Fund 317
Capital Renewal Construction

Focus

This fund supports the long-term needs of the County's capital assets to maximize the life of County facilities, avoid their obsolescence, and provide for planned repairs, improvements and restorations to make them suitable for organizational needs. Capital renewal is the planned replacement of building subsystems such as roofs, electrical systems, HVAC, plumbing systems, carpet replacement, parking lot resurfacing, fire alarm replacement and emergency generator replacement that have reached the end of their useful life. Without significant reinvestment in building subsystems, older facilities can fall into a state of ever decreasing condition and functionality, and the maintenance and repair costs necessary to operate the facilities increase.

Fairfax County will have a projected facility inventory of over 180 buildings in FY 2010 (excluding schools, parks, housing and human services residential facilities), with over 8.0 million square feet of space throughout the County. This inventory is expanding both with the addition of newly constructed facilities and by the acquisition of additional property. With such a large inventory, and the acquisition of additional facilities, it is critical that a planned program of repairs and restorations be maintained. In addition, the age of a major portion of this inventory of facilities is reaching a point where major reinvestments are required in the building subsystems.

Many County facilities have outdated HVAC and electrical systems that are susceptible to failure or are highly inefficient energy users. Sites are identified and each individual project involves a two-step process to complete both design and construction. Roof repairs and waterproofing are conducted in priority order after a detailed evaluation of all roofs at County facilities. Based upon the results of that evaluation, critical requirements are prioritized and a five-year plan is established. Repairs and replacement of facility roofs are considered critical to avoid the serious structural deterioration that occurs from roof leaks. By addressing this problem in a comprehensive manner, a major backlog of roof problems can be avoided. Carpet replacement and parking lot resurfacing are evaluated annually and prioritized based on the most critical requirements for high traffic areas. In addition, emergency generators and fire alarm systems are replaced based on equipment age, coupled with maintenance and performance history. Emergency minor repairs and renovations, usually generated by customer requests, are accomplished under the category of emergency building and repair. These small projects abate building obsolescence and improve the efficiency and effectiveness of facilities and facility systems. The following table outlines the expected service life of building subsystems used to project capital renewal requirements, coupled with actual condition of the subsystem component:

General Guidelines for Expected Service Life Of Building Subsystems

Electrical		**Plumbing**	
Lighting	20 years	Pumps	15 years
Generators	25 years	Pipes and fittings	30 years
Service/Power	25 years	Fixtures	30 years
Fire Alarms	15 years		
HVAC		**Finishes**	
Equipment	20 years	Broadloom Carpet	7 years
Boilers	15 to 30 years	Carpet Tiles	15 years
Building Control Systems	10 years	Systems Furniture	20 to 25 years
Conveying Systems		**Site**	
Elevator	25 years	Paving	15 years
Escalator	25 years		
		Roofs	
		Replacement	20 years

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In 2004, a comprehensive facilities condition assessment was conducted on 92 selected Fairfax County facilities (approximately 4.2 million square feet of space), representative of older facilities anticipated to have the most immediate capital renewal requirements. The assessment included a complete visual inspection of roofs and all mechanical and electrical components for each facility. Maintenance and repair deficiencies were identified and funding requirements estimated. Results from the survey indicated an estimated total of $80 million needed through 2010 or approximately $13 million per year to repair and meet expected repair and equipment replacement needs for these 92 facilities. The number of facilities evaluated represents approximately 50 percent of the current inventory. Therefore, it is estimated that a range of $22 to $25 million in capital renewal investment is required annually for the current building inventory.

The Facilities Management Department (FMD) prioritized the comprehensive facility assessment lists and classified projects into five categories. Projects were classified as Category F: urgent/safety related, or endangering life and/or property; Category D: critical systems beyond their useful life or in danger of possible failure; Category C: life-cycle repairs/replacements where repairs are no longer cost effective; Category B: repairs needed for improvements if funding is available, and Category A: good condition.

The industry standard for capital renewal investment is currently 2 percent of replacement value. Based on average replacement values of $150 per square foot, 2 percent would equate to capital renewal requirements of $3.00 per square foot. Budgeted renewal funds in the County have not reached this level. This may be due to the fact that much of the square footage added in the early 1990s was in the form of new facilities and thus has not yet required major capital renewal and subsystem replacement. However, this infrastructure is now aging and appropriate action must be taken to avoid system failures leading to potential disruptions in County services. The current level of requirements for FY 2010 by category is outlined below:

Category	Amount
Category F Projects	$12,630,000
Category D Projects	6,675,000
Category C Projects	5,975,000
Category B Projects	3,350,000
Emergency Systems Failure	500,000
Total	**$29,130,000**

This requested level of funding does not include significant estimated requirements at several County facilities which are under review for replacement, including the Massey Building and the Pine Ridge facility. In addition, this does not include any green building initiatives such as green roofs, enhanced lighting software, or energy audit work.

