

# Countywide Infrastructure Replacement Requirements

## PROGRAM DESCRIPTION

This section provides a compilation of the Infrastructure Replacement and Upgrade requirements associated with the various program areas contained in the Capital Improvement Program (CIP). Infrastructure Replacement and Upgrades is the planned replacement of building subsystems such as roofs, electrical systems, HVAC systems, plumbing systems and other infrastructure that has reached the end of its useful life. Without significant reinvestment in building subsystems, older facilities can fall into a state of deterioration and the maintenance and repair costs necessary to keep them functional will increase. One of the primary roles in facility management is to maximize the life of facilities, avoid their obsolescence and provide for a planned program of repairs, improvements and restorations. Infrastructure Replacement and Upgrades projects also include the reinvestment required for stormwater facilities and conveyance pipes, sewer lines, parks, trails, and bus shelters. It is important to support the reinvestment and maintenance of spaces, structures and infrastructure in a routine, scheduled, or anticipated fashion to prevent failure and/or degradation. More importantly, this type of infrastructure replacement and upgrade work can reduce the potential for the exorbitant cost and inconvenience associated with unanticipated failures and safety concerns.

## LINK TO THE COMPREHENSIVE PLAN

Fairfax County's Comprehensive Plan has established a number of objectives and policies in order to:

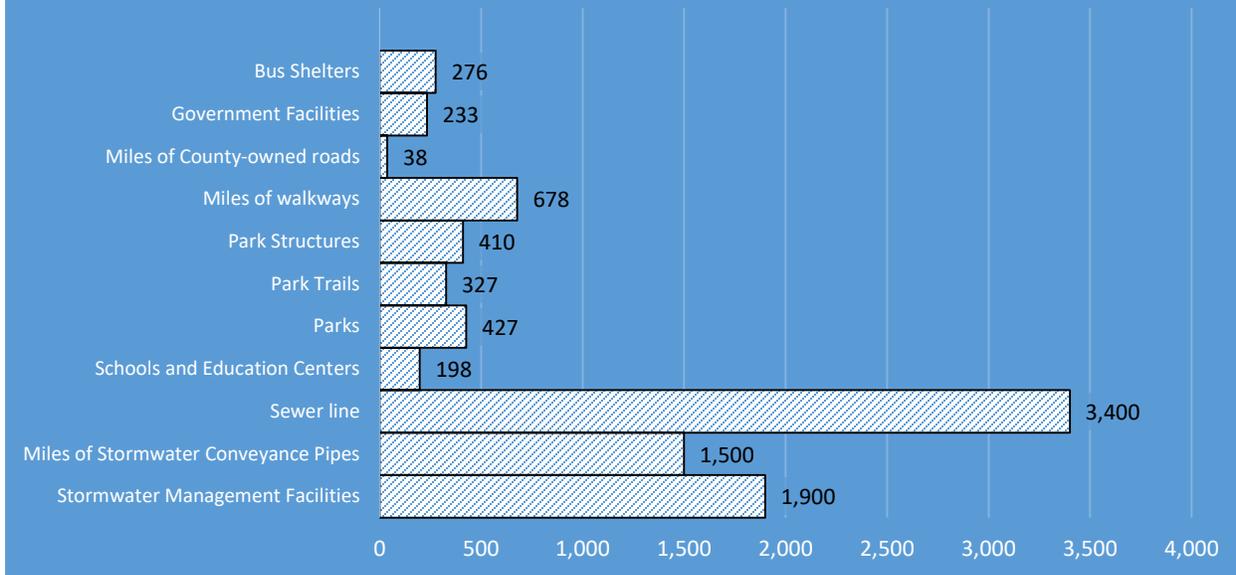
- ✓ Maintain a high-quality system of public infrastructure.
- ✓ Ensure adequate infrastructure replacement and upgrades of existing facilities, and provide urgently needed repairs to meet public health or safety needs.

Source: 2017 Edition of the Fairfax County Comprehensive Plan, Area IV, and the Policy Plan Element, Economic Development and Public Facilities Sections, as amended.

## CURRENT INFRASTRUCTURE REPLACEMENT PROGRAM

As the County infrastructure ages, more frequent replacement and upgrades are required. Fairfax County's inventory of infrastructure includes not only government buildings, but housing units, miles of walkways and sewer pipe and many facilities such as residential facilities and fire stations that operate 24/7, 365 days per year. Infrastructure replacement and upgrades are prioritized based on life safety concerns, repair history and availability of replacement parts. The following chart displays some of the types of infrastructure that the County is responsible for maintaining.

## INVENTORY OF MAJOR COUNTY FACILITIES



### **Infrastructure Replacement and Upgrades**

In the Spring of 2014, the Board of Supervisors and the School Board approved the Infrastructure Financing Committee's Final Report and Recommendations regarding long-term maintenance plans for both the County and Schools. The Report contained many recommendations, one of which was to develop standard definitions. The Joint Board definition approved for Infrastructure Replacements and Upgrades is stated below:

### ***INFRASTRUCTURE REPLACEMENT AND UPGRADES***

Infrastructure Replacement and Upgrades refers to the planned replacement of building subsystems that have reached the end of their useful life. These systems, once replaced, will have an average life cycle of 20 years or more. Without significant reinvestment in facility 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. Currently these types of Infrastructure Replacement and Upgrades are funded within operational budgets or financed using municipal bonds. Examples of Infrastructure Replacement and Upgrades include:

- Roof Replacement
- Electrical System Replacement
- HVAC Replacements
- Plumbing Systems Replacements
- Replacement Windows
- Parking Lot Resurfacing
- Fire Alarm System Replacements
- Sprinkler Systems
- Emergency Generator Replacements
- Elevator Replacement

### **Infrastructure Life Cycles**

For planning purposes, the County uses the following life cycle guidelines when projecting future replacement requirements. Some of the major work completed annually at County facilities includes the replacement of building subsystems: HVAC and electrical system repairs and replacement, roof repairs and waterproofing, carpet replacement, parking lot and garage repairs, window repairs/replacement, elevator/escalator repairs/replacement, fire alarm replacement and emergency generator replacement. Replacement of these building subsystems is based on not only age and lifecycle, but on repair history, safety concerns, and availability of replacement parts. The following chart includes the expected lifecycle of building infrastructure.

