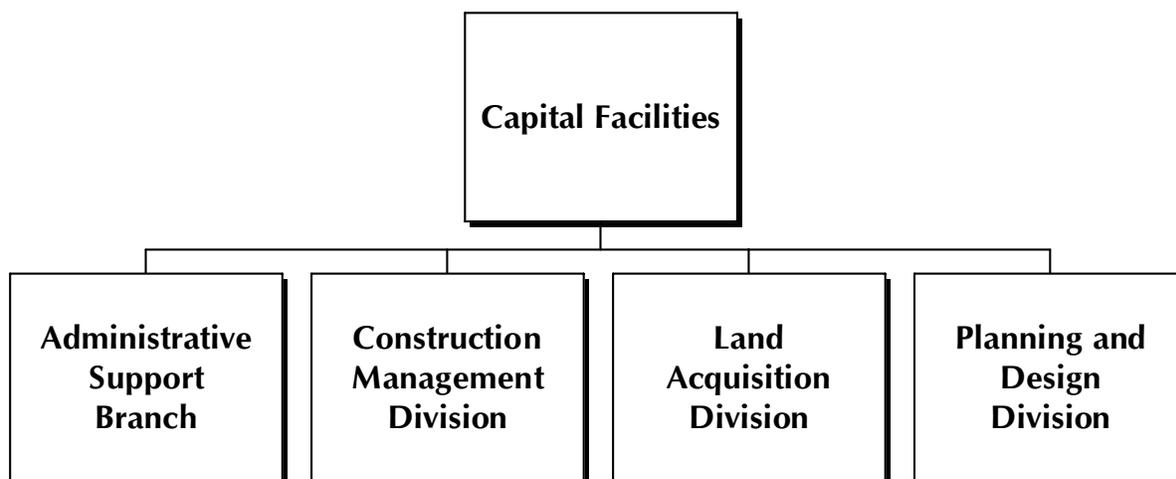


# Capital Facilities



## Mission

To provide Fairfax County with quality, cost effective buildings and infrastructures in a safe and timely manner.

## Focus

Capital Facilities' purpose is to complete the construction of publicly funded projects. Specifically, Capital Facilities provides the design, land acquisition and construction services for governmental facility projects such as libraries, courts, and police and fire stations. The agency supports user agencies during the site selection and feasibility study phases and coordinates with the user agencies throughout the project implementation process. The agency is also responsible for the implementation of infrastructure improvement projects, such as roads, sanitary sewer extensions, sanitary pump stations, pollution control plant expansions/upgrades, walkways, bus stop shelter installation and the land acquisition and construction management of stormwater drainage projects. Through the completion of these projects, Capital Facilities contributes to the health, safety and welfare of all who reside in, work in and visit Fairfax County.

Since 2000, Capital Facilities has been engaged in a strategic process to become a higher performing organization. One of the strengths of Capital Facilities is its technical and operational capabilities and, as such, its operations have continued to be recognized for technical excellence. To improve upon this excellence, Capital Facilities has focused many of its efforts over the last five years on improving three major aspects of the agency, including work culture, environmental stewardship, and relationships with the community.

Capital Facilities has several initiatives, including, but not limited to, the improvement of project delivery and customer service. As part of this initiative, the agency recently completed the development of new performance measures. The development of the new performance measures utilized a team-based approach, getting input from staff throughout the different business areas as the need for new performance measures was borne out of an interest in improving the tools used to evaluate the business areas and their achievement of their missions.

Funding for capital construction projects administered by Capital Facilities is provided from bond funds, the General Fund and grant funds and is affected by the economic climate, and the availability of funds from the Commonwealth of Virginia and the federal government.

### THINKING STRATEGICALLY

Strategic issues for the Department include:

- o Improving relationships with customers by working collaboratively and sharing information in a more timely fashion;
- o Implementing tactical information technology initiatives to improve business operations; and
- o Developing methods to allow the agency to accomplish its mission more efficiently.

