

**A. INTRODUCTION**

This chapter describes the recommended Chesterfield County Airport (FCI) Capital Improvement Program (CIP) for the 20-year planning horizon. It identifies probable construction costs, in constant 2010 dollars, and establishes a preliminary funding scenario for each recommended project. Projects are presented in three development phases: Phase I (0-5 years), Phase II (6-10 years), and Phase III (11-20 years).

The budget data provided herein represents an order of magnitude estimate of the total project cost, including construction and additional expenses such as engineering, administration, surveying, and testing. These are preliminary estimates for planning purposes; it should be noted that more detailed cost estimates must be developed prior to the implementation of a project in order to ensure that sufficient funding is available to complete the identified scope of work. To this end, project cost estimates should be periodically reviewed and updated to reflect annual inflation and other changing conditions.

Major project categories are offered for each development phase in Section D of this chapter. Projects are depicted on the Airport Layout Plan (ALP) drawing. The recommended phasing plan should be evaluated periodically and adjusted accordingly to reflect changes in demand, local priorities, economic conditions, and/or availability of funding.

**B. FUNDING SOURCES**

**1. Federal Aviation Administration (FAA) Funds**

The principal source of federal funding for airport capital development is through the Airport Improvement Program (AIP). This program was initially authorized in 1992 and



has been periodically re-authorized since that date. In February 2012, FAA Reauthorization Legislation was signed into law as the FAA Modernization and Reform Act of 2012. This act provides grant funds specifically for general aviation airports listed in the latest published National Plan of Integrated Airports (NPIAS), generally publicly owned airports that have documented airfield development needs.

The funding for the Airport Improvement Program Trust Fund occurs through a flight segment tax and airline ticket tax, a tax on cargo waybills, an international departure fee, and a per gallon tax on general aviation fuel and jet fuel. FAA Order 5100.38, *Airport Improvement Program (AIP) Handbook*, as amended, defines project eligibility. In general, airfield improvements and airfield safety and security equipment, airport ground access, public use areas of the terminal, land acquisition for eligible airport facilities, runway protection zones, and certain noise mitigation purposes are eligible. Airport master planning is also eligible. Eligible projects at FCI receive 90 percent funding participation from the FAA.

Generally, revenue-producing space and facility developments for parking, car rental, concession space, private tenant hangars, and so forth, are not eligible. In order for the development to be eligible, the airport must currently be included as an approved airport in the NPIAS and the eligible projects must be included in the airport's FAA-approved Airport Layout Plan. The entitlement may be used in the fiscal year it becomes available and the next two fiscal years. An airport may choose to delay using their entitlement the first or second year and use the accrued money in the third year to fund a larger project. The fund availability expires if not under grant for a project three years after accrual.

## **2. Virginia Department of Aviation (DOAV) Funds**

Funding for airport improvements by the Commonwealth of Virginia is administered by the Virginia Department of Aviation (DOAV) as authorized by the Virginia Aviation Board (VAB). Similar to the Federal Aviation Trust Fund, DOAV funds are derived



from user fees (i.e. aircraft fuel taxes and state sales tax on aircraft). On a larger scale, a percentage of gasoline taxes are assigned to funding for aviation infrastructure development.

Immediately following the signing of the FAA Modernization and Reform Act of 2012, the VAB adopted a policy change that increased the state's funding portion for federally funded projects from 60 percent to 80 percent of the non-federal share when state discretionary funds are involved. Therefore, the local share of such projects remains at two percent. The funding structure is now 90 percent federal funds, eight percent state funds, and two percent local funds.

When an airport sponsor is not eligible for federal funds, or federal funds are not available for an eligible sponsor, the VAB may allocate state discretionary funds to projects. The participation rate varies depending on the type of project. For most state funded projects, the state participation is 80 percent of the eligible project costs.

### **3. Local Funds**

Airports have the ability to fund capital projects from surplus revenues generated at the airport, funds generated through the issuance of airport bonds, and public infrastructure or development funds provided by, or to, the local government operator of the airport.

### **4. Other Capital Funds**

The balance of funding to be provided for implementation of the airport's CIP would be private investment for projects, assumed to be provided by airport tenants or third party investors. These privately funded projects are typically reserved for non-eligible items including revenue-producing space and facility developments for parking, concession space, car rental, and private tenant hangars.



## C. AIRPORT DEVELOPMENT PROGRAM

This section identifies the projects and associated timeline required for the continued improvement and operation of FCI during the 20-year planning period. The projects are listed by phase (time period), estimated cost, funding service, and estimated AIP eligibility. Estimated costs include design and engineering fees and a project contingency and are intended only to identify "order of magnitude of costs" for planning purposes. Changes in airport operations or demand, implementation priorities, funding availability, or economic conditions may alter the need or timing of the proposed development.

