

Capital Improvement Program Introduction:

County government provides needed and desired services to the public. In order to provide these services, the County must furnish and maintain capital facilities and equipment, such as roads, parks and schools. The Capital Improvement Program (CIP) is a proposed schedule for the expenditure of funds to acquire or construct needed improvements over the next five-year period along with a planning CIP for years six thru ten.

The Capital Improvement Program is an important component of the County's long range planning process and serves as a planning and implementation tool for the acquisition, development, construction, maintenance, and renovation of public facilities, infrastructure and capital equipment. The first year of the CIP becomes the capital budget and the remaining years provide an estimated, but unfunded, cost of the proposed projects and their anticipated funding sources. The CIP is reviewed annually and the priorities re-evaluated based on conditions and requirements of the community. This forecasting also allows the County to anticipate and plan for future spending requirements, and provides a positive influence on private investment decisions.

In developing its Capital Improvement Program, the County adheres to a set of financial and debt management policies established by the Board of Supervisors. These policies help preserve the County's credit rating and establish the framework for the County's overall fiscal planning and management. Projects are carefully evaluated and prioritized to optimize the use of limited capital funds to meet operational and community needs.

A CIP Development Policy was approved by the Board of Supervisors on Resolution R19-209. A New School Planning Policy for the Development of the CIP was approved by the Board of Supervisors on Resolution R19-183.

Capital Improvement Program:

The first five years of the ten-year plan represents Stafford County's Capital Improvement Program, and years six through ten provides the County's needs assessment. The first year of the CIP becomes the capital budget and the remaining years provide an estimated, but unfunded, cost of the proposed projects and their anticipated funding sources as prioritized by the various review committees in accordance with the Board's guiding principles.

Capital Needs Assessment:

The second five years of the ten year plan represents Stafford County's Capital Needs Assessment. The Capital Needs Assessment helps identify the County's needs beyond the five-year period. This plan is updated every year with the CIP and helps form the basis of the five-year Capital Improvement Program as projects are brought forward. Projects included in the assessment period are not balanced to revenues but are viewed as potential projects in a planning stage.

Capital Improvement Program Introduction:

Benefits of Capital Programming are:

- Eliminates the duplication of project requests and enables the County to take advantage of joint planning and shared County facilities.
- Provides a budgeting tool which anticipates expenditure levels several years in advance to determine revenue needs and appropriate financing strategies.
- Provides a concise central source of information for citizens and land developers to accurately anticipate facilities in Stafford and to make their investment decisions accordingly.
- Assists in the implementation of the Comprehensive Plan.
- Provides a sound and stable financial program.
- Focuses attention on community goals and objectives.
- Overall, the CIP provides a foundation for coordinating and managing programs and expenditures, and assisting the local government in maintaining an excellent level of service to the citizens of Stafford, now and in the future.

Project Descriptions:

Capital Project:

A planned expense for a facility or physical item requiring a minimum expenditure of \$50,000. Has a useful life span of 5 years or more and meets one or more of the following definitions:

- Requires the acquisition or construction of any physical facility for the community.
- Involves the acquisition of land or an interest in land for the community.
- Involves the acquisition or construction of public utilities.
- Involves the ongoing acquisition of major equipment or physical systems, such as, computer technology, radio systems, major specialized vehicles etc.
- Involves modifications to facilities, including additions to existing facilities, which increases the square footage, useful life, or value of the facility; and/or capital maintenance or replacement projects on existing facilities, as defined below.

Capital Repair, Replacement and Rehabilitation Projects:

Repair, replacement and rehabilitation projects (3R), primarily are small scale projects related to current existing physical assets. These projects can extend the useful life of an asset, but not fundamentally change the structure or purpose. These also include repair, replacement and rehabilitation of major mechanical systems such as heating and cooling systems. Upgrades to technology infrastructure and systems can also be considered a 3R project.

The County's 3R projects are funded with current revenue as defined in the Principles of High Performance Financial Management. This funding is a minimum 3% of general government expenditures. In the prior year, projects were accounted for in the Capital Projects Fund if it exceeded \$100,000. The current budget all projects will be accounted for in the Capital Projects fund. This delineation of projects and change of budgetary practices creates a more transparent process. It creates the additional benefit of unused capital funds being held in reserve for the use of capital projects and creates a transparent reporting mechanism to inform management, the Board and the public.

Capital Improvement Program Introduction:

The Budget also leverages the use of capital projects reserve and expired commitments to provide funding to invest in current assets. A list of the projects expensed in the General Fund can be found in the General Fund Expenditures section, within non-departmental and capital projects. This practice of utilizing the budget development process to fund projects is considered to provide the management, the Board and the citizens with a comprehensive list of needs and the resources to address those needs. This initiative supports the Board's priorities for infrastructure and fiscal responsibility.

Approximately \$5M in bond funding is allocated to the School's 3R projects annually. The funding source is bond funding through the Virginia Public School Authority program. The School's 3R projects are identified and prioritized by School staff and are presented to the School Board for approval.

Funding Sources:

There are a number of different funding sources available for the various types of projects included in the Capital Improvements Program (CIP). This section outlines some of the more common funding sources used in the CIP.