## Capital Facilities

### New Initiatives and Recent Accomplishments in Support of the Fairfax County Vision

 <b>Building Livable Spaces</b>	<b>Recent Success</b>	<b>FY 2007 Initiative</b>
Completed the construction of 96 capital projects, including the expansion and upgrade of the Noman M. Cole Wastewater Pollution Control Plant and the new Cub Run RECenter.	☑	
Evaluate future projects using implementation strategies that may include, but are not limited to, Design/Build, Public-Private Transportation Act (PPTA), Public-Private Education Act (PPEA), and “turn-key” Project Managers, which are managers who are in charge of a project from start to finish.		☑
Refine and implement pre-qualified competitive bid procedures to improve timely delivery, quality, and cost effectiveness.		☑
Received two awards from the American Public Works Association (APWA) for “Project of the Year” and “Contractor of the Year” for the Judicial Center Parking Structure and the Chain Bridge Sanitary Sewer Project. The awards recognize outstanding projects in the Virginia, Maryland, and Washington Metropolitan Area as determined by a panel of judges selected by APWA.	☑	
 <b>Connecting People and Places</b>	<b>Recent Success</b>	<b>FY 2007 Initiative</b>
Continue design work, land acquisition and construction of projects included in the Board of Supervisors Four-Year Transportation Initiative. DPWES is managing approximately 18 projects as part of this major transportation initiative.	☑	☑
Completed 18 sidewalk/trail projects and the installation of 13 bus shelters countywide. Several more bus shelter sites will be under construction over the next several months.	☑	☑
Continue to enhance outreach efforts to inform residents and vendors about proposed and ongoing projects through the County Web site. New information added to the Web site includes the publication of a quarterly status report to inform residents about ongoing capital construction projects. In FY 2004, reports were enhanced by use of a map and district index. During FY 2006, a Geographic Information System (GIS) map of capital project locations will assist residents in finding information for ongoing projects. Additional enhancements are planned.	☑	☑
Complete surveys to monitor progress, including a user survey to measure how satisfied building users are with completed buildings, such as fire stations, libraries and district police stations. In FY 2006-2007, new surveys of customers will be developed and administered to determine the level of customer satisfaction with completed capital projects.	☑	☑

## Capital Facilities

 <b>Practicing Environmental Stewardship</b>	<b>Recent Success</b>	<b>FY 2007 Initiative</b>
<p>Capital Facilities is instrumental in the planning, design and construction management of sanitary sewer improvement projects that provide residents the ability to switch from septic fields to County sewer. Due to the failure of many private septic fields, corrective measures often become necessary. To address this problem, the Kirby Road, Shirley Acres, and Marlin Drive projects have made sanitary sewer available to residents with failing septic systems in FY 2005.</p>	<input checked="" type="checkbox"/>	
<p>Continue the development of a Green Building program specifically tailored to the needs of Fairfax County that is practical and economical while maintaining the environmental intent of low impact development and Leadership in Energy and Environmental Design (LEED). Two County fire stations are now under construction which will qualify for a LEED certification.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Removed silt and dirt to increase the depth and to create a wetland sanctuary at Lake Accotink, which was created by a Stormwater dam of Accotink Creek. The maintenance and additions of Stormwater management dams and ponds is a critical component of the protection of the environment and residents within the County.</p>	<input checked="" type="checkbox"/>	
 <b>Exercising Corporate Stewardship</b>	<b>Recent Success</b>	<b>FY 2007 Initiative</b>
<p>Developed new internal performance measures for individual Divisions and external performance measures for budgetary and business-wide use.</p>	<input checked="" type="checkbox"/>	
<p>The Capital Facilities' Land Acquisition Process Redesign Team (LAPRT) reviews all land acquisition processes required for the implementation of capital projects. The LAPRT will identify ways to streamline and expedite the land acquisition process in an effort to improve the overall delivery of capital projects.</p>		<input checked="" type="checkbox"/>
<p>Develop and implement a comprehensive workforce plan for key disciplines in DPWES. Components of the workforce plan that will be evaluated include competencies, succession, knowledge management, recruitment, hiring, retention, staff development, compensation, benefits and workforce support.</p>		<input checked="" type="checkbox"/>

