X = USCPI in any given future year
Y = Change Ratio
I = Current Index (USCPI)[15]

USCPI
213.856
(1982-1984 = 100)
May 2009

Multiplying the change ratio (Y) times any 2009-based cost figures presented in this study will yield the adjusted dollar amounts appropriate in any future year evaluation. Several different CPI-based indices are available for use and any applicable index may be substituted by the City in its financial management program.

The following sections outline the recommended development program and funding assumptions. The scheduling has been prepared according to the facility requirements determined through the master plan evaluation. The projected staging of development projects is based upon anticipated needs and investment priorities. Actual activity levels may vary from projected levels; therefore, the staging of development in this section should be viewed as a general guide. When activity does vary from projected levels, implementation of development projects should occur when demand warrants, rather than according to the estimated staging presented in this chapter. In addition to major projects, the airport will continue to require regular facility maintenance such as pavement maintenance, vegetation control, sweeping, lighting repair and fuel system maintenance.

The first phase of the capital improvement program includes the highest priority projects recommended during the first six years. Intermediate and long term projects are anticipated to occur in the 6 to 20 year period, although changes in demand or other conditions could accelerate or slow demand for some improvements.

[15] U.S. Consumer Price Index for All Urban Consumers (USCPI-U)

Short Term Projects

The short term program contains work items of the highest priority. Priority items include improvements related to safety. Because of their priority, these items will need to be incorporated into Airport District Office and FAA capital improvement programming. To assist with this process, the short term projects are scheduled in specific calendar years for the first six years of the planning period (2009/10-2014).

Short Term Projects:

- Relocate and upgrade fencing (Terminal Area, adjacent to FBO and rear of apron).
- Pavement maintenance (crack filling and slurry seals) on runway, major taxiways, hangar taxilanes) and repaint markings.
- Airport Lighting Projects: Replace airport beacon; install PAPI Runway 15.
- Airport obstruction survey for existing Runway 33 approach, and west transitional surface (trees, terrain), and non-precision instrument approach.
- Develop non-precision instrument approach (FAA).
- Obstruction removal Runway 33 Approach, primary surface and transitional surface (west side).
- Reconfigure and Expand main apron to meet FAA standards and improve efficiency:
    - Relocate aircraft fueling island
    - Reconfigure & upgrade taxilanes
    - 18 aircraft tiedowns
    - 2 business aircraft parking positions
- Relocate Segmented Circle.
- Construct itinerant helicopter parking pad (Portland Cement Concrete).
- Helicopter Parking Pad.
- Install taxiway edge reflectors (parallel taxiway).
- Conduct environmental evaluation for runway and parallel taxiway extension.

Intermediate & Long Term Projects

Several intermediate or long term projects are considered to be current needs. However, based on the limited funding resources available, it was necessary to shift some projects to the longer term timeline. However, projects may be completed sooner in the event that additional funding can be generated.

Intermediate Term Projects (6-10 years)

- 400-foot runway north extension; extend parallel taxiway; extend MIRL and taxiway reflectors.
- Add wind sock (@ north runway end).
- Complete pavement maintenance projects: Regular crack filling, slurry seal all airfield (asphalt) pavements on 6 to 8 year intervals; repaint airfield markings.
- Construct North T-hangar area taxilanes (demand based).
- Install REIL - Runway 15 & 33.
- Terrain Removal (Sand Dune) – Future Runway 15 approach surface (phased based on funding availability).
- Construct aircraft wash pad adjacent to main apron.
- Complete pavement rehabilitation projects: (overlay North hangar taxilane #1).

Long Term Projects (11-20 years)

- Terrain Removal (Sand Dune) – Future Runway 15 approach surface (phased based on funding availability).
- Complete pavement maintenance projects: Regular crack filling, slurry seal all airfield (asphalt) pavements on 6 to 8 year intervals; repaint airfield markings.
- Pavement maintenance (crack filling and slurry seals) on runway, major taxiways, hangar taxilanes; repaint markings.
- Complete pavement rehabilitation projects: (overlay North hangar taxilanes #2-5; main apron, runway, parallel taxiway).
- Install medium intensity taxiway edge lighting (MITL) on parallel taxiway.
- Extend north section of parallel taxiway (access to north landside area).
- Construct north landside area apron (Phase 1) - 9 aircraft tiedowns.