The cost estimates presented in this section are intended to provide a basis for development of the Airport Capital Improvement Plan (ACIP). The ACIP is a need based five year plan of funding for airport planning and development projects.

Projects are ranked nationally in priority to accomplish the following objectives:

1. Preserve existing airport infrastructure,
2. Mitigate noise and other environmental effects,
3. Achieve compliance with design standards, and
4. Increase airport system capacity.

The FAA uses a numerical system as one tool for prioritizing airport development projects. The values generated by the National Priority System (NPS) equation categorize the projects in accordance with agency goals and objectives. The NPS generates values between 0 and 100, with 100 generally being most consistent with agency goals. Additional information on ACIP development is available in FAA Order 5100.39A, Airports Capital Improvement Plan (see **Appendix K**).

The current estimated cost of each phase and the total cost of the program are as follows:

- Phase I - \$15 million
- Phase II - \$8 million



- Phase III - \$5 million
- Total - \$28 million

## 1. Phase I Development

Phase I of the airport development program is focused on correcting non-standard conditions and preparing the environmental coordination necessary for future construction. Phase I also includes the construction of facilities recommended in Chapter Four, Facility Requirements.

Implementation of Phase I projects is highlighted in **Table 8-1** by fiscal year phasing. The Environmental Assessment (EA) and resulting funding is required prior to initiating the key action steps toward construction. Land acquisition covers two levels of activity; first the services involving survey, appraisal, review appraisal, Environmental Due Diligence Audit (EDDA) – if applicable, negotiation services, and secondly, final settlement of the purchases. Wetland mitigation would then be pursued with obstruction removal. The remaining Phase I projects are not elements of a critical path project and would be pursued at the County’s discretion or as demand warrants.

The AIP eligible projects within Phase I should compete well in the NPS. The environmental assessment and subsequent obstruction removal and wetland mitigation each should rank in the top 40 percentile. Land acquisition will be a mid-range rankings, with the taxiway turnout and hold apron ranked lowest of the eligible projects. Ranking of the projects identified by the FAA as an individual work item within the multi-year runway extension project will be given the same priority rating as the overall runway project and thus may be ranked lower than if they were justified as standalone projects.

The total estimated cost for Phase I development, is approximately \$15 million. Phase I development estimates, complete with potential funding sources, are presented in **Table 8-1**.



## 2. Phase II Development

Phase II of the planning period is focused on extending the runway and enhancing all-weather operational capability through reduced visibility minima.

The implementation strategy for Phase II projects (specifically toward the runway extension) would initiate with project design and then follow in sequence of the projects as listed in **Table 8-2**.

The AIP eligible projects within Phase II will likely be in the mid-range rankings as most are associated with the proposed runway extension. Ranking of the projects identified by the FAA as an individual work item within the multi-year runway extension project will be given the same priority rating as the overall runway project and thus may be ranked lower than if they were justified as standalone projects.

The probable development costs for Phase II total approximately \$8 million. Phase II development estimates and potential funding sources are presented in **Table 8-2**.

## 3. Phase III Development

Phase III of the planning period includes actions to address non-standard conditions and the development of facilities recommended for the future growth of the airport.

The implementation strategy for Phase III project would be at County discretion or as demand warrants as they are not elements of a critical path project.

The AIP eligible project within Phase III, relocation of the parallel taxiway, will likely be in the mid-range rankings as the project is standards driven.



The probable development costs for Phase III total approximately \$5 million. Phase III development estimates and potential funding sources are presented in **Table 8-3**.

#### **D. SUMMARY**

The ALP depicts approximately \$28 million in future airport improvements required to accommodate the existing and future aviation demand for the 20-year planning period. The estimated funding sources for the program are as follows:

- FAA - \$14.7 million
- DOAV - \$3.4 million
- Local - \$7.6 million
- Private/Other - \$2.0 million

The Airport Capital Improvement Program (ACIP) presented in the following tables details the key elements of the proposed runway extension project, the timing associated with each, and the potential funding source. The initial step in implementing the runway project is successful completion of the Environmental Assessment (EA). It is anticipated the EA will begin mid-2012 and be completed within 12 to 18 months allowing land acquisition services to be initiated during Spring 2014. Land services has the goal of successfully achieving a negotiated Purchase Agreement with the Owner, which then provides the support to request purchase funding to settle the property acquisition. It is anticipated that purchase funds will be required during federal fiscal year 2015. The County recognizes that the availability and timing of federal funding is dependent on the completion of the EA, as well as the continued congressional reauthorization of the Airport Improvement Program.