# Capital Facilities

## Budget and Staff Resources

Agency Summary					
Category	FY 2005 Actual	FY 2006 Adopted Budget Plan	FY 2006 Revised Budget Plan	FY 2007 Advertised Budget Plan	FY 2007 Adopted Budget Plan
Authorized Positions/Staff Years					
Regular	127/ 127	129/ 129	135/ 135	135/ 135	139/ 139
Expenditures:					
Personnel Services	\$7,364,558	\$8,705,664	\$8,723,978	\$9,403,418	\$9,403,418
Operating Expenses	6,270,275	6,554,912	6,739,100	6,680,570	6,680,570
Capital Equipment	8,686	0	31,676	0	0
<b>Subtotal</b>	<b>\$13,643,519</b>	<b>\$15,260,576</b>	<b>\$15,494,754</b>	<b>\$16,083,988</b>	<b>\$16,083,988</b>
Less:					
Recovered Costs	(\$5,009,327)	(\$6,206,411)	(\$6,224,725)	(\$6,459,539)	(\$6,459,539)
<b>Total Expenditures</b>	<b>\$8,634,192</b>	<b>\$9,054,165</b>	<b>\$9,270,029</b>	<b>\$9,624,449</b>	<b>\$9,624,449</b>
Income:					
Land Acquisition					
Charges for Service	\$1,070	\$1,100	\$1,100	\$1,100	\$1,100
<b>Total Income</b>	<b>\$1,070</b>	<b>\$1,100</b>	<b>\$1,100</b>	<b>\$1,100</b>	<b>\$1,100</b>
<b>Net Cost to the County</b>	<b>\$8,633,122</b>	<b>\$9,053,065</b>	<b>\$9,268,929</b>	<b>\$9,623,349</b>	<b>\$9,623,349</b>

## FY 2007 Funding Adjustments

The following funding adjustments from the FY 2006 Revised Budget Plan are necessary to support the FY 2007 program:

- ◆ **Employee Compensation** **\$434,659**  
 An increase of \$434,659 in Personnel Services associated with salary adjustments necessary to support the County's compensation program.
- ◆ **New Positions for Developer Default Program** **\$124,472**  
 An increase of \$124,472 for the addition of 2/2.0 SYE positions for the Developer Default Program, including 1/1.0 SYE Engineer III in the Planning and Design Division and 1/1.0 SYE Engineering Technician III in the Construction Management Division. Due to the increasing volume of developer projects going into default, these positions are necessary in order to bring projects to completion in a timely manner. In addition, it should be noted that the FY 2007 net cost to fund the addition of these positions is \$158,079. The net cost includes \$33,607 in fringe benefits funding, which is included in Agency 89, Employee Benefits. For further information on fringe benefits, please refer to the Agency 89, Employee Benefits, narrative in the Nondepartmental program area section of Volume 1.
- ◆ **New Positions for Stormwater Construction Support** **\$120,309**  
 An increase of \$120,309 for the addition of 2/2.0 SYE positions for stormwater construction support, including 1/1.0 SYE Engineer II in the Construction Management Division and 1/1.0 SYE Right of Way Agent in the Land Acquisition Division. These positions will support the increased workload arising from watershed implementation plans and will be included on a team responsible for managing over 100 stormwater construction contracts. In addition, it should be noted that the FY 2007 net cost to fund the addition of these positions is \$153,152. The net cost includes \$32,843 in fringe benefits funding, which is included in Agency 89, Employee Benefits. For further information on fringe benefits, please refer to the Agency 89, Employee Benefits, narrative in the Nondepartmental program area section of Volume 1.

## Capital Facilities

- ◆ **Intergovernmental Charges** **\$18,958**  
An increase of \$18,958 is due to intergovernmental charges. Of this total, an increase of \$12,847 is due to the Department of Vehicle Services charges based on anticipated charges for fuel, vehicle replacement, and maintenance costs; and an increase of \$6,111 is for Information Technology charges based on the agency's historic usage of mainframe applications.
- ◆ **Streetlight Operation** **\$106,700**  
An increase of \$106,700 in Operating Expenses for the operation of 2,373 additional streetlights, primarily due to new development, revitalization projects and residents' petitions. The increase is comprised of \$56,700 for new streetlights and \$50,000 due to rising energy cost projections.
- ◆ **Recovered Costs** **(\$234,814)**  
An increase of \$234,814 in Recovered Costs based on projected salary and operating requirements.
- ◆ **Carryover Adjustments** **(\$85,864)**  
A decrease of \$85,864 due the carryover of one-time expenses as part of the *FY 2005 Carryover Review*.