<b>GENERAL GUIDELINES FOR EXPECTED SERVICE LIFE OF BUILDING SUBSYSTEMS</b>	
<b>ELECTRICAL</b>	
Service/Power	25 years
Generators	25 years
Lighting	20 years
Fire Alarms	15 years
<b>HVAC</b>	
Equipment	20 years
Boilers	15 to 30 years
Building Control Systems	10 years
<b>PLUMBING</b>	
Pipes and fittings	30 years
Fixtures	30 years
Pumps	15 years
<b>OTHER</b>	
Elevator	25 years
Escalator	25 years
Systems Furniture	20 to 25 years
Roofs	20 years
Paving	15 years
Carpet Tiles	15 years
Broadloom Carpet	7 years

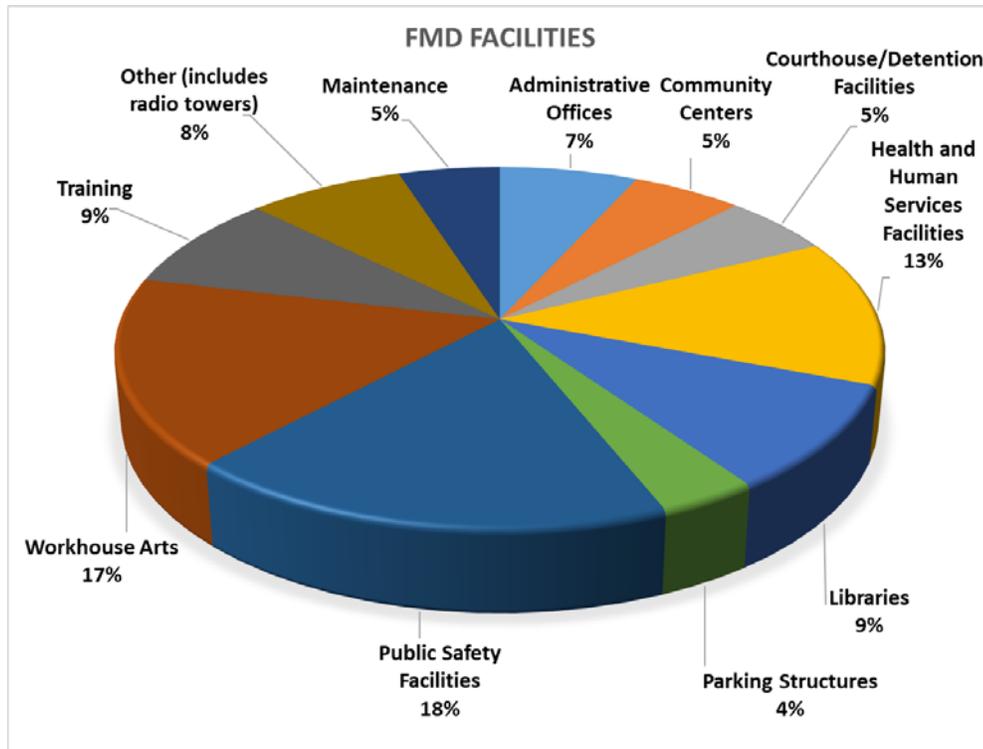
### **Program Area Requirements**

The sections that follow are grouped by specific capital program areas. Each program area has identified slightly different methodologies for categorizing projects, measuring the facility conditions and identifying funding sources. Many program areas are assessed on an annual basis and some have developed multi-year plans for maintaining infrastructure.

Each year, many County agencies prioritize and classify infrastructure replacement and upgrades projects into five categories. Projects are 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. Other County organizations have other methodologies for prioritization of projects, including the Fairfax County Public Schools (FCPS). FCPS uses a Comprehensive Investment Capital Plan (CICP) which provides an assessment index (AI) to prioritize capital asset renewal projects, based on the capital asset's useful life and criticality.

## County Facility Infrastructure Replacement and Upgrades - FMD

The Facilities Management Department (FMD) currently provides support for evaluating facilities, identifying problems, developing costs estimates, establishing priorities and performing the upgrades required to county-owned buildings. Fairfax County will have a projected FY 2020 facility inventory of over 11 million square feet of space throughout the County (excluding schools, parks, and housing facilities). This inventory is expanding both with the addition of newly constructed facilities and with the acquisition of additional property. With such a large inventory, 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. The chart below includes the types of facilities managed by FMD.



FMD is currently responsible for an inventory of 233 buildings. Of this amount, 12 facilities are maintained by FMD, but Infrastructure Replacement and Upgrade work is performed by another entity, such as the Department of Housing and Community Development. As the inventory of County facilities age, reinvestment in buildings and building equipment becomes critical. Currently, 65 percent of the buildings for which FMD has responsibility for infrastructure replacement and upgrades are over 20 years old. Per industry standards, most building systems require replacement at 20 to 25 years of age. Infrastructure replacement and upgrades extend the serviceability and life of a building and provide for the continued effective, efficient and safe operation of a building. These needs vary by building size and type, the extent of facility use, and maintenance management.



Many County facilities have outdated HVAC and electrical systems which are susceptible to failure or are highly inefficient energy users. Sites are identified and each individual project involves a two-step process normally requiring two years to complete design and construction. Roof repairs and waterproofing are conducted in priority order after an annual evaluation of the maintenance history. Based upon the results of that evaluation, critical requirements are prioritized and a plan is established. Repairs and replacement of facility roofs are considered critical to avoid serious structural deterioration caused by water 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. Minor repairs and renovations are also conducted in priority order. These projects, usually generated by customer requests, are small projects which abate building obsolescence, improve facility efficiency and effectiveness and address major structural repairs.

Each year, FMD prioritizes and classifies infrastructure replacement and upgrades projects into five categories. Projects are 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.

**Acceptable levels of Infrastructure Replacement and Upgrades:** For many years, the requirement for County infrastructure replacement and upgrades has been estimated at \$26 million per year. This estimate is based on collected assessment data, as well as industry standards (2 percent of the current replacement value). Based on current staffing levels, the complexity of many of the projects, and the timeline for completing replacement and upgrade projects, it is estimated that approximately \$15 million per year would be a good funding goal.

The following chart includes both funded and unfunded infrastructure replacement and upgrade requirements identified to date at County owned facilities. This list totals approximately \$130.7 million, of which \$8.5 million is proposed to be funded as part of the *FY 2019 Third Quarter or Carryover Review*. In addition, approximately \$67 million is associated with projects that are scheduled for renovation as part of the 5-10 year CIP period. As a result, the total requirement could be reduced to approximate \$55.2 million. However, this number is a moving target, as building systems and components can fail without notice and many buildings in the portfolio have not been assessed in over 15 years. In addition, many of facilities with category “F” and “D” upgrade projects identified may not be remediated for several years. The backlog requirements will continue to increase as capital components pass the end of their useful life.