For ease of budgetary planning, the ACIP assumes annual federal entitlement funding for FCI remaining at \$150,000, and that discretionary funding is available following successful completion of the EA (please see Note 4 on Table 8-1). This condition would allow successfully negotiated sales to be settled during federal fiscal year 2015 and relocation of the church and



residences to occur as early as 2015. The design of the runway extension, removal and mitigation of obstructions, and mitigation of wetlands are also programmed for 2015. The obstruction removal construction is planned as the primary runway project element during 2016, with the relocation of the localizer, PAPI, and power lines, as well as the actual runway extension construction as early in Phase II (2017-2021) as funding will allow.





**Table 8-1  
Chesterfield County Airport  
Airport Capital Improvement Program (ACIP) – Phase I**

Ref No.	Project Description	Fiscal Year/s	Estimated Cost <sup>1</sup>	FAA Funding		DOAV Eligible Funding	Local Funding	Private or Other Investment
				NPE	DISC			
1	Obstruction Removal – Industrial Park (DD/CO) <sup>2</sup>	2012	\$25,000	\$0	\$0	\$0	\$25,000	\$0
2	Environmental Assessment	2012-2013	\$630,000	\$388,167	\$178,833	\$50,400	\$12,600	\$0
3	Construct 10-unit T-hangar <sup>3</sup> (DD/CO) – ALP Facility #21	2013	\$600,000	\$0	\$0	\$0	\$600,000	\$0
4	Land and Easement Acquisition Services (Phase 1) <sup>4</sup>	2014	\$300,000	\$270,000	\$0	\$24,000	\$6,000	\$0
5	Land and Easement Acquisition (Phase 2) <sup>4</sup> : Parcel 1- \$2,000; Parcel 2- \$6,000; Parcel 3- \$70,000; Parcel 4- \$220,000; Parcel 5- \$550,000; Parcel 6- \$75,000; Parcel 7- \$525,000; Parcel 8- \$5,000; Parcel 9- \$180,000; Parcel 10 - \$1,000; Parcel 11- \$2,000; Parcel 12- \$7,000; Parcel 15- \$80,000	2015	\$1,700,000	\$180,000	\$1,350,000	\$136,000	\$34,000	\$0
6	Land Acquisition (Phase 3) Relocation – Parcels 63, 64, 65	2015	\$1,000,000	\$0	\$900,000	\$80,000	\$20,000	\$0
7	Extend Runway (DD)	2015	\$400,000	\$0	\$360,000	\$32,000	\$8,000	\$0
8	Obstruction Removal (DD) – On Airport <sup>5</sup>	2015	\$100,000	\$0	\$90,000	\$8,000	\$2,000	\$0
9	Install Obstruction Lights (DD/CO) <sup>6</sup>	2015	\$20,000	\$0	\$18,000	\$1,600	\$400	\$0
10	Wetland Mitigation	2015	\$2,300,000	\$0	\$2,070,000	\$184,000	\$46,000	\$0



11	Rehabilitate Auto Parking (DD)	2015	\$300,000	\$0	\$0	\$240,000	\$60,000	\$0
12	Construct Taxiway Turnout/Hold Apron (DD)	2015	\$80,000	\$0	\$72,000	\$6,400	\$1,600	\$0
13	Obstruction Removal (CO) – On Airport	2016	\$250,000	\$150,000	\$75,000	\$20,000	\$5,000	\$0
14	Construct Conventional Hangars <sup>3,7</sup> (DD/CO)	2016	\$5,000,000	\$0	\$0	\$0	\$3,000,000	\$2,000,000
15	Construct Taxiway Turnout/Hold Apron (CO)	2016	\$170,000	\$0	\$153,000	\$13,600	\$3,400	\$0
16	Replace Rotating Beacon (Beacon Only) (DD/CO)	2016	\$50,000	\$0	\$45,000	\$4,000	\$1,000	\$0
17	Rehabilitate Auto Parking (CO)	2016	\$1,800,000	\$0	\$0	\$1,440,000	\$360,000	\$0
18	Pilot Activity Center <sup>8</sup> – ALP Facility #24	2016	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL PHASE I:</b>			<b>\$14,725,000</b>	<b>\$988,167</b>	<b>\$5,311,833</b>	<b>\$2,240,000</b>	<b>\$4,185,000</b>	<b>\$2,000,000</b>

Notes:

NPE = Non Primary Entitlements

DISC = Discretionary funding

CO = Construction phase

DD – Design & Development phase

<sup>1</sup>All figures are gross order of magnitude estimates based on 2010 dollars.

<sup>2</sup>Obstruction Removal for parcels 28-31 with existing easements.

<sup>3</sup>Site preparation has been completed as part of a previous project.

<sup>4</sup>Discretionary funding for FY 13-14 likely unavailable due to anticipated EA completion in the 1<sup>st</sup> quarter of calendar year 2014.

<sup>5</sup>Obstructions are located north of existing Runway 15 threshold, east and west of existing Runway 33 threshold and north and south of Whitepine and Airport Road intersection.