### Board of Supervisors' Adjustments

*The following funding adjustments reflect all changes to the FY 2007 Advertised Budget Plan, as approved by the Board of Supervisors on May 1, 2006:*

- ◆ The Board of Supervisors made no adjustments to this agency.

### Changes to FY 2006 Adopted Budget Plan

*The following funding adjustments reflect all approved changes in the FY 2006 Revised Budget Plan since passage of the FY 2006 Adopted Budget Plan. Included are all adjustments made as part of the FY 2005 Carryover Review and all other approved changes through December 31, 2005:*

- ◆ **Carryover Adjustments** **\$85,864**  
An increase of \$85,864 in encumbered carryover as part of the *FY 2005 Carryover Review*. Of this amount, \$54,188 is included for Operating Expenses, and \$31,676 is included for Capital Equipment for the purchase of surveying equipment.
- ◆ **Position Redirections** **\$0**  
In FY 2006, the County Executive approved the redirection of 1/1.0 SYE position from Fund 401, Sewer Operation and Maintenance to establish 1/1.0 SYE Engineer III position in Capital Facilities Construction Management Division to oversee the contracting of construction services for the stormwater projects as well as manage construction inspectors provided to the County through outsourcing. In addition, the County Executive approved the redirection of 1/1.0 SYE position for the establishment of 1/1.0 SYE Engineer III for the Planning Design Division to provide full-time, on-site project management for the construction phase of the Public Safety and Transportation Operations Center (PSTOC). This position will be responsible for design decisions, cost control, consultant contract administration and project documentation, as well as providing coordination with the Construction Management Division, public safety agency team members, and the Department of Information Technology. There were no corresponding funding adjustments associated with these position redirections.