- North landside area access improvements (fence reconfiguration, vehicle gate relocation, vehicle access road and parking at 27th Street & Kingwood.
- Install automated vehicle gate at north end of Airport Way (tenant access to north hangar area).

Florence Municipal Airport
Florence, Oregon
2009-2029

20-YEAR CAPITAL IMPROVEMENT PROGRAM (DRAFT)

Short Term	Yr	Project	Project Category	Unit	Quantity	Unit Cost	Subtotal Cost	35% Engineering / Environmental / Contingency	Total Cost	FAA Eligible	Airport Sponsor	*Accumulated NPE$ (including FY09) $543,245*
2009-2010	**0, 1**	Relocate & Upgrade Terminal Area Airport Fencing; add pedestrian gate	Security	LF	240	$18	$6,820	$2,387	$9,207	$8,747	$460	$150,000
		Install PAPI (Rwy 15)	Lighting	ea	1	$100,000	$100,000	$35,000	$135,000	$128,250	$6,750	
		Replace Airport Beacon & Pole	Lighting	ea	1	$80,000	$80,000	$28,000	$108,000	$102,600	$5,400	
		Relocate Segmented Circle	Other	LS	1	$60,000	$60,000	$21,000	$81,000	$76,950	$4,050	
Subtotal - Year 1 & 2							$246,820	$86,387	$333,207	$316,547	$16,660	
2011	**2**	Terminal Apron Expansion & Reconfiguraton	Pavement Construction	SY	8,667	$65	$569,355	$199,274	$768,629	$730,198	$38,431	$150,000
		Relocate Aircraft Fueling Island	Other	LS	1	$125,000	$125,000	$43,750	$168,750	$160,313	$8,438	
		Helicopter Parking Pad (50 x50' PCC)	Pavement Construction	SY	278	$100	$37,800	$13,230	$51,030	$48,479	$2,552	
		Slurry Seal Main Apron; repaint markings & tiedowns	Pavement Maintenance	SY	7,288	$4.00	$31,652	$11,078	$42,730	$40,594	$2,137	
Subtotal - Year 2							$763,807	$267,332	$1,031,139	$979,582	$51,557	
2012	**3**	Obstruction Survey (Instrument Approach & West Transitional Surface (trees/terrain))	Other	LS	1	$125,000	$125,000	$43,750	$168,750	$160,313	$8,438	$150,000
		Slurry Seal Runway 15/33; repaint markings	Pavement Maintenance	SY	22,667	$4.00	$98,668	$34,534	$133,202	$126,542	$6,660	
		Slurry Seal Parallel Taxiway; repaint markings	Pavement Maintenance	SY	13,898	$4.00	$59,592	$20,857	$80,449	$76,427	$4,022	
		Install Parallel Taxiway Edge Reflectors	Lighting	LF	3,000	$3	$9,000	$3,150	$12,150	$11,543	$608	
Subtotal - Year 3							$292,260	$102,291	$394,551	$374,823	$19,728	
2013	**4**	Terrain Grading/Tree Removal - Rwy 33 Approach & Primary Surface	Other	LS	1	$30,000	$30,000	$10,500	$40,500	$38,475	$2,025	$150,000
Subtotal - Year 4							$30,000	$10,500	$40,500	$38,475	$2,025	
2014	**5**	Slurry Seal North Hangar Taxilane #1	Pavement Maintenance	SY	612	$4.00	$2,448	$857	$3,305	$3,140	$165	$150,000
		Slurry Seal North Hangar Taxilane #2	Pavement Maintenance	SY	612	$4.00	$2,448	$857	$3,305	$3,140	$165	
		Slurry Seal North Hangar Taxilane #3	Pavement Maintenance	SY	708	$4.00	$2,832	$991	$3,823	$3,632	$191	
		Slurry Seal North Hangar Taxilane #4	Pavement Maintenance	SY	693	$4.00	$2,772	$970	$3,742	$3,555	$187	
		Slurry Seal North Hangar Taxilane #5	Pavement Maintenance	SY	693	$4.00	$2,772	$970	$3,742	$3,555	$187	
Subtotal - Year 5							$13,272	$4,645	$17,917	$17,021	$896	
						Yr 0-5 Total	$1,346,159	$471,156	$1,817,315	$1,726,449	$90,866	**$1,293,245**