Category	Proposed		
	FY 2019 Third Quarter/Carryover	Unfunded	Total
Asphalt and Paving	\$0	\$6,985,113	\$6,985,113
Building Envelope	\$0	\$9,746,982	\$9,746,982
Electrical	\$708,000	\$18,554,329	\$19,262,329
Elevators and Escalators	\$460,000	\$5,160,298	\$5,620,298
Fire Alarms and Fire Suppression	\$415,000	\$9,633,586	\$10,048,586
Generators	\$0	\$1,266,132	\$1,266,132
HVAC & Building Automation	\$5,080,000	\$49,873,358	\$54,953,358
Interior & Exterior Repairs	\$345,000	\$6,932,127	\$7,277,127
Plumbing	\$0	\$7,634,409	\$7,634,409
Roof	\$1,530,000	\$4,407,994	\$5,937,994
Parking Garage	\$0	\$1,939,000	\$1,939,000
<b>Total</b>	<b>\$8,538,000</b>	<b>\$122,133,328</b>	<b>\$130,671,328</b>

**Emergency System Failures Project:** In addition to the planned replacement of building systems, unplanned emergencies often occur. As part of the *FY 2013 Carryover Review*, the Board of Supervisors approved an amount of \$5.0 million to support unexpected emergency system failures that occur at aging County facilities throughout the year. This project provides a source of funding for unforeseen emergency repairs and allows FMD to address projects not currently funded for which repairs are becoming more imminent. The Board makes every effort to replenish this fund annually as part of the Carryover Review in order to maintain this level of funding and address emergency repairs at facilities in the event of a major systems failure. Some examples of Emergency System Failure projects include: the replacement of a failed Uninterruptable Power Supply at the Jennings Courthouse, replacement of a failed booster pump at the Government Center, replacement of failed grease piping and traps in the Pennino Building child care center kitchen, replacement of electrical service at West Ox Department of Vehicle Services Garage to correct safety issues, structural repairs to the Government Center cooling towers and platforms, replacement of a failed roof top unit at the Kings Park Library, remediation of tunnels at the Workhouse Arts Center, replacement of the failed/leaking roof at the Jennings Courthouse, drainage corrections at the Clifton Fire Station and Town Hall, and replacement of the chiller at Reston Library to correct a noise ordinance violation.

## **Fairfax County Public Schools (FCPS)**

Fairfax County Public School (FCPS) is the largest educational system in the Commonwealth of Virginia and the tenth largest school system nationwide, ranked by enrollment. FCPS is currently responsible for 191 schools and 7 special education centers. There are currently 141 Elementary Schools, 23 Middle Schools, 22 High Schools, 3 Secondary Schools (Grades 7 through 12), 2 Alternative Schools and 7 Special Education Centers. FCPS maintains more than 27 million square feet of school buildings and office space, including 173 Energy Star certified schools (more than any other school system in the country). FCPS has a robust capital program including renovations, new schools and capacity enhancements. In addition, approximately \$10 million is allocated annually for infrastructure replacement and upgrades at schools, centers, and administrative facilities. In addition, since FY 2016 the County has transferred \$13.1 million annually (a total of \$39.3 million through FY 2018) to the FCPS Capital Program to offset expenses previously funded by school bonds for facility infrastructure replacement and upgrades. This \$13.1 million transfer supports infrastructure repairs, replacement, and upgrades in school system facilities such as HVAC, ADA, security, roof replacement, athletic infrastructure, life safety systems, and asphalt paving.

The following chart includes both funded and unfunded infrastructure replacement and upgrade requirements throughout the FCPS system. Any renovation project that has been bid for construction has not been included below; however, infrastructure replacements and upgrades associated with renovation projects planned over the 5-10 year period are included here as many of these building components will require replacement prior to scheduled renovations. In FCPS' 10-year Comprehensive Investment Capital Plan (CICP), the backlog of requirements will continue to increase by 12 percent or \$15 million annually as capital components pass the end of their useful life. This chart provides a point in time snapshot and does not include all projected requirements.

### **SUMMARY-FCPS FY 2020 REPLACEMENT AND UPGRADE REQUIREMENTS**

Fund	Funded FY 2020	Unfunded	Total
<b>ADA-Facilities</b>	\$1,250,000	\$0	<b>\$1,250,000</b>
<b>Asphalt Capital</b>	\$750,000	\$7,614,984	<b>\$8,364,984</b>
<b>Athletic Capital</b>	\$1,250,000	\$3,407,476	<b>\$4,657,476</b>
<b>Electrical Systems</b>	\$0	\$17,019,357	<b>\$17,019,357</b>
<b>Health-Safety-ADA Equipment</b>	\$0	\$16,316,188	<b>\$16,316,188</b>
<b>HVAC Capital</b>	\$3,625,000	\$110,468,769	<b>\$114,093,769</b>
<b>Information Technology</b>	\$2,000,000	\$0	<b>\$2,000,000</b>
<b>Plumbing Systems</b>	\$0	\$4,805,216	<b>\$4,805,216</b>
<b>Roofing</b>	\$3,625,400	\$0	<b>\$3,625,400</b>
<b>Safety and Security</b>	\$600,000	\$0	<b>\$600,000</b>
<b>Total</b>	<b>\$13,100,400</b>	<b>\$159,631,990</b>	<b>\$172,732,390</b>

FCPS' CICP provides an assessment index (AI) to prioritize capital asset renewal projects, based on the capital asset's useful life and criticality. Nationally, 21st Century Schools recommends a best business practice of investing 2 percent of an organizations current replacement value (CRV) to support its capital renewal program. FCPS' CRV is estimated at \$6.2 billion, but only receives funding from internal and County sources totaling 0.4 percent of the CRV. This significantly under-funded requirement created a deferred backlog which continues to grow; FY 2016 - \$110 million, FY 2017 - \$128 million, FY 2018 - \$142 million and FY 2019 - \$157 million. This snow ball effect will continue with the current investment amount. A review of FCPS CICP 10-year cash flow of \$446,639,593 in End of Useful Life (EOUL) requirements, in addition to \$74,750,000 in Roofing, Security, Facility ADA, and DIT EOUL requirements, over this same 10-year period, total \$521,389,593. FCPS will need an increase in the Infrastructure Replacement Funding and FCPS Major Maintenance allocation to keep pace and become good stewards of the capital asset program prior to renovations. Total funding for FCPS at the goal of 1 percent of CRV would be \$62 million, of which \$23.1 million is currently funded. These improvements will positively impact health and safety, indoor air quality, and result in an educationally inspiring environment for our students and staff.

## ***Park Authority Infrastructure***

The Park Authority has been working to address the backlog of reinvestment requirements at deteriorating facilities, athletic courts, pedestrian bridges, parking lots, and trails located throughout the County. The Park Authority is responsible for 410 structures at 427 Parks with 58 percent of this total inventory over 30 years old. In addition, the Park Authority owns a total of 23,512 park acres which equates to over 9.3 percent of the land mass of Fairfax County. In 2016, Parks Count, which is the Park Authority Needs Assessment was completed and provides recommendations for capital investments in the park system based on a body of data that the Park Authority will continue using for years. The total projected need for the ten-year period was \$939,161,000; that amount has been reduced by \$87,700,000 due to the approval of the 2016 Park Bond Referendum for a future need of \$851,461,000. The remaining needs of \$851,461,000 are broken out into three strategic areas in five-year increments.