Bonds:

Bonds are usually for projects requiring initial capital outlays which exceed current revenue available in the short term. Bonds include general obligation debt, which requires a referendum, as well as lease/revenue bonds, which require only authorization by the Board of Supervisors after a public hearing.

Virginia Public School Authority (VPSA) funds can only be used to support the construction of school facilities. Similarly, Literary Fund allocations, when available, can be designated to projects for new school construction.

Current Revenue/Pay-As-You-Go:

Cash capital funding comes from annual appropriations and is part of the adopted operating budget. Projects that are typically smaller in scale such as minor renovations and upgrades are likely candidates for Cash Capital funding as long as the project has an expected useful life of at least five years or more. This type of funding provides the greatest flexibility since it:

- Has no debt service cost to be paid on the expenditure
- Is available at the start of the fiscal year
- Does not have to be approved through a referendum
- Can be carried over at the end of each fiscal year

Funding Sources:

Cash Proffers:

Funds negotiated at the time of rezoning to help defray the capital costs associated with resultant development. As funds are collected over time, appropriations are used for specific capital facility needs.

Funding Sources:

Capital Project Reserve:

Funds reserved from County operating revenues for capital projects.

Master Lease:

Master Lease financing represents another source of capital financing to acquire equipment, vehicles, and technology purchases that have useful lives ranging from three to ten years. Master lease financing is very flexible, allowing the County to finance projects with minimal transaction costs and on an “as needed” basis over the term of the master lease. Because of the short-term maturities of master lease financing, interest rates are typically lower than rates on long-term bonds. Below is a summary of the master lease projects and the County’s availability limit for the five-year plan:

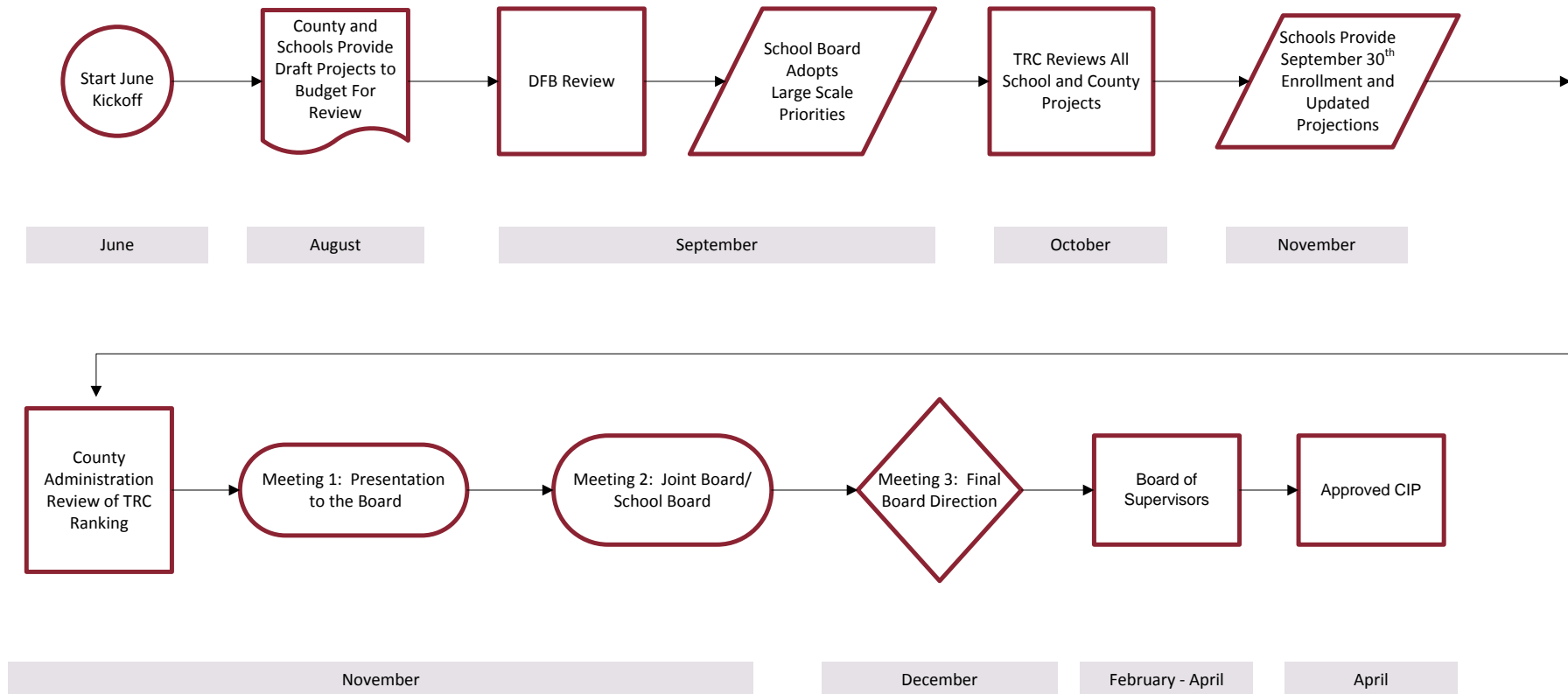
Project	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Replacement Apparatus	1,544,000	1,915,521	1,485,686	1,445,677	638,487	658,112	677,545	697,781	1,143,815	740,639
ERP System	0	0	6,206,000	0	0	0	0	0	0	0
CAD	0	0	0	0	0	0	0	0	0	11,242,000
Life Pac	1,716,000	270,000	0	0	0	0	0	90,000	0	0
Total	3,260,000	2,185,521	7,691,686	1,445,677	638,487	658,112	677,545	787,781	1,143,815	11,982,639
Capacity	10,652,000	9,439,000	577,000	498,000	3,660,000	551,000	3,105,000	570,000	581,000	1,174,000
Cumulative surplus/(deficit)	7,392,000	14,645,479	7,530,793	6,583,117	9,604,629	9,497,518	11,924,973	11,707,191	11,144,377	335,737