<sup>6</sup>Obstruction lights to be installed along peak of terrain over gas line to the west of runway.

<sup>7</sup>Funding for hangar construction could be local (County) or private investment as negotiated

<sup>8</sup>County has not developed cost estimates for this project at this time. Project not eligible for FAA or DOAV funding.

Source: Delta Airport Consultants, Inc.



**Table 8-2**  
**Chesterfield County Airport**  
**Airport Capital Improvement Program (ACIP) – Phase II**

Ref. No.	Project Description	Estimated Cost <sup>1</sup>	FAA Eligible Funding	DOAV Eligible Funding	Local Funding	Private or Other Investment
1	Relocate Power Lines Underground	\$250,000	\$225,000	\$20,000	\$5,000	\$0
2	Relocate Localizer (DD/CO)	\$200,000	\$180,000	\$16,000	\$4,000	\$0
3	Relocate PAPI (DD/CO)	\$70,000	\$63,000	\$5,600	\$1,400	\$0
4	Extend Runway (CO)	\$3,100,000	\$2,790,000	\$248,000	\$62,000	\$0
5	Construct Blast Pads (DD/CO)	\$400,000	\$360,000	\$32,000	\$8,000	\$0
6	Relocate Glideslope Equipment	\$300,000	\$270,000	\$24,000	\$6,000	\$0
7	Install MALS (DD/CO)	\$500,000	\$450,000	\$40,000	\$10,000	\$0
8	Relocate Fuel Farm <sup>2</sup> (DD/CO) – ALP Facility #27	\$2,000,000	\$0	\$200,000	\$1,800,000	\$0
9	Construct Alternative 24-hour Fueling Site <sup>2</sup> (DD/CO) – ALP Facility #36	\$150,000	\$0	\$0	\$150,000	\$0
10	Expand Airfield Maintenance and Equipment Building (DD/CO) – ALP Facility #17	\$150,000	\$0	\$120,000	\$30,000	\$0
11	Acquire SRE Equipment <sup>3</sup> – Wheel loader & attachments (sweeper, displacement & rotary plows)	\$425,000	\$0	\$50,000	\$375,000	\$0
12	Public Observation Park <sup>4</sup> – ALP Facility #31	\$0	\$0	\$0	\$0	\$0
<b>TOTAL PHASE II:</b>		<b>\$7,545,000</b>	<b>\$4,338,000</b>	<b>\$755,600</b>	<b>2,451,400</b>	<b>\$0</b>

Notes: CO = Construction phase

DD = Design and Development phase

<sup>1</sup>All figures are gross order of magnitude estimates based on 2010 dollars.

<sup>2</sup>The DOAV's fuel farm funding policy was changed in August 2011, allowing a \$200,000 cap for a 25 year period. No additional state funding beyond the \$200,000 will be available for relocation of the fuel farm or alternative fuel site. The remaining balance will be locally funded.

<sup>3</sup>SRE Equipment is eligible for DOAV funding through their maintenance program at \$50,000 for a period of 5 years.

<sup>4</sup>County has not developed cost estimates for this project at this time. Project not eligible for FAA or DOAV funding.

Source: Delta Airport Consultants, Inc.



**Table 8-3**  
**Chesterfield County Airport**  
**Airport Capital Improvement Program (ACIP) – Phase III**

Ref. No.	Project Description	Estimated Cost <sup>1</sup>	FAA Eligible Funding	DOAV Eligible Funding	Local Funding	Private or Other Investment
1	Construct 10-unit T-Hangar (small) <sup>2</sup> (DD/CO) – ALP Facility #23	\$900,000	\$0	\$0	\$900,000	\$0
2	Relocate Taxiway (DD/CO) <sup>3</sup>	\$4,000,000	\$3,600,000	\$320,000	\$80,000	\$0
3	Demolition of TW ‘B’ & ‘C’/Construct Replacement TW (DD/CO)	\$500,000	\$450,000	\$40,000	\$10,000	\$0
4	Aviation Education Facility <sup>4</sup> – ALP Facility #32	\$0	\$0	\$0	\$0	\$0
<b>TOTAL PHASE III:</b>		<b>\$5,400,000</b>	<b>\$4,050,000</b>	<b>\$360,000</b>	<b>\$990,000</b>	<b>\$0</b>

Notes: CO = Construction phase

DD = Design and Development phase

<sup>1</sup>All figures are gross order of magnitude estimates based on 2010 dollars.

<sup>2</sup>Site preparation has been completed as part of a previous project.

<sup>3</sup>Cost includes reducing width of Taxiways ‘D’ and ‘E’ to 35’.

<sup>4</sup>County has not developed cost estimates for this project at this time. Project not eligible for FAA or DOAV funding.

Source: Delta Airport Consultants, Inc.