- Critical, “Repairing what we have” makes the most of existing resources with the primary goal being for FCPA to maintain services. The plan addresses deferred maintenance at existing parks and facilities. The Critical funding need is \$98,892,000 over the next five years.
- Sustainable, “Upgrade Existing” looks at enhancing existing programs, beginning new alternative programs, or making other strategic changes that would require additional operational or capital funding. The Sustainable need for years 1-5 is \$107,945,000, the need for years 6-10 is \$172,350,000, for a total of \$280,295,000.
- Visionary, “New, Significant Upgrades” includes new and expanded facilities to fully meet needs desired by the community and ensure that the Park Authority remains a preferred provider of park and recreation amenities. The Visionary need is \$472,274,000 over the 10-year period, and if funding is made available in 1-5 years staff would accelerate visionary elements that include expansion and renovation of existing recreation centers and development of new athletic facilities.

Based on continual facility condition assessments, growing and shifting community needs and expectations, an ever-increasing amount of funding will be needed for capital maintenance of aging park assets in order to maximize the life of the existing facilities and to develop new facilities. The following table includes a total of \$4.0 million in estimated Park Authority Category “F” projects which are estimated to be funded between FY 2020 and FY 2021. In addition, to this list, the Park Authority has identified \$34.3 million in unfunded Category “D” projects. These category “D” projects can often become Category “F” projects if left unattended. The Category “D” list includes infrastructure replacement and upgrades such as: fire alarm systems, electrical panels, playgrounds, HVAC systems, trail renovations, athletic courts, irrigation systems parking lots, historic houses, shelters, restrooms, picnic areas and other small mixed-use buildings.

To further safeguard and align with County practices, the Park Authority established a Capital Sinking Fund within their Park Improvement Fund. Annual Net Revenue is designed to be transferred to this capital sinking fund to contribute to the funding of ongoing needs at revenue-generating sites. Recent analysis identified an unfunded annual need for lifecycle/capital renewal maintenance at revenue supported facilities. To date, the Park Authority has identified approximately \$21.1 million in category D and F projects associated with 9 RECenters. This critical funding element of sustainability cannot be realized through charging of fees. It is anticipated that this sinking fund will assist with funding for lifecycle/capital renewal maintenance of the revenue facilities.

INFRASTRUCTURE REPLACEMENT AND UPGRADE REQUIREMENTS: PARKS						
PRIORITY	PROJECT TYPE	FACILITY	CATEGORY	EXISTING CONDITIONS/DEFFICIENCIES	ESTIMATE	FUNDING STATUS
1	Shelters/ Shade Structures/ Restrooms/ Picnic Areas	Park Authority properties throughout the County	F	Maintenance and repair no longer feasible. Disruption to building operations/end-users Increased utilities cost.	\$2,800,000	FY 2020 - FY 2021
2	Playgrounds	Park Authority facilities throughout the County	F	Maintenance and repair no longer feasible. Disruption to operations/end-users.	\$720,000	FY 2020 - FY 2021
3	Athletic Court Surfaces	Park Authority facilities throughout the County	F	Complete renovations are required due to maintenance and repairs no longer feasible	\$281,150	FY 2020 - FY 2021
4	Demolish or Repair Houses/ Garages/ Barns	Park Authority facilities throughout the County	F	Safety hazard.	\$200,000	FY 2020
5	Greenhouse/ Garden Plots	Park Authority facilities throughout the County	F	Demolish and rebuilt.	\$35,000	FY 2020 - FY 2021
<b>Total Category F</b>					<b>\$4,036,150</b>	
6	Replace and Upgrade Fire Alarm Systems	Park Authority facilities throughout the County	D	Safety hazard.	\$10,000	FY 2020
7	Replace and Upgrade Electrical Panels	Park Authority facilities throughout the County	D	Does not meet current code requirements.	\$20,000	FY 2020-FY 2021
8	Replace Playgrounds	Park Authority facilities throughout the County	D	Repairs/replacement required.	\$4,880,000	FY 2021- FY 2923
9	HVAC Systems	Park Authority facilities throughout the County	D	Increased equipment failure. Old technology. Disruption to building operations/users. Increased Utility Costs.	\$30,000	FY 2021- FY 2022
10	Renovate Trails	Park Authority properties throughout the County	D	Address Safety Concerns. Heavy usage.	\$939,225	FY 2021 - FY 2022
11	Replace and Renovate Failing Parking Lots, roadways and stormwater	Park Authority properties throughout the County	D	Increased failures. Maintenance and repair no longer feasible.	\$1,695,129	FY 2020-FY 2022
12	Maintenance/ Storage	Park Authority facilities throughout the County	D	Renovation required.	\$18,000,000	FY 2022 - FY 2024
13	Irrigation Systems	Park Authority properties throughout the County	D	Replacement required.	\$596,000	FY 2020-FY 2021
14	Athletic Court Surface	Park Authority properties throughout the County	D	Repairs or Replacement required.	\$1,701,992	FY 2020 - FY 2023
15	Athletic Fields	Complete renovation of six ball diamond fields at Braddock Park	D	Complete renovation to include new fencing, foul poles, benches, metal dugout covers, grading of field surfaces, sodding, road and trail improvements.	\$2,700,000	FY 2020 - FY 2021
16	Shelters/ Shade Structures/ Restrooms/ Picnic Areas	Park Authority properties throughout the County	D	Replacement or renovation required.	\$3,401,000	FY 2021- FY 2023
17	Historic Houses	Park Authority properties throughout the County	D	Maintain or Remove.	\$85,000	FY 2020- FY 2021
18	Houses/ Garages/ Barns	Park Authority properties throughout the County	D	Repairs/replacement required.	\$185,000	FY 2020- FY 2021
19	Small Buildings with Mixed Use	Park Authority properties throughout the County	D	Repairs/replacement required.	\$15,000	FY 2022
<b>Subtotal Category D</b>					<b>\$34,258,346</b>	
<b>Total</b>					<b>\$38,294,496</b>	

## ***Athletic Field Infrastructure***

The Athletic Field Program facilitates the development, maintenance, and replacement of athletic fields, including synthetic turf fields, throughout the County. The maintenance of athletic fields includes: field lighting, fencing, irrigation, dugout covers, infield dirt, aeration and seeding. These maintenance efforts improve safety standards, enhance playing conditions and increase user satisfaction. Athletic field maintenance is funded by the General Fund and is supplemented by an Athletic Services Fee. Annual funding of \$7.6 million is included for the athletic field maintenance and sports program in FY 2020. This level of funding is supported by a General Fund transfer of \$6,135,338 and revenue generated from the Athletic Services Fee in the amount of \$1,475,000. Of the Athletic Services Fee total, \$800,000 will be dedicated to the turf field replacement program, \$275,000 will be dedicated to custodial support for indoor sports organizations, \$250,000 will be dedicated to maintenance of school athletic fields, \$75,000 will be dedicated to synthetic turf field development, and \$75,000 will partially fund the Youth Sports Scholarship Program. The Athletic Service Fee revenue is based a rate of \$5.50 per participant per season and \$15 for tournament team fees for diamond field users and indoor gym users and a rate of \$8.00 per participant per season and \$50 tournament team fees for rectangular fields users. The rate for rectangular field users is specifically to support the turf field replacement fund.