Development of the Capital Improvement Program:

As shown below, the CIP is a collaborative process among a number of departments within the County and Schools. The Department of Finance and Budget provides information concerning the County's past, present and future financial resources. The department prepares and distributes the package utilized by departments and agencies to submit project requests. The planning phase begins with a detailed review of the ten-year needs and as the program develops, Finance and Budget assists in the review and evaluation of project submissions. The CIP process takes approximately ten months each planning cycle.

CIP Development Flowchart

CIP Capital Improvement Program
TRC Technical Review Committee
DFB Department of Finance and Budget



Capital Improvement Program Calendar:

August

Monday, August 20, 2018	CIP-All requests for County and School CIP projects due
Tuesday, August 21, 2018	CIP-Present CIP policy/procedure changes to the FAB
Monday, August 27, 2018	CIP-Joint Working Group review Joint CIP Policy

September

Tuesday, September 04, 2018	CIP-Present Joint CIP Policy for Board approval
Tuesday, September 11, 2018	CIP-School Board Meeting - adopts the CIP priorities

October

Monday, October 01, 2018	CIP- Technical Review Committee (TRC) receives projects
Monday, October 08, 2018	CIP - TRC meeting - Review all Schools Projects
Tuesday, October 09, 2018	CIP - TRC meeting - Review all Public Works Projects
Friday, October 12, 2018	CIP - TRC meeting - Review all Public Safety Projects
Monday, October 15, 2018	CIP – TRC meeting - Review all Parks Projects
Tuesday, October 16, 2018	CIP - TRC meeting - Review all Transportation Projects
Wednesday, November 07, 2018	CIP-School submits updated enrollment projections to TRC for review
Friday, November 09, 2018	CIP-TRC committee forward CIP to both Boards for information and the OSC committee
Thursday, November 15, 2018	CIP-Tentative Date: CIP Oversight Committee (OSC), Meeting #1 - project overviews/review and review of program capacity that has been adopted by the School Board
Tuesday, November 27, 2018	CIP and debt capacity
Thursday, November 29, 2018	CIP-Tentative Date: CIP OSC Meeting #2 - revenues, debt capacity, and final recommendations

December

Thursday, December 6, 2018	CIP-Tentative Date: CIP OSC Meeting #3 – finalize the recommended CIP
Tuesday, December 18, 2018	CIP-Tentative Date: Joint Meeting of Board of Supervisors and School Board to present OSC recommended CIP
Friday, December 28, 2018	CIP-Final recommended CIP document prepared for County Administrator

Capital Improvement Program Calendar:

January

Friday, January 18, 2019 CIP-County Administrator/Superintendent final review of CIP

March

Tuesday, March 05, 2019 CIP to Board of Supervisors

Tuesday, March 05, 2019 Board of Supervisors authorize Public Hearings for the FY2020 Budget, the CY2019 tax rates, and the CIP

Tuesday, March 26, 2019 Budget Work session Debt, Financial Policy limitations (debt capacity) CIP

April

Tuesday, April 02, 2019 Budget, tax rate and CIP Public Hearings

Project Request:

Each year, representatives of County departments, offices and agencies and the Stafford County Public Schools are asked to submit a Capital Improvements Project (CIP) request form. The completed forms provide a detailed project description, justification, cost projections, and a statement of impact on the County's and School's operating budgets.

Projected costs are determined using historical or current costs for similar projects based on engineering or architectural estimates when available. An average annual escalation assumption is included for all projects.

New projects should include the following:

- A CIP justification package - based on standards, comparisons, metrics, methodologies and objective study to justify the need and timing for capital improvements. This includes: the Comprehensive Plan, School capacity projections, vehicle and apparatus replacement criteria, facility maintenance and replacement needs assessment, long range space studies, facility master planning; and/or strategic plans.
- Program Description - The description should provide sufficient detail to permit a full understanding of the nature and scope of the project and include, but not be limited to the function or goal served, and the location (include an illustration, map or photograph, if appropriate). Also include in the program description a discussion of project need; the function a project will serve; the reason a project is requested for a specific time; a discussion of the project as it relates to department objectives and the relationship of the project to long term County goals as defined by the Comprehensive Plan.