Funding in the amount of $6,795,000 is included in Fund 317, Capital Renewal Construction, in FY 2010. This level of funding is supported by a General Fund transfer of $2,470,000, and $4,325,000 in fund balance. The fund balance is based on revenues received from the Virginia Department of Transportation (VDOT) associated with acquisition and construction of the Dulles Toll Road. In FY 1982, a note payable was issued for the purpose of paying the costs of acquisition and construction of the Dulles Toll Road, and included County funds held in escrow by the State to ensure uninterrupted construction payments. These funds were provided within Fund 303, County Construction which primarily supported annual capital renewal expenditures, until the creation of Fund 317, Capital Renewal in FY 2006. Pay back of the escrow was due to the County by December 2008 based on an agreement between the Commonwealth and Fairfax County approved on December 22, 1982. The funding was received in FY 2008 and was held in reserve within Fund 317 to help offset capital renewal requirements in FY 2010.

Staff is currently working to supplement the General Fund supported or Paydown capital renewal program by developing alternative financing mechanisms to provide for a more sufficient level of funding. Capital Renewal funding has been supplemented in recent years by increasing bond referendum amounts associated with specific purposes. For example, the voters approved $5 million in the fall 2004 bond referendum for

library and human service facility capital renewal requirements and another $5 million in the fall 2006 bond referendum associated with public safety facility capital renewal requirements. This practice is expected to continue where appropriate. In addition, staff is developing the concept of a revolving fund, supported by $15 million annually through the sale of Economic Development Authority (EDA) bonds. This concept is expected to be further developed for implementation in FY 2011 or FY 2012.

FY 2010 funding, as detailed below, will provide for only the most critical category F (urgent/safety related, or endangering life) projects. This funds only 10 of the top 23 Category F projects. In addition, an amount of $500,000 is included for emergency repairs and replacements to County facilities in the event of a systems failure, or other unforeseen event. Based on budget constraints in FY 2010, funding is not included for the remaining Category F projects in the amount of $6,335,000; any Category D projects in the amount of $6,675,000; Category C projects in the amount of $5,975,000; or Category B projects totaling $3,350,000. Specific funding levels in FY 2010 include:

HVAC/Electrical Systems

This project provides for HVAC replacement at prioritized County facilities, based on the severity of problems including overloaded systems, fire hazards, and costly repairs. FY 2010 funding of $1,765,000 will provide for HVAC replacement and electrical repairs at a variety of County facilities. Funding of $350,000 will provide for the 30 year old Adult Detention Center which is experiencing significant problems with various HVAC components including water pumps, associated valves, cooling tower and air conditioning equipment. Funding supports the repair of water pump seals that are no longer closing properly due to numerous replacements of system parts. In addition, the cooling tower and air conditioning systems leak resulting in rust and corrosion and repairs are no longer cost effective. An amount of $150,000 is provided for the Massey Parking Garage, which is 15 years old, and requires replacement of the dry sprinkler pipes throughout the garage. The sprinkler system requires numerous repairs and maintenance caused by corrosion and leaks in the system. The 18 year old Government Center Parking Garage sprinkler system requires replacement at a cost of $380,000. The sprinkler system is experiencing corrosion due to rust and temperature changes. The corrosion deteriorates pinholes in the pipes which can cause the sprinkler system to release setting off the fire alarm systems; resulting in a potential evacuation of the building. In addition, the 27 year old Fair Oaks Fire Station air handling unit which is experiencing failure due to age and repairs is no longer cost effective ($150,000), the 20 year old Jermantown Garage which is experiencing inefficient system operations with HVAC components including air-conditioners, furnaces, radiant heaters, water heaters, and plumbing system components ($380,000), and the 24 year old Reston Library is experiencing inefficient HVAC components including boilers, pumps, failed duct work and variable air volume (VAV) boxes ($355,000). All of these repairs have been classified as safety imminent repairs, or critical systems beyond their useful life in risk of failure, or life-cycle repairs/replacements where repairs are no longer cost effective. In general, the useful life of HVAC/Electrical systems is 20 years.