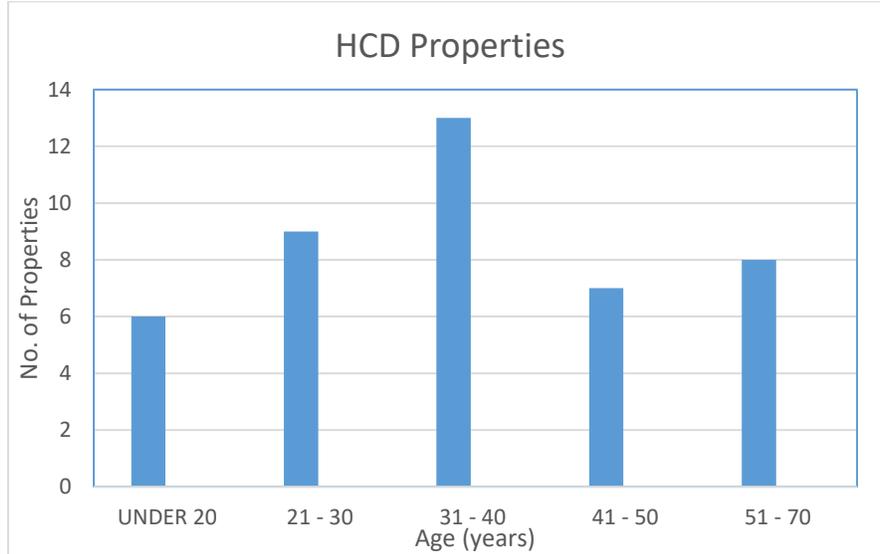
Maintenance efforts include: contracted services to improve the condition of 408 non-Park Authority athletic fields scheduled for community use at FCPS elementary schools, middle schools and centers; upgrades to athletic field lighting systems at middle and high schools; and the development and replacement of synthetic turf fields. A large portion of the program supports synthetic turf fields which allow for year-round use in most weather increasing playable hours, provide playing surfaces and conditions that are similar to grass fields, and eliminate the need for watering, mowing, and fertilizing. There are a total of 92 synthetic turf fields throughout the County, of which 24 are FCPS stadium fields and 68 are County park/FCPS non-stadium fields. Increased annual funding has been provide to begin to address the growing need for field replacement and to establish a 10-year replacement schedule. The first turf field replacement efforts began in 2013 for the first two fields developed. Most manufacturers provide an eight-year warranty for a properly maintained synthetic turf field; however, it is a generally accepted practice to assume a life expectancy of the synthetic turf field of no more than 10 years. The current projected replacement cost per field is approximately \$450,000.

The following chart outlines the 10-year Plan for turf field replacement at the current levels of both Athletic Service Fee revenue and General Fund support. The program includes the number of fields anticipated to be replaced per year and is fully funded through FY 2024. The level of funding support will need to be re-evaluated prior to FY 2025.

<b>NCS - Turf Field Replacement Plan (Current Funding)</b>										
10 year Replacement cycle	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Fund - Beginning Balance</b>	\$300,156	\$891,745	\$1,516,745	\$2,691,745	\$3,066,745	\$2,491,745	\$1,216,745	-\$2,308,255	-\$1,533,255	-\$3,958,255
Replacement Fund Contribution	\$2,250,000	\$2,250,000	\$2,250,000	\$2,250,000	\$2,250,000	\$2,250,000	\$2,250,000	\$2,250,000	\$2,250,000	\$2,250,000
Partner/Matching Funds	\$0	\$100,000	\$200,000	\$300,000	\$700,000	\$0	\$0	\$250,000	\$200,000	\$100,000
One-time Agency Contribution (from Application Fee)	\$141,589	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
<b>Total Available Funds</b>	<b>\$2,691,745</b>	<b>\$3,316,745</b>	<b>\$4,041,745</b>	<b>\$5,316,745</b>	<b>\$6,091,745</b>	<b>\$4,816,745</b>	<b>\$3,541,745</b>	<b>\$266,745</b>	<b>\$991,745</b>	<b>-\$1,533,255</b>
Estimated # of Turf Field Replacements Required	4	4	3	5	8	8	13	4	11	8
Estimated Cost	\$1,800,000	\$1,800,000	\$1,350,000	\$2,250,000	\$3,600,000	\$3,600,000	\$5,850,000	\$1,800,000	\$4,950,000	\$3,600,000
<b>Year End Fund Balance</b>	<b>\$891,745</b>	<b>\$1,516,745</b>	<b>\$2,691,745</b>	<b>\$3,066,745</b>	<b>\$2,491,745</b>	<b>\$1,216,745</b>	<b>-\$2,308,255</b>	<b>-\$1,533,255</b>	<b>-\$3,958,255</b>	<b>-\$5,133,255</b>

## **Housing and Community Development (HCD) Facilities**

HCD's housing inventory includes thirty-two residential properties, ten group homes, one mobile home park and two office buildings. The inventory is significant, housing approximately 21,948 residents in 2,238 apartments, 551 townhouses, 10 group homes and 115 mobile homes. As evidenced in the graph below 65 percent of the properties are 31 years or older. Many infrastructure replacement and upgrade projects have been deferred due to increasingly less funding from HUD. Some of the major items that have been deferred include replacement of central boilers, HVAC systems, roofs, electrical systems, flooring, windows, and resurfacing of parking lots. Deferral of these items results in inefficient utility usage as well as higher future maintenance costs.



The following table identifies the top 10 Housing facility priorities totaling \$3.3 million which are scheduled to be funded between in FY 2020. In addition, Housing and Community Development staff have identified an additional \$4.5 million category "D" projects that will require funding during the same time-period. The total requirement identified between beyond FY 2020 is an additional \$4.5 million, totaling \$7.8 million.