Project Request:

- Operating Impact Summary - All CIP projects include a section that identifies operating budget impacts that will be incurred as a result of project implementation during the ten-year CIP period. Examples of annual operating budget impacts would include, but are not limited to maintenance, personnel, supplies, and utilities associated with the project. This calculation should estimate the annual cost for the capital project. This estimate should be included in the five-year operating budget included in the proposed budget for the upcoming year. Include any cost savings or improved efficiencies resulting from the proposed project. The purpose of assessing and displaying these impacts is to identify foreseeable demands on the operating budget as a result of project completion. Include any cost savings or improved efficiencies as a result of the proposed project
- Project Cost Estimates – The schedule should include the following phases:
 - Land: any actual or projected costs pertaining to the acquisition of land for a project, including appraisal fees, land costs, closing costs, and recording fees. Estimate acres and cost if firm figures are not known.
 - Construction: any actual or projected cost for construction of a project, including site preparation or grading, erection and finishing of structures, and any other on-site items such as roads, parking, curb and gutter, water and sewer, storm drains, and landscaping.
 - Planning and Design: any costs, actual or projected, for planning, architectural, or engineering fees. If a specific amount is not known, estimate these costs by taking ten percent of site development and construction costs.
 - Equipment: any costs, actual or projected, for furniture, fixtures, or equipment that is required in the facility but not included in the construction of the structure.
 - Hardware/Software: any costs, actual or projected, of any computer hardware or software associated with the project.
 - Project Management: any costs for personnel and operating costs needed for project or contract management during the life of the project.
 - Other: cost estimates for projects or project elements that do not fit in the above categories.

Updated projects should include the following:

- Project amendments to include a brief description
- Updated cost calculations based on current market or program clarifications
- Change in an existing approved project
- Change based on revenue projections

Review Process:

Initial Staff Review:

Finance and Budget Department staff compiles the submitted project requests and verifies the accuracy of the anticipated project costs and operating impact. The requests are extensively reviewed by the County Public Works Department (PW) and Department of Parks, Recreation and Community Facilities (PRCF) to verify the accuracy, adequacy and completeness of project descriptions, project cost, and funding requests. The Capital Improvement Program review schedule provides for a four week review period for any project in the CIP requiring construction.

Review Process:

Technical Review Committee:

The TRC ranks the projects based on established criteria. The ranking process allows projects to be added in a systematic, objective manner. Available revenues, the Board's Guiding Principles and Priorities, and financial policies guide project inclusion in the Capital Improvement Program. The Technical Review Committee reports its recommendations to the Board of Supervisors.

The Capital Program Technical Review Committee will assist the County in the Capital Program process by assuring that the technical aspects and costs of each of the requested projects have been well researched and documented. The team will also review, evaluate and document the need for each project and make recommendations for priority funding based on the established Capital Project Evaluation Criteria. The Capital Program Technical Review Committee will report their recommendations to the County Administrator and the Board of Supervisors.

TRC Members Responsibilities:

- Review all project requests for clarity, accuracy and appropriate timing;
- Meet with project submitters to clarify requests and propose revisions, if needed;
- Rank requested projects based on established evaluation criteria;
- Review available revenues and debt service requirements for project requests based on approved County financial policies;
- Prioritize projects based on their ranking and available revenues;
- Determine if projects should be considered a 3R project;
- Together with the Department of Finance and Budget develop a recommended CIP based on revenue projections provided by Department of Finance and Budget;
- Review updated school enrollment projections to determine if variances in the recommendation need to be made;
- Forward the joint recommendation to the County Administrator

TRC Members:

- County Budget Director, Department of Finance and Budget (Member/Facilitator)
- Senior Project Management staff, Department of Public Works
- Senior Planning staff, Department of Planning & Zoning
- Senior Project Management staff, Stafford County Schools
- Planning/Budget/Finance staff, Stafford County Schools
- Budget staff/analyst, Department of Finance and Budget

Review Process:

Established Project Evaluation Criteria:

Project evaluation criteria have been established and are used by the committees to review and evaluate all capital projects and their cost estimates. All projects are evaluated against various factors which the submitting department/agency is asked to address on each of the CIP forms.

All submitted or proposed Capital Improvement Projects will be subject to ranking in the following areas of emphasis:

- Health and Safety (15%)
- Education (15%)
- Impact on Operational Budget (15%)
- Special Considerations (15%)
- Economic/Community Development (15%)
- Quality of Life (10%)
- Infrastructure (10%)
- Sustainability/Energy Efficiency (5%)

Review of 3R Projects:

As defined by the process, projects that are considered to be 3R will have different scoring criteria. Emphasis in the CIP will be given to maintaining current assets. The first five years of the CIP will have scored projects that are balanced with offsetting revenues. Consideration for the following will be included:

- Does the project increase infrastructure capacity to meet existing deficiencies to service the existing population? (20%)
- Does the project eliminate a risk or hazard to public health and/or safety that endangers that population area? (20%)
- Does the project preserve or extend the life of an existing asset? (30%)
- Will failure to do the project or delaying the project have major impacts on other projects or programs? (15%)
- Is the need for the project supported through studies? (20%)

Guiding Principles for the TRC:

Guiding principles have been established for the Technical Review Committee. These principles will be incorporated into the scoring and evaluations of projects.

- New high schools will be proposed at 2,150 seats.
- Projects approved in previous CIP's that will begin in the next fiscal year will not be part of the Technical Review Committee's review.