Emergency Generator Replacement

This project provides for the replacement of emergency generators at County facilities that have outlived their useful life of 25 years. FY 2010 funding is included to replace the generators and obsolete parts for the 18 year old system at the Government Center ($1,500,000). In general, the useful life of generators is 25 years. This generator will provide emergency back-up for the critical Enterprise Technology and Operations Center (ETOC) within the Government Center which houses the County mainframe computer and corporate servers and is essential to on-going County business and service to citizens. There have been tremendous changes in the hardware, software, and communications infrastructure supporting County business, resulting in significant additions to the ETOC and this generator is imperative to ensure continued County operations.

Elevator Replacement

This project provides for the emergency elevator replacement program. This program was established to address the replacement of elevators that have outlived their useful life and are experiencing an increase in frequent breakdowns. FY 2010 funding is included to continue to replace obsolete elevator components at all 15 elevators installed in the 18 year old system at the Government Center ($2,750,000). Funding of $1.3 million was provided in FY 2009 to begin the replacement of obsolete elevator parts at the Government Center. FY 2010 funding will continue this effort and support replacement of the elevator equipment

including circuit boards, architectural and engineering costs, and installation and modification of related systems. This new elevator equipment will satisfy all current code requirements for elevator safety devices. In general, the useful life of elevators is 25 years; however, these elevators are experiencing an increased number of shut downs primarily attributed to problems with the circuit boards.

Fire Alarm Systems
This project provides for the replacement of fire alarm systems throughout the County. Fire alarm systems are replaced based on age and difficulty in obtaining replacement parts and service. FY 2010 funding in the amount of $80,000 is included for the replacement of fire alarm systems installed 38 years ago at the Mount Vernon Fire Station, which is experiencing failure due to age and obsolete system parts. In general, the useful life of fire alarm systems is 15 years; therefore, this system is significantly beyond its useful life, and is obsolete making repair parts unavailable.

Emergency Building Repairs
This project provides for emergency repairs, minor renovations, and critical upgrading of various buildings and facilities throughout the County. Projects include emergency repairs to buildings and building equipment, plumbing repairs, minor renovations to electrical and mechanical systems, structural repairs, vandalism abatement, and other non-recurring construction and repair projects. FY 2010 funding in the amount of $200,000 is included for emergency repairs at the 17 year old Pennino Building. Funding is required to replace main entrance doors which are rusted and deteriorating due to temperature changes and treatment of ice and snow over the years. This deterioration could result in a collapse of the main front door area resulting in safety hazards to patrons using the building. The doors are currently not functioning properly, causing energy inefficiencies and reduced insulation. The front of the building requires custom made replacement for the revolving door and 2 side doors, one of which is consistently unavailable due to malfunctioning.

Emergency Systems Failures
This project provides for emergency repairs at County facilities in the event of a major systems failure such as a large HVAC system, or other unforeseen event. Currently, the County has limited capacity to deal with potential system failures. The County's current capital renewal program emphasizes preventative maintenance primarily because investing in aging and deteriorating building systems and components can alleviate the need for future expenditures, often resulting in significant cost avoidance. If a system failure should occur, there is the potential that a County facility may shut down, suspending services to residents and disrupting County business. FY 2010 funding of $500,000 will allow this project to be maintained at a level to allow potential disruptions to be corrected immediately.

Changes to FY 2009 Adopted Budget Plan

The following funding adjustments reflect all approved changes in the FY 2009 Revised Budget Plan since passage of the FY 2009 Adopted Budget Plan. Included are all adjustments made as part of the FY 2008 Carryover Review and all other approved changes through September 15, 2008:

- As part of the *FY 2008 Carryover Review*, the Board of Supervisors approved an increase of $23,925,951 due to the carryover of unexpended project balances in the amount of $26,425,951, partially offset by a decrease of $2,500,000. This decrease supported a transfer from the Old Courthouse capital renewal project to Fund 312, Public Safety Construction to support the Jennings Judicial Center Renovation project due to higher than anticipated expenses associated with asbestos removal.

A Fund Statement and a Summary of Capital Projects are provided on the following pages. The Summary of Capital Projects may include some projects without a Total Project Estimate amount. These projects are considered "continuing" projects or projects for which funding is necessary on an ongoing basis (e.g., a contingency or planning project).