<b>INFRASTRUCTURE REPLACEMENT AND UPGRADE REQUIREMENTS: HOUSING</b>						
<b>PRIORITY</b>	<b>PROJECT TYPE</b>	<b>FACILITY</b>	<b>CATEGORY</b>	<b>EXISTING CONDITIONS/DEFFICIENCIES</b>	<b>ESTIMATE</b>	<b>Funding Status</b>
1	Replace doors, water heaters, appliances & electrical panels	The Atrium Apartments	F	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$266,000	FY 2020
2	Replace doors, water heaters, HVAC, flooring & appliances	Audubon Apartments	F	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$164,834	FY 2020
3	Replace roofs, water heaters, HVAC, kitchen cabinets, appliances & flooring	Barkley Square Townhomes	F	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$33,840	FY 2020
4	Replace playground equipment, kitchen cabinets & appliances	Barros Circle Townhomes	F	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$297,694	FY 2020

**INFRASTRUCTURE REPLACEMENT AND UPGRADE REQUIREMENTS: HOUSING**

<b>PRIORITY</b>	<b>PROJECT TYPE</b>	<b>FACILITY</b>	<b>CATEGORY</b>	<b>EXISTING CONDITIONS/DEFFICIENCIES</b>	<b>ESTIMATE</b>	<b>Funding Status</b>
5	Replace playground equipment, windows, doors, water heaters, HVAC, flooring & appliances	Briarcliff Townhomes	F	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$118,706	FY 2020
6	Replace HVAC, kitchen cabinets, flooring & electrical panels	Colchester Condominiums	F	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$103,826	FY 2020
7	Replace fencing, water heaters, kitchen cabinets, flooring, appliances & sump pumps	Greenwood II Townhomes	F	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$31,499	FY 2020
8	Seal & stripe parking lots, repair/replace walkways, paint exterior, replace roofs, HVAC, kitchen cabinets, flooring & appliances	Greenwood Apartments	F	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$1,618,229	FY 2020
9	Seal & stripe parking lots, repair/replace walkways, replace playground equipment, entrance doors, water heaters, flooring & appliances	Kingsley Park Townhomes	F	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$335,315	FY 2020
10	Replace water heaters, HVAC, kitchen cabinets, flooring, appliances & tub surrounds	Newington Station Townhomes	F	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$299,363	FY 2020
<b>Total</b>					<b>\$3,269,306</b>	
11	Seal & stripe parking lot, point & tuck brick veneer, replace siding, paint exterior, replace HVAC, kitchen cabinets, appliances, flooring & vanities	Old Mill Gardens Apartments	D	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$852,303	FY 2021
12	Seal & stripe parking lots, replace sliding glass doors, vinyl siding, HVAC, kitchen cabinets, appliances, flooring & tub surrounds	Ragan Oaks Apartments	D	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$692,452	FY 2021
13	Seal & stripe parking lots, replace playground equipment, windows, siding, paint exterior, replace water heaters, HVAC, kitchen cabinets, appliances, flooring & vanities	Reston Town Center Townhomes	D	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$456,779	FY 2021
14	Seal & stripe parking lots, replace sliding glass doors, water heaters, HVAC, appliances, vanities & flooring	Robinson Square Townhomes	D	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$432,364	FY 2021

**INFRASTRUCTURE REPLACEMENT AND UPGRADE REQUIREMENTS: HOUSING**

<b>PRIORITY</b>	<b>PROJECT TYPE</b>	<b>FACILITY</b>	<b>CATEGORY</b>	<b>EXISTING CONDITIONS/DEFFICIENCIES</b>	<b>ESTIMATE</b>	<b>Funding Status</b>
15	Seal & stripe parking lots, point brick veneer, replace fencing & flooring	Rosedale Manor Apartments	D	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$314,194	FY 2021
16	Replace bathroom exhaust fans, kitchen cabinets, flooring, appliances & vanities	Shadowood Condominiums	D	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$111,203	FY 2021
17	Replace fencing, retaining walls, water heaters, HVAC, flooring, appliances & sump pumps	Sheffield Village Townhomes	D	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$39,757	FY 2021
18	Replace kitchen cabinets, flooring, appliances, vanities & electrical panels	Springfield Green Condominiums	D	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$29,215	FY 2021
19	Seal & stripe parking lot, replace fencing, playground equipment, siding, roofs, water heaters, HVAC, appliances & flooring. Paint exterior	Tavener Lane Apartments	D	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$162,138	FY 2021
20	Seal & stripe parking lots, replace fencing, roofs, water heaters, HVAC, flooring, kitchen cabinets, appliances & vanities	The Green Apartments and Townhomes	D	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$530,245	FY 2021
21	Seal & stripe parking lot, repair/replace walkways & replace siding	The Park Townhomes	D	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$73,341	FY 2021
22	Replace HVAC, flooring, appliances & vanities	Villages of Falls Church Condominiums	D	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$186,057	FY 2021
23	Replace gutters, sliding glass doors, entrance doors, water heaters, roofs, HVAC, kitchen cabinets, flooring, appliances, vanities & tub surrounds	Waters Edge Townhomes	D	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$104,277	FY 2021
24	Seal & stripe parking lots, repair/replace walkways, replace water heaters, HVAC, kitchen counter tops, flooring, appliances & vanities	Westford Townhomes	D	- Increased equipment breakdowns - Disruption to building operations/users - Unreliable equipment; potential failure - Maintenance and repairs no longer feasible - Safety Hazard	\$513,309	FY 2021
	<b>Total</b>				<b>\$4,497,634</b>	
	<b>Grand Total</b>				<b>\$7,766,940</b>	

## **Wastewater Infrastructure**

There are 3 major infrastructure systems, within the Wastewater System: Pump Stations, the Noman Cole Pollution Control Treatment Plant, and Collections System. In any given year, the amount programed for infrastructure replacement and upgrades in each area may vary based on specific project schedules, however; staff is attempting to manage the system on a programmatic basis over a ten-year period. There are 63 wastewater pump stations. Each station typically has multiple pumps for peak flows and emergency backup, motors associated with the pumps, a backup generator, a force main, electrical control equipment, communication equipment for monitoring and remote operation, and a building or other housing structure. County staff monitor the condition of each asset at each pump station and attempt to schedule rehabilitation or replacement before failure. Each pump station is also monitored as a unit, and prior to replacing a major component, an in-depth review is completed to determine if rehabilitation or replacement of other component systems are required at the same time. The current 10-year financial plan (FY 2020-FY 2029) includes an average \$15.3 million per year for reinvestment and rehabilitation of these facilities. This component of the system is currently fully funded.

At the Noman Cole Treatment Plant, there are over 4,000 assets monitored making up 32 major operating systems such as Odor Control, Primary Treatment and others. Each operating system consists of many components such as pumps and concrete tanks. Redundancy is built into all critical systems to allow for maintenance. The condition of each component is monitored during routine maintenance checks as well as by the age of system. Based on age and condition, reinvestment schedules are determined. Currently in the 10-year plan there is an average of \$73.6 million per year programmed for treatment plant capital improvements, the majority is for replacement and rehabilitation. Based on current information, the appropriate reinvestment amounts are being funded.

The Collection system consists of approximately 3,400 miles of pipe and 94,000 manholes. Approximately 70 percent of the system is 30 years or older. In the late 1990s the County began a significant reinvestment program by relining existing pipes utilizing trenchless technology. Over 15 percent of the system has been rehabilitated utilizing this technology, primarily on the smaller, 8" to 15" lines. In recent years, the program has been expanded to include inspection and rehabilitation of the larger trunk lines. The 10-year financial plan includes a continual increase in funding for collection system rehabilitation with an average of \$30 million per year. With this gradual ramp up and based on current information, the appropriate reinvestment amounts are being funded. Failures in either the collection system, pump stations or treatment plant will likely result in discharges of untreated raw sewage into basements or streams, therefore, all three of these systems are considered critical. As a result, the wastewater rates are reviewed each year and the 10-year financial plan is reviewed and updated to insure adequate funds are programed to safely maintain and operate the systems.