Review Process:

Board of Supervisors Policy Review:

Prior to the Board's Review, the Board will receive the TRC's recommendation. The CIP projects that have been ranked by the TRC and reviewed by the County Administrator will be presented to the Board in November. The purpose of this presentation will be to gather the Board's direction to incorporate into the CIP that the County Administrator proposes in conjunction with the annual operating budget.

CIP Recommendation:

The County Administrator's recommended CIP is reviewed by the Board of Supervisors for projects to be funded in the upcoming fiscal year during the annual budget process. The projects approved for funding in the current budget year become that year's Capital Budget. Those projects approved for funding in the subsequent years will serve as a guide to ongoing project planning and preparation of the following year's CIP.

Policies:

Financial Policy:

The CIP is developed to be consistent with The County's Principles of High Performance Financial Management, which were last update by Resolution R18-377 on November 27, 2018.

New debt requires the County operating budget to absorb the increased debt service and any operating costs associated with the capital project. Prior to the issuance of any new debt, consideration will be given to current economic and budgetary conditions. The County is working to reduce reliance on debt by increasing other types of funding for capital projects. The County has established the following policies to assist management with financial decisions.

Capital Improvement Program (CIP) and Bonded Debt Service Affordability Guidelines:

- A five-year balanced CIP allocating capital improvement funds along with a planning CIP for years six – ten developed between the Schools and General Government will be adopted annually. A projection of changes to the tax rate will be included to help inform the Board of possible impacts of decisions.
- Capital Improvement projects for County and Schools are items for which the purchase, construction, renovation, non-recurring replacement, expansion, or the acquisition represents a public betterment and adds to the total physical worth of Stafford. Projects include, but are not limited to, expenditures for land, new structures, major repairs and renovations; maintenance of existing structures; and expenditures for machinery, equipment and vehicles. Each project funded by long term bonds should have a total cost of \$500,000 or more. Bond funded expenses include land acquisition, legal, planning, design and construction costs.
- In any year when debt service decreases from the prior year, the resulting budget savings will be used to fund one time capital needs or retained for future debt service.
- Year-end money and funds in the Capital Projects Reserve will be utilized during the budget process, and will be allocated in the CIP on projects that have been prioritized using the CIP criteria and process.
- To provide oversight over project budgets, the Board will generally appropriate by project phase (e.g. design, construction, FF&E) and may withhold from appropriation a portion of contingency funds until such time as the need for them is ascertained.

Policies:

Proffer Guidelines:

Development proffers can be a valuable asset towards funding capital projects in the County's CIP. Proffers are voluntary off-sets for new development to mitigate its capital facilities impacts. Proffers are derived from individual zoning reclassifications of properties. Proffers are negotiated on a case by case basis between the Board of Supervisors and a land development applicant. Proffers benefiting the CIP usually take two forms 1) cash payments and 2) land dedications. The most prevalent type of proffer received by the County is cash payments.

State Code regulates when and how proffers can be accepted by the County and what they can be used for. Proffers are intended to minimize capital facilities impacts and cannot be used to off-set operating costs or maintenance. Proffers must be used for facility improvements that will increase capacity to serve the new development. Some proffers are designated to specific capital projects. The use of those designated funds would be restricted to the specified capital facility. Cash proffer payments can only be collected at time of final inspection for a new home or business. As a result, payments cannot be considered a reliable funding source. They are made to the County as development occurs and are subject to market conditions and decisions made by individual developers. For CIP planning purposes, the County must project when proffer payments are made.

The County is limited in its ability to expend proffer funds. Expenditure of proffer funds are not only limited to capital facilities but, can only be applied to projects within the CIP. There is a time limit for which proffer funds must be expended. The County has 12 years to expend proffer funds from the date of collecting all proffered payments associated with a specific zoning reclassification. If those funds are not expended, they must be forfeited to the Virginia Commonwealth Transportation Board to be used for construction of road improvements in the County.

The state monitors the County's use of proffers. The County is required to provide an annual report to the state on its activities regarding proffers. The County reports to the Virginia Commission on Local Government 1) the aggregate amount of cash proffer payments collected, 2) estimated dollar amount of proffered pledged to the County, and 3) the amount of proffer payments expended. The expended funds report must be broken out by type of public facility. Funds are not expended by the County until the Board of Supervisors has appropriated them to the Capital Budget for an eligible project.

In accordance with Section 15.2-2303.2 (B) of the Code of Virginia, localities are required to include in their capital improvement program a copy of the Survey of Cash Proffers accepted by local governments during the most recent fiscal year. Additionally, this Section requires that localities include in its annual capital budget the amount of cash proffers projected to be expended for projects in the adopted fiscal year.