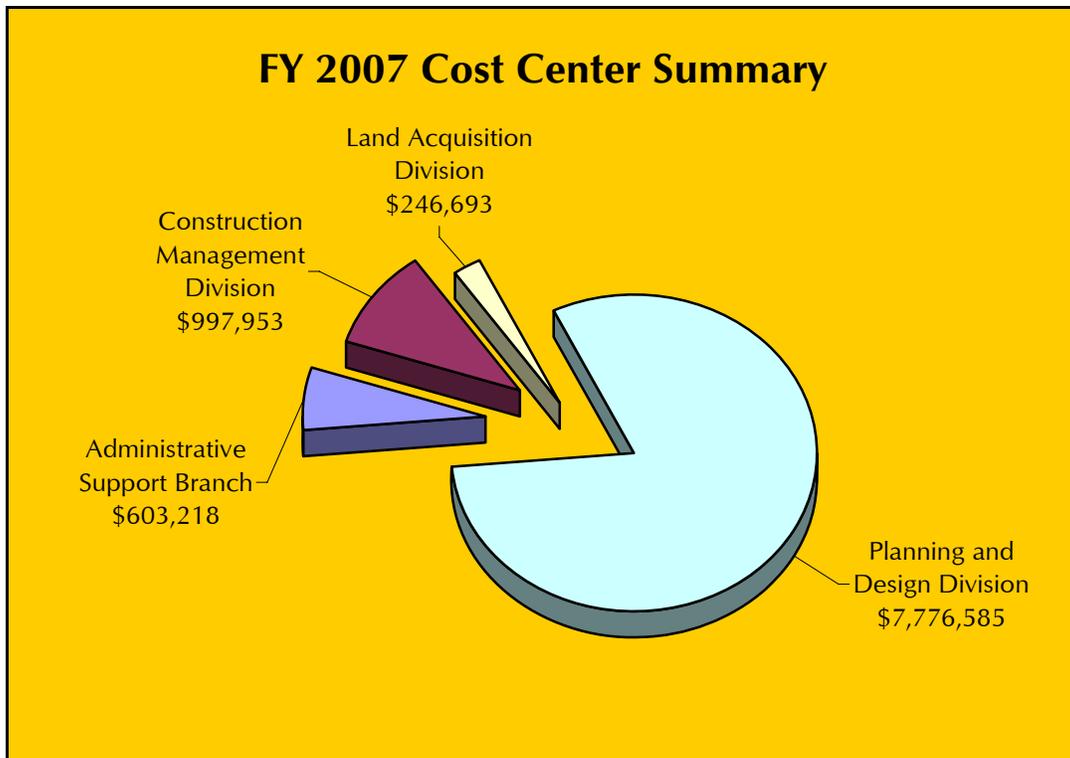
# Capital Facilities

The following funding adjustments reflect all approved changes to the FY 2006 Revised Budget Plan from January 1, 2006 through April 24, 2006. Included are all adjustments made as part of the FY 2006 Third Quarter Review:

- ◆ **Third Quarter Adjustments** **\$130,000**  
An increase of \$130,000 in Operating Expenses was approved for utility costs associated with the operation of County streetlights and higher-than-projected electric and natural gas costs.
- ◆ **Position Redirections** **\$0**  
In FY 2006, the County Executive approved the redirection of 4/4.0 SYE positions for the Planning Design Division, including 1/1.0 SYE Engineer IV, 1/1.0 SYE Engineer III, and 2/2.0 SYE Engineers II. These positions will provide both staff and project management responsibilities for new projects occurring throughout the County, including numerous public safety, human service, and library facilities, as well as pedestrian improvements. In addition, these positions will aide with the heavy workload associated with the Four Year Transportation Program and the Fall 2007 Transportation Bond Referendum. There were no corresponding funding adjustments associated with these position redirections.

## Cost Centers

Capital Facilities has four cost centers including Administrative Support, Construction Management, Land Acquisition and Planning and Design.



# Capital Facilities

## Administrative Support Branch



Funding Summary					
Category	FY 2005 Actual	FY 2006 Adopted Budget Plan	FY 2006 Revised Budget Plan	FY 2007 Advertised Budget Plan	FY 2007 Adopted Budget Plan
Authorized Positions/Staff Years					
Regular	8/ 8	8/ 8	8/ 8	8/ 8	8/ 8
<b>Total Expenditures</b>	<b>\$588,714</b>	<b>\$576,355</b>	<b>\$576,434</b>	<b>\$603,218</b>	<b>\$603,218</b>

Position Summary					
1 Management Analyst IV	1 Programmer Analyst III	1 Administrative Assistant IV			
3 Accountants I	2 Network/Telecom Analysts II				
<b>TOTAL POSITIONS</b>					
<b>8 Positions / 8.0 Staff Years</b>					

### Goal

To provide personnel, procurement, information technology, budget and financial support to the cost centers within Capital Facilities to ensure they have adequate resources available in order to accomplish their goals.

## Planning and Design Division



Funding Summary					
Category	FY 2005 Actual	FY 2006 Adopted Budget Plan	FY 2006 Revised Budget Plan	FY 2007 Advertised Budget Plan	FY 2007 Adopted Budget Plan
Authorized Positions/Staff Years					
Regular	46/ 46	46/ 46	51/ 51	48/ 48	52/ 52
<b>Total Expenditures</b>	<b>\$7,141,529</b>	<b>\$7,456,279</b>	<b>\$7,608,065</b>	<b>\$7,776,585</b>	<b>\$7,776,585</b>

Position Summary					
1 Director	19 Engineers III (1)	2 Administrative Assistants III			
1 Management Analyst II	13 Engineers II	1 Administrative Assistant I			
5 Engineers IV	7 Engineering Technicians III				
2 Project Coordinators	1 Engineering Technician II				
<b>TOTAL POSITIONS</b>					
<b>52 Positions (1) / 52.0 Staff Years (1.0)</b>					

( ) Denotes New Position

### Goal

To provide essential professional engineering design and project management services in support of Capital Improvement Project (CIP) implementation including: sanitary sewers, pump stations, commuter parking lots, building projects including fire stations, libraries, police stations, parking structures and other County facilities as well as commuter rail facilities, neighborhood improvement projects, commercial revitalization projects, roads, trails, sidewalks, developer defaults and streetlights.