Intermediate Term	Yr	Project	Project Category	Unit	Quantity	Unit Cost	Subtotal Cost	35% Engineering / Environmental / Contingency	Total Cost *	FAA Eligible	Airport Sponsor	
2015-2019												
		Environmental Assessment (Runway & Parallel Taxiway Extension)	Other	LS	1	$75,000	$75,000	$26,250	$101,250	$96,188	$5,063	
		North Runway Extension (400' x 60') w/ Parallel Taxiway; MIRL; relocate PAPI	Pavement Construction	SY	4,000	$65	$320,000	$112,000	$432,000	$410,400	$21,600	
		Wind Sock (north end of runway)	Other	ea	1	$2,000	$2,000	$700	$2,700	$2,565	$135	
		North Hangar E/W Taxilane # 1 (250' x 25')	Pavement Construction	SY	750	$65	$78,750	$27,563	$106,313	$100,997	$5,316	
		Install REIL (Rwy 15 & 33)	Lighting	ea	2	$20,000	$40,000	$14,000	$54,000	$51,300	$2,700	
		Terrain Removal - Rwy 15 Approach (Phase 1)	Other	CY	80,000	$5.50	$440,000	$154,000	$594,000	$564,300	$29,700	
		Construct Aircraft Wash Pad	Other	LS	1	$20,000	$20,000	$7,000	$27,000	$25,650	$1,350	
		Overlay North Hangar Taxilane #1	Pavement Rehabilitation	SY	612	$40.00	$24,480	$8,568	$33,048	$31,396	$1,652	
		North Hangar E/W Taxilane # 2 (250' x 25')	Pavement Construction	SY	750	$65	$78,750	$27,563	$106,313	$100,997	$5,316	
		ALP/Master Plan Update	Other	ea	1	$85,000	$85,000	$29,750	$114,750	$109,013	$5,738	
Subtotal - Year 6-10						**Yr 6-10 Total**	$1,088,980	$381,143	$1,470,123	$1,396,617	$73,506	$750,000