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FUND STATEMENT

Fund Type G30, Capital Project Funds | **Fund 317, Capital Renewal Construction**

	FY 2008 Actual	FY 2009 Adopted Budget Plan	FY 2009 Revised Budget Plan	FY 2010 Baseline Budget
Beginning Balance	**$12,851,733**	**$0**	**$21,750,951**	**$4,325,000**
Revenue:				
Sale of Bonds [1]	$3,000,000	$0	$9,000,000	$0
State Aid [2]	7,056,000	6,924,321	0	0
VDOT Reimbursement [3]	4,325,000	0	0	0
Total Revenue	$14,381,000	$6,924,321	$9,000,000	$0
Transfer In:				
General Fund (001)	$1,943,321	$0	$6,924,321	$2,470,000
Total Transfers In	$1,943,321	$0	$6,924,321	$2,470,000
Total Available	**$29,176,054**	**$6,924,321**	**$37,675,272**	**$6,795,000**
Total Expenditures	$7,051,103	$6,924,321	$30,850,272	$6,795,000
Transfers Out:				
County Construction (303)[4]	$374,000	$0	$0	$0
Public Safety Construction (312)[5]	0	0	2,500,000	0
Total Transfers Out	$374,000	$0	$2,500,000	$0
Total Disbursements	**$7,425,103**	**$6,924,321**	**$33,350,272**	**$6,795,000**
Ending Balance[6]	**$21,750,951**	**$0**	**$4,325,000**	**$0**

[1] The sale of bonds is presented here for planning purposes only. Actual bond sales are based on cash needs in accordance with Board policy. On November 7, 2006, the voters approved a $125 million Public Safety Bond Referendum, of which $14 million was designated for capital renewal purposes. An amount of $3.0 million was sold as part of the January 2008 Bond Sale. Including prior sales, an amount of $9.0 million remains in authorized but unissued bonds from the November 7, 2006 bond referendum.

[2] Represents House Bill 599 state revenues. FY 2009 House Bill 599 revenues are now reflected in the General Fund and transferred to Fund 317 for ease of accounting.

[3] A total of $4,325,000 in revenue has been received from the Virginia Department of Transportation (VDOT) for a revenue note payable to Fairfax County associated with acquisition and construction of the Dulles Toll Road. In FY 1982, a note payable was issued for the purpose of paying the costs of acquisition and construction of the Dulles Toll Road, and included County funds held in escrow by the State to ensure uninterrupted construction payments. These funds were provided within Fund 303, County Construction which primarily supported annual capital renewal expenditures, until the creation of Fund 317, Capital Renewal in FY 2006. Pay back of the escrow was due to the County by December 2008 based on an agreement between the Commonwealth and Fairfax County approved on December 22, 1982. This revenue was held in reserve within fund balance to help offset capital renewal requirements in FY 2010.

[4] Represents a Transfers Out to Project 009504, Enterprise and Technology Operations Center (ETOC) Renovation, in Fund 303, County Construction to fund higher than anticipated costs associated with HVAC replacement and electrical support systems.

[5] Represents a Transfers Out to Fund 312, Public Safety Construction of $2,500,000 to support higher than anticipated expenses associated with asbestos removal within Project 009209, Judicial Center Renovation.

[6] Capital projects are budgeted based on the total project costs. Most projects span multiple years, from design to construction completion. Therefore, funding for capital projects is carried forward each fiscal year, and ending balances fluctuate, reflecting the carryover of these funds.

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FY 2010 Summary of Capital Projects

Fund: 317 Capital Renewal Construction

Project #	Description	Total Project Estimate	FY 2008 Actual Expenditures	FY 2009 Revised Budget	FY 2010 Baseline Budget
003099	Emergency Building Repairs		$31,393.30	$615,046.85	$200,000
003100	Fire Alarm Systems		270,467.17	2,787,531.55	80,000
009132	Roof Repairs and Waterproofing		1,655,944.39	225,389.61	0
009133	Carpet Replacement		22,711.69	205,864.70	0
009136	Parking Lot and Garage Repairs		571,079.59	57,319.13	0
009145	Emergency Systems Failures		370,565.82	1,223,329.67	500,000
009146	Transferred School Site Stabilitzation		218,620.90	242,298.46	0
009151	HVAC/Electrical Systems		2,882,851.93	9,577,507.34	1,765,000
009431	Emergency Generator Replacement		68,471.79	715,685.45	1,500,000
009481	Juvenile/Human Services Capital Renewal		109,162.53	14,812.07	0
009600	Elevator Replacement		0.00	4,535,321.00	2,750,000
009601	Public Safety Capital Renewal		849,833.64	10,650,166.36	0
Total		**$0**	**$7,051,102.75**	**$30,850,272.19**	**$6,795,000**