# Capital Facilities

## Construction Management Division



Funding Summary					
Category	FY 2005 Actual	FY 2006 Adopted Budget Plan	FY 2006 Revised Budget Plan	FY 2007 Advertised Budget Plan	FY 2007 Adopted Budget Plan
Authorized Positions/Staff Years					
Regular	60/ 60	62/ 62	63/ 63	65/ 65	65/ 65
<b>Total Expenditures</b>	<b>\$767,700</b>	<b>\$841,971</b>	<b>\$905,970</b>	<b>\$997,953</b>	<b>\$997,953</b>

Position Summary					
1 Director	4 Engineering Technicians II	3 Senior Survey Analysts/Coordinators			
1 Management Analyst II	2 Supervising Engineering Inspectors	4 Survey Party Chiefs/Analysts			
2 Engineers IV	7 Senior Engineering Inspectors	4 Survey Instrument Technicians			
10 Engineers III	1 County Surveyor	1 Administrative Assistant III			
15 Engineers II (1)	1 Deputy County Surveyor	2 Administrative Assistants II			
3 Engineering Technicians III (1)	1 Chief of Survey Parties	3 Surveyor Aides			
<b>TOTAL POSITIONS</b>					
65 Positions (2) / 65.0 Staff Years (2.0)					

( ) Denotes New Positions

### Goal

To provide contract administration, inspections and land surveys for all assigned County capital construction projects, which will enhance governmental services to County citizens (excluding School Board Construction).

## Land Acquisition Division



Funding Summary					
Category	FY 2005 Actual	FY 2006 Adopted Budget Plan	FY 2006 Revised Budget Plan	FY 2007 Advertised Budget Plan	FY 2007 Adopted Budget Plan
Authorized Positions/Staff Years					
Regular	13/ 13	13/ 13	13/ 13	14/ 14	14/ 14
<b>Total Expenditures</b>	<b>\$136,249</b>	<b>\$179,560</b>	<b>\$179,560</b>	<b>\$246,693</b>	<b>\$246,693</b>

Position Summary					
1 Director	1 Engineering Technician II	6 Right-of-Way Agents (1)			
3 Engineering Technicians III	2 Senior Right-of-Way Agents	1 Administrative Assistant III			
<b>TOTAL POSITIONS</b>					
14 Positions (1) / 14.0 Staff Years (1.0)					

( ) Denotes New Position

### Goal

To acquire easements, dedications, rights-of-way and other fee purchases requested by Fairfax County agencies in order to keep capital construction projects on schedule.

## Key Performance Measures

### Objectives

- ◆ To monitor design and construction activities in order to maintain construction cost growth at no more than 5.0 percent.
- ◆ To perform Value Engineering (VE) studies in accordance with the adopted BOS policy in order to identify cost savings while meeting required performance, with Return on Investment (ROI) of at least 25:1.

## Capital Facilities

Indicator	Prior Year Actuals			Current Estimate	Future Estimate
	FY 2003 Actual	FY 2004 Actual	FY 2005 Estimate/Actual	FY 2006	FY 2007
<b>Output:</b>					
Projects completed	79	56	60 / 96	63	75
Projects completed with total cost over \$10,000,000	2	0	2 / 3	0	0
Projects completed with total cost over \$100,000 and under \$10,000,000	28	19	18 / 32	20	20
Projects completed with total cost under \$100,000	49	37	40 / 61	43	55
Projects completed on time (1)	77	53	NA / NA	60	71
Projects completed within budget (1)	78	51	55 / NA	60	71
VE studies completed/accepted cost savings	4 / \$2,838,509	1 / \$168,572	2 / \$900,000 / 4/\$4,085,039	2/\$900,000	3/\$1,723,000
<b>Efficiency:</b>					
Design costs as a percent of construction costs for projects with total cost over \$100,000 and under \$10,000,000	11.2%	28.1%	25.0% / 16.2%	17.2%	17.2%
Design costs as a percent of construction costs for projects with total cost under \$100,000	73.0%	70.5%	70.0% / 34.2%	56.7%	56.7%
Construction contract administration costs as a percent of construction costs for projects with total cost over \$100,000 and under \$10,000,000	5.0%	12.4%	10.0% / 11.9%	9.2%	9.2%
Construction contract administration costs as a percent of construction costs for projects with total cost under \$100,000	14.0%	13.5%	15.0% / 13.0%	13.2%	13.2%
Staff cost per land acquisition instrument acquired for projects with total cost over \$100,000 and under \$10,000,000	\$1,702	\$1,484	\$1,632 / \$3,928	\$1,698	\$2,256
Staff cost per land acquisition instrument acquired for projects with total cost under \$100,000	\$2,471	\$3,815	\$4,096 / \$3,869	\$2,809	\$3,074
Cost per VE study	\$19,250	\$30,204	\$30,000 / \$29,025	\$27,753	\$27,753
<b>Outcome:</b>					
Contract cost growth (2)	3.3%	4.4%	5.0% / 4.7%	3.6%	3.6%
Return on investment ratio for VE studies	27:1	6:1	15:1 / 35:1	25:1	25:1