Long Term	Yr	Project	Project Category	Unit	Quantity	Unit Cost	Subtotal Cost	35% Engineering / Environmental / Contingency	Total Cost	FAA Eligible	Airport Sponsor	
2020-2029												
		Terrain Removal - Rwy 15 Approach (Phase 2)	Other	CY	161,000	$5.50	$885,500	$309,925	$1,195,425	$1,135,654	$59,771	
		Install Medium Intensity Taxiway Edge Lights (MITL)	Lighting	LF	3,000	$40	$120,000	$42,000	$162,000	$153,900	$8,100	
		Slurry Seal Runway 15/33; repaint markings	Pavement Maintenance	SY	22,667	$4.00	$98,668	$34,534	$133,202	$126,542	$6,660	
		Slurry Seal Parallel Taxiway; repaint markings	Pavement Maintenance	SY	13,898	$4.00	$59,592	$20,857	$80,449	$76,427	$4,022	
		Slurry Seal Main Apron (south section); repaint markings & tiedowns	Pavement Maintenance	SY	8,667	$4.00	$37,168	$13,009	$50,177	$47,668	$2,509	
		Overlay/Reconstruct Main Apron (north section)	Pavement Rehabilitation	SY	7,288	$50	$364,900	$127,715	$492,615	$467,984	$24,631	
		Slurry Seal North Hangar Taxilane #2	Pavement Maintenance	SY	612	$4.00	$2,448	$857	$3,305	$3,140	$165	
		Slurry Seal North Hangar Taxilane #3	Pavement Maintenance	SY	708	$4.00	$2,832	$991	$3,823	$3,632	$191	
		Slurry Seal North Hangar Taxilane #4	Pavement Maintenance	SY	693	$4.00	$2,772	$970	$3,742	$3,555	$187	
		Slurry Seal North Hangar Taxilane #5	Pavement Maintenance	SY	693	$4.00	$2,772	$970	$3,742	$3,555	$187	
		Overlay Runway 15/33; Repaint Markings	Pavement Rehabilitation	SY	20,000	$40	$808,000	$282,800	$1,090,800	$1,036,260	$54,540	
		Overlay Parallel Taxiway; repaint markings	Pavement Rehabilitation	SY	12,862	$40.00	$518,480	$181,468	$699,948	$664,951	$34,997	
		Replace PAPI (Rwy 33)	Lighting	ea	1	$40,000	$40,000	$14,000	$54,000	$51,300	$2,700	
		Slurry Seal Main Apron; repaint markings & tiedowns	Pavement Maintenance	SY	7,288	$4.00	$31,652	$11,078	$42,730	$40,594	$2,137	
		Slurry Seal North Hangar Taxilane #1	Pavement Maintenance	SY	612	$4.00	$2,448	$857	$3,305	$3,140	$165	
		Overlay North Hangar Taxilane #2	Pavement Rehabilitation	SY	612	$40.00	$24,480	$8,568	$33,048	$31,396	$1,652	
		Overlay North Hangar Taxilane #3	Pavement Rehabilitation	SY	708	$40.00	$28,320	$9,912	$38,232	$36,320	$1,912	
		Overlay North Hangar Taxilane #4	Pavement Rehabilitation	SY	693	$40.00	$27,720	$9,702	$37,422	$35,551	$1,871	
		Overlay North Hangar Taxilane #5	Pavement Rehabilitation	SY	693	$40.00	$27,720	$9,702	$37,422	$35,551	$1,871	
		North Landside Area Access Road (paved) & Parking (gravel)	Other	LF	680	$55	$37,400	$13,090	$50,490	$47,966	$2,525	
		North Tiedown Apron - 9 tiedowns (Phase 1)	Pavement Construction	SY	3,920	$65	$284,800	$99,680	$384,480	$365,256	$19,224	
		North Hangar Access Taxiway (N-S section)	Pavement Construction	SY	1,600	$65	$134,000	$46,900	$180,900	$171,855	$9,045	
		Install new Automated Vehicle Access Gates & Reconfigure Fence (North Hangar Area)	Other	LS	1	$35,000	$35,000	$12,250	$47,250	$44,888	$2,363	
		Modify/Upgrade Airport Fencing & Gates (27th Street)	Security	LF	690	$18	$22,420	$7,847	$30,267	$28,754	$1,513	
		MIRL (Replace existing lighting system @ end of useful life)	Lighting	LF	3,000	$40	$120,000	$42,000	$162,000	$153,900	$8,100	
Subtotal - Year 11-20						**Yr 11-20 Total**	$3,719,092	$1,301,682	$5,020,774	$4,769,735	$251,039	$1,500,000
						20 Yr Total	$6,154,231	$2,153,981	$8,308,212	$7,892,801	$415,411	**$3,543,245**

CAPITAL FUNDING SOURCES

Federal Grants

Federal funding is provided through the Federal Airport Improvement Program (AIP). This reauthorization is the latest evolution of a funding program originally authorized by Congress in 1946 as the Federal Aid to Airports Program (FAAP). The program provides grant funding for airports listed in the National Plan of Integrated Airport Systems (NPIAS). Under current legislation, eligible general aviation airports can receive up to $150,000 per year in general aviation "non-primary entitlement" grants. If a project is anticipated to cost in excess of $150,000, the participating airport can roll over the funding allocations for up to four years, at which time the accumulated total of funds can be used for larger projects. Any unused funds that remain beyond the maximum allowable roll over period revert to the FAA for use at other airports. These funds may only be used for eligible capital improvement projects and may not support airport operation and maintenance costs.