At this time, based on current information, there is not a funding gap to safely operate the wastewater systems. Annual infrastructure replacement and upgrades throughout the Wastewater system are reflected below:

<b>INFRASTRUCTURE REPLACEMENT AND UPGRADE REQUIREMENTS: WASTEWATER FACILITIES</b>						
<b>PRIORITY</b>	<b>PROJECT TYPE</b>	<b>FACILITY</b>	<b>CATEGORY</b>	<b>EXISTING CONDITIONS/DEFFICIENCIES</b>	<b>ESTIMATE</b>	<b>Funding Status</b>
1	Pump Stations	Countywide	C	Projected lifecycle is 30 years	\$15,300,000	Annual Requirement
2	Treatment Plan Improvements	Noman Cole Pollution Control Plant (NCPCP)	C	Projected lifecycle is 30 years	\$73,600,000	Annual Requirement
3	Gravity Sewer Lines	Countywide	C	Projected lifecycle is 50 to 75 years	\$30,000,000	Annual Requirement
	<b>Total</b>				<b>\$118,900,000</b>	

It should be noted that the Sanitary Sewer System also has an established Capital Reinvestment Reserve which is intended to address both anticipated and unanticipated increases within the Capital Improvement Program. This reserve provides for significant rehabilitation and replacement of emergency infrastructure repairs. A reserve of 3.0 percent of the five-year capital plan is consistent with other utilities and is recommended by rating agencies. Based on the total five-year capital plan, an amount of \$27 million would be required to reach 3.0 percent. The Sanitary Sewer System is currently maintaining a reserve of approximately \$13 million.

## **Stormwater Infrastructure**

There are two major infrastructure systems associated with the stormwater program, the conveyance system including pipes, manhole inlets and open channels; and the management facilities including bio retention, infiltration, wet and dry ponds, porous pavements, manufactured devices and other items used to improve water quality or manage water quantity. There are currently 1,500 miles of pipes and paved channels, and approximately 69,000 manholes and inlets. The pipes range in size from 12 to 78 inches and are made from concrete, various metals, or plastic. The life of the system varies with the material type and the original construction practices, but the general estimated lifecycle is 50-75 years. A recent study indicated the County should invest an estimated \$16 million per year in rehabilitating or replacing the existing system on about a 70-year cycle. In FY 2020, this program is funded in the amount of \$8.5 million.

The County currently also maintains approximately 1,900 stormwater management facilities ranging from small rain gardens to large flood control dams. Reinvestment projects vary in scope and include replacement of plant materials as part of the treatment process for dredging the larger lakes and ponds. Because many of these facilities are newer and the routine and life cycle operating procedures are still being developed, a good life cycle cost model does not exist. The county has prepared estimates based on recent dredging experiences as well experiences with “green” infrastructure facilities and estimates an annual program expense of \$16.6 million. Because the plant material is an active component of the “Green” infrastructure and because routine maintenance relates directly to the life and function of the facility the \$16.6 million estimate includes both annual operating expenses as well as traditional capital expenses such as dredging and dam repair. In FY 2020, this program is funded in the amount of \$9.0 million.

Staff is currently evaluating the success of the five-year spending plan, analyzing future stormwater rate requirements, and developing the next 5-10 year Stormwater plan. Actual revenue collected in recent years has been higher than projected, and it is anticipated that this amount will continue to increase as property values rise throughout the County. Therefore, staff is recommending that the FY 2020 stormwater service rate remain at the current rate of \$0.0325 per \$100 of assessed real estate value. The county is scheduled to be issued a new Municipal Separate Storm Sewer System (MS4) permit in 2020 and it is anticipated that State and Federal permit requirements will require future increases in the service district rate.

Annual infrastructure replacement and upgrades for the County’s Stormwater Facilities are reflected below:

<b>INFRASTRUCTURE REPLACEMENT AND UPGRADE REQUIREMENTS: STORMWATER FACILITIES</b>						
<b>PRIORITY</b>	<b>PROJECT TYPE</b>	<b>FACILITY</b>	<b>CATEGORY</b>	<b>EXISTING CONDITIONS/DEFFICIENCIES</b>	<b>ESTIMATE</b>	<b>Funding Status</b>
1	Conveyance System	69,000 structures and 1,500 miles of pipes	D	Projected lifecycle is 50 to 75 years	\$16,000,000	Annual Requirement
2	Stormwater Management Facilities	1,900 county facilities and 4,200 private facilities including 20 state regulated dams	C	Projected lifecycle is 50 to 75 years	\$16,600,000	Annual Requirement
<b>Total</b>					\$32,600,000	

## ***Revitalization Infrastructure***

The five geographical areas in the County that are defined as Commercial Revitalization Districts (CRDs) include: Annandale, Baileys/Seven Corners, McLean, Route 1 and Springfield. These five CRDs total 821,521 square feet. Both routine maintenance (trash removal, quality control inspections, grass mowing, edging, pruning, mulching, bus shelter glass cleaning, pest control, leaf removal) and non-routine capital improvement projects are conducted annually. The non-routine improvements in the CRDs include: under grounding utilities; roadway design and construction; and, streetscape improvements that consist of new paver sidewalks, street furnishings, signage, and bus shelters. Several of these non-routine improvement projects have been initiated in the CRDs with the sinking fund allocation and have been focused on sidewalk and bus shelter repairs. The Bailey's Sidewalk rehabilitation and Bland Street Public Private Partnership projects are currently underway and include infrastructure repairs such as retaining walls, brick paver repairs, stairway repairs and sidewalk redesigns.

Routine maintenance efforts include street and sidewalk sweeping, landscaping, and trip hazard mitigation with annual funding of \$950,000. In addition, FY 2020 funding of \$460,000 will support the Tysons Silver Line area. Routine and non-routine repairs and recurring landscape maintenance are also required in the Tyson's Corner Silver Line area along the Route 7 corridor, from Route 123 to the Dulles Toll Road. Routine maintenance includes landscape maintenance along the median and both sides of the road, trash removal, snow removal, and stormwater facility maintenance. This area is different from other Metro stations due to the County's responsibility to maintain 27 water quality swales under the raised tracks of the Silver Line located in VDOT right-of-way. Typical maintenance for the swales includes litter and sediment removal and vegetation care. These two maintenance initiatives were previously budgeted in separate projects, however in FY 2020 the funding has been combined into one project to provide maximum flexibility and efficiency. The FY 2020 funding level is consistent with the FY 2019 Adopted Budget Plan.