(1) The methodology for calculating the number of projects completed on time and the number of projects completed within budget is being reviewed and the numbers were unable to be determined in FY 2005. These categories will be reported in future years after the new methodology is established.

(2) Cost Growth = (Final Construction Contract Cost - Initial Construction Contract Cost) / Initial Construction Contract Cost \* 100

# Capital Facilities

## Performance Measurement Results

During 2005, Capital Facilities worked to implement the new performance measures for publication in the Capital Facilities Annual Budget. New software programs were developed and executed in order to effectively collect, store and manage data elements required by the new performance measures.

Value Engineering (VE) studies involves a thorough, intensive review of project plans by a group of individuals with engineering expertise in various disciplines. The review identifies the functions of products, establishes the worth of those functions, and generates alternatives through the use of creative thinking. VE studies are performed at the preliminary design stage where the design is 35 percent complete and studies are conducted by using a combination of in-house staff and consultants depending on the type and size of the project. After VE study recommendations are evaluated by project managers and impacted agencies, they are reviewed by the Director of DPWES, who ultimately decides which recommendations, and associated savings will be accepted. The amount of VE cost savings and return on investment ratios vary from one fiscal year to another and are somewhat dependent on the both the type and size of projects reviewed. In FY 2005, four VE studies were completed on projects with a construction estimate totaling \$101,157,738, identifying \$9.9 million in savings with \$4.1 million in accepted savings.

Design costs include in-house design costs and consultant design costs, as well as the cost of survey work during design. Construction contract administration costs include the cost for in-house staff to administer construction contracts, as well as the cost of survey work during construction. The cost of construction includes the costs for contracted construction, in-house construction, and utility connections/relocations. The efficiency measure for staff costs per land acquisition instrument acquired is calculated by dividing land acquisition staff costs by the number of instruments, such as easements, acquired.

The efficiency measures are further broken out by the size of the completed projects. It is substantially more efficient to design and administer construction for larger projects and the staff cost per instrument is also less for larger projects. The three category breakout clearly shows the economy of scale achieved with larger projects.

During FY 2005, 96 projects were completed and 61 of these projects cost less than \$100,000, showing a larger volume of smaller projects than in previous years. Typically, smaller projects result in increased design and administration costs as a percentage of total project costs as compared to larger, more expensive projects which tend to be more cost-efficient. However, since there were three projects with total costs over \$10 million completed in FY 2005 versus zero completed in FY 2004, the design and contract administration costs as a percent of costs efficiency indicator decreases from FY 2004 to FY 2005 despite the dramatic increase in smaller projects, as they are offset by the cost-effectiveness of the larger, more costly projects.

The agency continues to maintain cost growth of less than 5.0 percent. The use of abbreviated designs has been expanded where possible in order to improve project delivery times. Using abbreviated designs may result in increases in cost growth, but current cost growth rates remain below the 5.0 percent benchmark.

In FY 2005, the agency completed more projects than anticipated. The number of smaller projects was the underlining reason for completing more projects than anticipated. Wet weather patterns over the previous two construction seasons continued to hamper construction activities. In addition, extremely active hurricane seasons in 2003 and 2004 impacted construction.