FAA funding is limited to projects that have clearly defined need that has been identified through preparation of an FAA approved airport layout plan (ALP). Periodic updates of the ALP are required when new or unanticipated project needs or opportunities exist that require use of FAA funds. The FAA will not generally participate in vehicle parking, utilities, building renovations or projects associated with non-aviation developments.

Some changes in funding levels and project eligibility were included in the current Airport Improvement Program (AIP) legislation (extending through FY 2009). Projects such as hangar construction or fuel systems, which have not traditionally been eligible for funding, are currently eligible, although the FAA indicates that this category of project would be considered to be a lower priority than other airfield needs. In addition, FAA funding levels have been increased from 90 percent to 95 percent.

The FAA also provides discretionary grants to airports. The dollar amounts of individual grants vary and can be significantly larger than the primary entitlements. Discretionary grants are awarded at the FAA's sole discretion. Discretionary funds are distributed after all entitlement funds have been allocated. For larger projects requiring substantially larger amounts of funding, non-primary entitlement and discretionary grants are often combined. Other types of FAA funding include facilities & equipment (F&E) projects and Congressionally-appropriated dollars for specific projects.

State Funding

No specific level of Oregon Department of Aviation (ODA) funding has been assumed in the CIP presented in **Table 6-1**. It is recommended that the City maximize use of any ODA funds that are available in the planning period.

Pavement Maintenance Program

The Pavement Management Program (PMP) programs airfield pavement maintenance funds on established multi-year cycles. This program is intended to preserve and maintain existing airfield pavements in order to maximize their useful lives and the economic value of the pavement. As noted earlier, several short-term pavement maintenance projects are identified for Florence Municipal State Airport in the most recent PMP. The program funds pavement maintenance and associated improvements (crack filling, repair, sealcoats, etc.), including some items which have not traditionally been eligible for FAA funding.

Funding for the PMP is generated through collection of aviation fuel taxes. ODA manages the PMP through an annual consultant services contract and work is programmed on a 3-year regional rotation. The program includes a regular schedule of inspection and subsequent field work. Benefits from the PMP include:

- Economy of scale in bidding contracts
- Federal/State/Local partnerships that maximize airport improvement funds
- PMP is not a grant program and local match is on a sliding scale (50% - 5% required).

The PMP includes the following features:

- Review prior year's Pavement Condition Index (PCI) reports
- Only consider PCIs above 70
- Apply budget
- Limit work to patching, crack sealing, fog sealing, slurry sealing
- Add allowance for striping
- Program to include approximately 20 airports per year, depending on funding levels.

Financial Aid to Municipalities (FAM) Grants

ODA's FAM grant program has been suspended in recent years due to a lack of funding. Efforts to resume the program are currently being considered by ODA. Previously, FAM grants up to $25,000 were available to Oregon airports for eligible airport related projects.

Local Funding

The local share required for the 20 year ACIP is estimated at 5 percent of the total project development costs. Hangar construction costs have been included in the ACIP. It has been assumed that FAA funds will not be used for hangar construction since the other proposed capital improvements exceed the projected level of AIP funding over the twenty year planning period. The FAA has indicated that funding hangars projects with AIP funds is considered only when the airport has no other higher priority project needs for a period of several years.

As currently defined, the locally funded portion for twenty year planning period is estimated to be just over $410,000. It is noted that the City costs could increase significantly if an investment in hangar construction and or other infrastructure development (utilities) was made.

The majority of local matching funds are generated through airport revenues, including fuel flowage fees, land leases and sale proceeds from non-aviation parcels in the airport industrial park. The City reviews Florence Municipal Airport's rates and fees schedule and land lease terms annually to ensure that the airport is generating fair and reasonable revenue for its facilities. Property appraisals are also recommended to periodically gauge local market valuation.