Staff is working to develop a more sustainable maintenance and reinvestment approach by reviewing the current inventory, reviewing urban streetscape standards, researching best management practices, and developing a more rigorous review and implementation process for new projects. The goal of the program is to enhance the appearance, functionality and sustainability of the pedestrian environment in CRDs and to prevent CRD infrastructure and aesthetic improvements from falling into a state of disrepair. The Plan includes expanding the areas eligible for enhanced levels of service for landscaping, litter control and streetlight inspections. In addition, the plan includes routine street sweeping and the repair and replacement of sidewalks and curbs for areas within the CRD.

## ***Transportation Infrastructure***

The County maintains an assortment of transportation infrastructure that is beyond the service levels provided by VDOT. Some of these include bus shelters, street name signs, trails and sidewalks that provide pedestrian connections, and roads and service drives not maintained by VDOT.

### ***Bus Shelters:***

The County maintains 276 bus shelters. The infrastructure replacement and upgrade program focuses on repairs to damaged shelters. A fully funded program would include cleaning, trash collection and reinvestment. Some of the cleaning and trash collection is provided by the Office of the Sheriff's Community Labor Force. Annual funding is used to replace damaged panels and replace shelters destroyed by vandalism or accidents. If there is not adequate funding to perform these tasks, damaged shelters are removed until funding is identified. Some shelters are in need of replacement and a sustainable program to replace shelters on a 20-year cycle estimating \$10,000 per shelter, is \$140,000. This level of funding would replace 14 shelters per year.

### ***Street Signs:***

As part of the 911 emergency system all roads are required to have a name and street sign to assist emergency response personnel. These signs are not maintained by VDOT and are the responsibility of the County. There are approximately 40,000 signs at 20,000 intersections in the current inventory. The county currently replaces street signs only when they are damaged beyond repair. Over time signs lose their reflectivity and become more difficult to read at night. It is estimated that if the signs are replaced on a 20 year cycle the average annual capital cost would be \$665,000.

**Walkways:**

The County manages the infrastructure replacement and upgrades of 678 miles of walkways and 76 pedestrian bridges valued at an estimated \$220 million. This inventory includes 63 percent of walkways that are over 20 years old. Projects are prioritized based on condition as well as pedestrian usage. On-going repairs provide for upgrades required for public standards, address safety and hazardous conditions, and rehabilitation of pedestrian bridges. Damaged trail surfaces, retaining wall failures, and handrail repairs are just a few of the common issues. A 2013 Rinker Study was conducted in order to build an accurate inventory and condition assessment of County walkways and revealed that there are approximately 10 miles of trails in extremely poor condition requiring \$3 million in initial reinvestment. The \$3 million reinvestment program was supported by funding from the allocation of the Capital Sinking Fund and work continues on reinvestment associated with additional deteriorating trails throughout the County. In addition, the Rinker Study did not include an assessment of pedestrian bridges, but sinking fund allocations have enabled some progress in this area. Assuming an average service life of 50 years for concrete sidewalks and 25 years for asphalt and bridges, a fully funded reinvestment program is estimated at \$5.4 million annually. In the last several years the sinking fund program has more than doubled the amount being invested in walkways and bridges.

**County-Owned Roads:**

The County is responsible for emergency safety and road repairs to 38 miles of County-owned service drives and County-owned stub streets which are currently not accepted in the Virginia Department of Transportation (VDOT) highway system for maintenance. This infrastructure is valued at over \$230 million. On-going road repairs often include: pothole repair, pavement rehabilitation, sidewalk and curb repairs, traffic and pedestrian signage, hazardous tree removal, grading, patching, and stabilization of shoulders. In 2015 a Rinker Study was conducted in order to build an accurate inventory and condition assessment of County-owned roads and service drives and identified an amount of \$4 million in reinvestment funding required for the roadways with the most hazardous conditions. It is anticipated that funding for the \$4 million reinvestment program will be supported by funding from the allocation of the Capital Sinking Fund. Annual investment funding was also identified and is recommended to increase each year. Annual funding supports pothole repair, drive surface overlays, subgrade repairs, curb and gutter repairs, traffic and pedestrian signage repairs, hazardous tree removal, grading, snow and ice control, patching of existing travelways, repairing drainage swales and stabilization of shoulders, and drainage facilities. The Sinking Fund allocation has provided \$3.8 million of the 5-Year Plan, leaving approximately \$0.2 million remaining to be funded. Once the initial backlogged reinvestment has been completed, it is anticipated that funding for annual reinvestments will continue to address those roads not yet considered hazardous and to sustain the Program in the future. Assuming a 20-year life, the estimated annual reinvestment funding required is \$6.2 million. In the last several years the sinking fund program has more than doubled the amount being invested in these roads and staff continues to work to implement this program.

<b>Summary of Transportation Infrastructure</b>	
<b>Program Area</b>	<b>Annual Amount</b>
Bus Shelters	\$140,000
Street Signs	\$665,000
Walkways	\$5,400,000
County-owned Roads	\$6,200,000
<b>Total</b>	<b>\$12,405,000</b>

## **Capital Sinking Fund**

In April 2013, the County and School Board formed a joint committee, the Infrastructure Financing Committee (IFC), to collaborate and review both the County and School's Capital Improvement Program (CIP) and infrastructure upgrade requirements. One of the goals of the Committee was to develop long-term maintenance plans for both the County and Schools, including annual requirements and reserves. The committee conducted a comprehensive review of critical needs and approved recommendations to support the development of a sustainable financing plan to begin to address current and future capital requirements. One of the components of the Final IFC Report included support for a capital sinking fund which would be populated each year as part of the Carryover Review based on 20 percent of the available year end balances. Funding was to provide for infrastructure replacement and upgrades, such as replacement roofs, electrical systems, HVAC and other facility requirements. The Board of Supervisors first approved the establishment of the IFC recommended Capital Sinking Fund as part of the *FY 2014 Carryover Review*. The Board of Supervisors also approved the allocation of the total sinking fund based on specific percentages for each infrastructure area, including: 55 percent for FMD, 20 percent for Parks, 10 percent for walkways, 10 percent for County roads and service drives, and 5 percent for revitalization. As part of the *FY 2018 Carryover Review*, the Board approved a one-time change to the allocation based on expenditures to date and work in progress. This change allocated additional funds to walkway reinvestment in FY 2018 to address this growing need. These funds support prioritized critical infrastructure replacement and upgrades projects throughout the County. The following table includes the allocation of Capital Sinking funds to date.

<b>Program Area</b>	<b>Total Allocated to Date</b>
FMD	\$21,119,386
Parks	\$7,752,632
Walkways	\$4,421,463
County Roads	\$3,839,890
Revitalization	\$1,338,372
<b>Total</b>	<b>\$38,471,743</b>

The breadth of the infrastructure upgrades and benefits of the sinking fund allocations can be seen in significant accomplishments throughout the County. Many projects have been initiated or completed in all of the program areas. Some examples of Capital Sinking Fund projects follow:

Athletic Court Repairs



Trail Repairs

Before



After



Window Replacement

Before



After