Policies:

	Available Proffer Balance FY2017	Proffers Received in FY2018	Proffers Budgeted & Appropriated in FY2018
Schools	\$1,308,670	\$1,346,888	\$149,298
Roads	1,434,125	745,021	60,000
Parks and Recreation	819,913	390,710	0
Libraries	279,148	229,822	0
General Government	49,028	162,787	0
Fire and Rescue	562,055	332,435	0
Government Center	5,482	280	0
Landfill	673	140	0
Other	0	1,677,488	0
	\$4,459,094	\$4,885,571	\$209,298

Coordinating Capital Budget with Operating Budget:

Operating impacts associated with CIP projects are estimated at the time the project is initially submitted for review. Impacts are broken down into personnel and operating expenses. These impacts are reviewed and updated annually. In the year the project is scheduled to be completed or implemented, costs are moved into the department's operating budget. See chart below for summary of all operating budget impacts:

Operating Impacts Summary	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Plan	Future Years
Personnel	0	0	0	395,500	807,000	1,107,000	4,859,000	4,957,000	5,056,000	5,157,300	1,202,500	21,136,300
Operating	0	0	23,000	435,000	570,000	1,737,000	2,373,000	1,847,000	1,890,080	1,977,642	1,028,000	9,824,722
Total Personnel and Operating	\$0	\$0	\$23,000	\$830,500	\$1,377,000	\$2,844,000	\$7,232,000	\$6,804,000	\$6,946,080	\$7,134,942	\$2,230,500	30,961,022

- Operating impacts in FY22 are associated with Sheriff 3R projects and assumes there will be additional maintenance costs associated with recommended Public Safety security upgrades
- Personnel and Operating costs in FY23 and FY24 are associated with the opening of the new Courthouse

Debt Service Impacts:

Each year's maximum available debt service will be established by increasing the prior year's actual debt service by the percentage of general fund revenue changes averaged over the last five years.

The financial policies define the County's maximum debt. As part of the efforts to improve the County's bond rating, the Board amended its financial policies in June 2019. Debt limitations are as follows:

- General obligation debt shall not exceed 2.75% of the assessed valuation of taxable real property.
- General fund debt service expenditures (County and Schools) shall not exceed 10% of the general government and schools operating budgets.
- The County intends to maintain a 10-year pay-out ratio at or above 60%. To the extent possible, future debt for County facilities will be issued with level principal payments.
- When the County finances capital improvements or other projects through bonds or capital leases, it will repay the debt within a period not to exceed the expected useful life of the projects.
- Debt ratios do not include debt to be repaid from identified revenue sources outside the General Fund. In the case of special service districts, the Board of Supervisors intends to set tax rates to cover any debt to be funded with the revenue.
- Capital lease debt service shall not exceed 1% of the general government budget. Capital lease debt may only be used if all the following four criteria are met:
 1. Capital lease purchase is eligible under state law for such financing;
 2. Useful life of the purchase equals or exceeds the term of the debt;
 3. Total purchase exceeds \$100,000; and
 4. Sufficient funds are available to service the capital lease debt.

Debt Service Impacts:

Although the adopted CIP will add an additional \$248,540,293 in bond funded debt over the ten year period, the additional debt to be incurred for these projects would still be below the County's guidelines.

Debt Capacity Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Plan	All Years
Total Borrow	14,523,185	35,797,241	11,634,579	42,364,216	52,133,409	30,209,389	7,934,000	18,928,000	14,344,000	20,672,274	156,624,716	248,540,293
Debt Capacity	32,419,000	46,106,000	42,400,000	41,387,000	35,029,000	17,947,000	27,127,000	20,085,000	31,831,000	64,695,000	197,341,000	359,026,000
Cumulative (Deficit)/Surplus	17,895,815	28,204,574	58,969,995	57,992,779	40,888,370	28,625,981	47,818,981	48,975,981	66,462,981	110,485,707	40,888,370	110,485,707

CAPITAL IMPROVEMENT PROGRAM

FY2020 Adopted Budget

Total Debt Service:

The following chart illustrates the year to year adjustment in the County's total debt.

Debt Service Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 year Balanced CIP	5 Year Planning Period	Total
Existing Debt Service for Governmental Funds	45,825,478	43,930,864	41,706,161	39,646,491	37,541,345	35,983,470	35,792,219	34,751,594	34,326,689	32,702,315	208,650,340	173,556,288	382,206,627
Debt Service Approved Not Borrowed	1,500,845	1,500,845	1,500,845	1,500,845	1,500,845	1,500,845	1,500,845	1,500,845	1,500,845	1,500,845	7,504,226	7,504,226	15,008,452
Existing Debt Service for Governmental Funds	47,326,324	45,431,709	45,185,297	46,633,116	47,302,543	49,628,678	53,949,916	55,591,192	55,989,199	56,132,707	231,878,989	271,291,691	503,170,680
County Debt Service	0	0	2,407,809	263,590	497,055	0	0	0	0	0	3,168,454	-	3,168,454
County Master Lease		763,000	512,000	1,801,000	339,000	150,000	154,000	159,000	184,000	268,000	3,415,000	915,000	4,330,000
Schools Debt Service		1,215,290	587,680	709,984	3,047,954	4,362,489	2,527,901	663,912	1,583,882	1,200,296	5,560,908	10,338,481	15,899,389
Total Debt Service	\$47,326,324	\$47,410,000	\$48,692,786	\$49,407,689	\$51,186,552	\$54,141,167	\$56,631,817	\$56,414,104	\$57,757,081	\$57,601,004	244,023,351	282,545,172	526,568,523

Summary of all Funding Sources:

Projected Sources	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 year Balanced CIP	5 Year Planning Period	Projected Sources (Includes PY Funding)
Debt Funding Sources														
County Bond Proceeds	0	0	28,774,241	3,150,000	5,940,000	0	0	0	0	0	9,619,274	37,864,241	9,619,274	47,483,515
School Bond Proceeds	172,086	14,523,185	7,023,000	8,484,579	36,424,216	52,133,409	30,209,389	7,934,000	18,928,000	14,344,000	11,053,000	118,760,475	82,468,389	201,228,864
Master Lease	0	3,260,000	2,185,521	7,691,686	1,445,677	638,487	658,112	677,545	787,781	1,143,815	11,982,639	15,221,371	15,249,892	30,471,263
Total Debt Funding Sources	\$172,086	\$17,783,185	\$37,982,762	\$19,326,265	\$43,809,893	\$52,771,896	\$30,867,501	\$8,611,545	\$19,715,781	\$15,487,815	\$32,654,913	171,846,087	\$107,337,555	\$279,183,642
County Sources														
Current Revenue	0	1,054,842	0	0	0	0	0	0	0	0	0	1,054,842	0	1,054,842
GF Allocation Transfer - 3% Guideline	0	3,966,034	3,759,000	3,989,503	4,141,533	4,267,400	4,870,717	4,408,200	4,505,000	5,039,000	4,258,930	20,123,471	23,081,847	43,205,318
Use of Prior Year Fund Balance General Fund	667,000	3,486,500	0	0	0	0	0	0	0	0	0	4,153,500	0	4,153,500
Proffers	0	63,000	305,334	0	0	0	122,126	0	199,888	1,129,573	423,156	368,334	1,874,743	2,243,077
State Grants	0	0	0	700,000	0	0	0	0	0	0	200,000	700,000	200,000	900,000
Net Sale from Boat Property	0	0	0	0	0	0	0	0	0	0	5,600,000	0	5,600,000	5,600,000
Transfer in from General Fund	0	41,027	0	0	0	0	0	0	0	0	0	41,027	0	41,027
Dedicated Real Estate Tax Revenue	0	0	194,479	200,314	206,323	212,513	218,888	225,455	232,219	239,185	246,361	813,629	1,162,108	1,975,737
Total County Sources	\$667,000	\$8,611,403	\$4,258,813	\$4,889,817	\$4,347,857	\$4,479,913	\$5,211,731	\$4,633,655	\$4,937,107	\$6,407,758	\$10,728,447	\$27,254,803	\$31,918,698	\$59,173,501
School Sources														
Current Revenue - County Designated 3R	0	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	7,229,325	7,229,325	14,458,650
Current Revenue - Schools	0	1,181,015	0	0	0	0	0	0	0	0	0	1,181,015	0	1,181,015
Use of Prior Year Fund Balance General Fund	1,478,714	0	0	0	0	0	0	0	0	0	0	1,478,714	0	1,478,714
Proffers	0	0	0	1,015,836	1,517,784	2,641,006	561,611	0	0	0	0	5,174,626	561,611	5,736,237
Nutrition Capital Funding	0	120,000	125,000	131,000	135,000	139,000	143,000	0	0	0	0	650,000	143,000	793,000
Net Funding Sale of MES	0	0	0	0	6,300,000	0	0	0	0	0	0	6,300,000	0	6,300,000
Total School Sources	\$1,478,714	\$2,746,880	\$1,570,865	\$2,592,701	\$9,398,649	\$4,225,871	\$2,150,476	\$1,445,865	\$1,445,865	\$1,445,865	\$1,445,865	\$22,013,680	\$7,933,936	\$29,947,616
Total Projected Sources	\$2,317,800	\$29,141,468	\$43,812,440	\$26,808,783	\$57,556,398	\$61,477,680	\$38,229,708	\$14,691,065	\$26,098,753	\$23,341,438	\$44,829,225	\$221,114,570	\$147,190,189	\$368,304,758

CAPITAL IMPROVEMENT PROGRAM

FY2020 Adopted Budget

Summary of all Projects:

Projects by Functional Area	Completion Date	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 year Balanced CIP	5 Year Planning Period	Total Projected Uses (Includes PY Funding)
General Government															
ERP System		200,000	0	0	6,206,000	0	0	0	0	0	0	0	6,406,000	0	6,406,000
Fiber Network		0	0	874,000	0	0	1,028,400	700,000	1,189,900	0	0	0	1,902,400	1,889,900	3,792,300
3R		0	1,022,930	32,000	169,503	468,363	186,000	970,000	897,000	1,031,000	1,906,000	1,381,930	1,878,797	6,185,930	8,064,727
Public Safety															
Replacement Apparatus & Ambulance		0	2,531,000	3,079,000	2,700,000	2,763,000	1,926,000	1,984,000	2,042,000	2,104,000	2,634,000	2,231,000	12,999,000	10,995,000	23,994,000
Public Safety Joint Training Center	FY2030	0	0	0	0	0	0	0	0	199,888	1,129,573	10,192,430	-	11,521,891	11,521,891
Cardiac Equipment Replacement		0	1,716,000	270,000	0	0	0	0	0	90,000	0	0	1,986,000	90,000	2,076,000
3R for Fire Rescue		0	440,022	0	0	0	0	0	0	0	0	0	440,022	0	440,022
CAD		0	0	0	0	0	0	0	0	0	0	16,842,000	-	16,842,000	16,842,000
3R for Sheriff		0	581,000	1,056,000	457,000	1,906,000	0	0	0	0	0	0	4,000,000	0	4,000,000
Brooks Park Stream Restoration (Stormwater)		467,000	0	0	1,100,000	0	0	0	0	0	0	0	1,567,000	0	1,567,000
Judicial															
Courthouse		0	2,600,000	28,991,575	3,150,000	5,940,000	0	0	0	0	0	0	40,681,575	0	40,681,575
Parking Lot and Initial Start of Downtown Stafford		0	1,800,000	0	0	0	0	0	0	0	0	0	1,800,000	0	1,800,000
Parks and Recreation															
3R		0	895,000	332,000	1,334,000	323,170	1,063,000	821,561	475,300	1,047,000	1,882,000	0	3,947,170	4,225,861	8,173,031
Library		0	0	0	0	0	0	0	0	0	0	50,000	0	50,000	50,000
Public Works															
3R		0	285,451	584,000	615,000	333,000	915,000	1,394,282	707,000	1,253,000	0	1,633,000	2,732,451	4,987,282	7,719,733
Education															
Renovate Ferry Farm ES		1,650,800	11,139,200	0	0	0	0	0	0	0	0	0	12,790,000	0	12,790,000
Drew MS Renovation (1)	FY2032		0	0	0	0	0	0	0	0	1,000,000	6,000,000	-	7,000,000	25,000,000
Elementary School Capacity (2)	FY2029		0	0	0	0	0	1,000,000	1,800,000	13,900,000	8,300,000	0	-	25,000,000	25,000,000
High School #6	FY2026	0	0	2,000,000	4,500,000	39,200,000	49,771,000	24,744,000	1,125,000	0	0	0	95,471,000	25,869,000	121,340,000
Bond Funded 3R		0	4,565,000	5,023,000	5,000,415	5,042,000	5,003,415	5,027,000	5,009,000	5,028,000	5,044,000	5,053,000	24,633,830	25,161,000	49,794,830
Cash Funded 3R		0	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	7,229,325	7,229,325	14,458,650
Nutrition Funded 3R		0	120,000	125,000	131,000	135,000	139,000	143,000	0	0	0	0	650,000	143,000	793,000
Total All Projects		\$2,317,800	29,141,468	43,812,440	26,808,783	57,556,398	61,477,680	38,229,708	14,691,065	26,098,753	23,341,438	\$44,829,225	221,114,570	147,190,189	\$386,304,758

*Schedules do not include Transportation and Utilities projects. Information on projects and funding are in separate sections.

(1) Drew MS Renovation - understanding of the cost and the data supporting the need for a renovation is necessary and will be conducted within the development of the FY2021-30 CIP. The Board supports leaving a place holder for the FY2020-24 CIP, with planning years of FY2025-29

(2) The Board supports the capacity needs that have been identified by the School Board. Specifically, the Hartwood ES and the lack of County water and sewer is a need that the Board desires to address within the next CIP planning process. The Board does not support construction on the existing Hartwood ES site. Further evaluation of existing schools will occur.

Effect on the Tax Rate:

The chart below illustrates the effect the additional debt service would have on each year of the operating budget. This effect is not cumulative. At the end of the five year period this equates to approximately \$0.07 on the current tax rate.

	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 year Balanced CIP	5 Year Planning Period
1 cent	\$1,672,000	\$1,672,000	\$1,755,600	\$1,755,600	\$1,843,380	\$1,843,380	\$1,935,549	\$1,935,549	\$2,032,326	\$2,032,326	\$9,779,131	\$2,032,326
Current tax rate	\$1.01	\$1.01	\$1.01	\$1.01	\$1.01	\$1.01	\$1.01	\$1.01	\$1.01	\$1.01		
Interest Rate	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%
Years Financed	20	20	20	20	20	20	20	20	20	20	20	20
Payment	-	1,978,290	3,507,489	2,774,574	3,884,009	4,512,489	2,681,901	822,912	1,767,882	1,468,296	\$12,144,363	\$11,253,481
Tax Rate Equivalent	0.000	0.012	0.020	0.016	0.021	0.024	0.014	0.004	0.009	0.007	0.069	0.059

Enrollment Projections:

Stafford County's New School Planning Policy for the Development of the Capital Improvement Program states When the aggregate school enrollment projections for a school level—i.e. elementary, middle, or high—is at 90% of the aggregate design capacity, staff is directed to begin planning for adding a school to the CIP. The timeline listed in this policy will direct staff's planning process.

The three major components to consider when adding a new school to the CIP are the following:

- Land Acquisition Planning
- Existing School Capacity
- School Enrollment Projections

Enrollment Projections:

Below is the enrollment projections used in the development of the FY2020-2029 CIP.

ES Design Capacity and Projections	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
ES Capacity	14,536	14,536	14,536	14,536	14,536	14,536	14,536	14,536	14,536	14,536
ES projected Students	12,634	12,766	12,879	12,980	13,168	13,343	13,443	13,606	13,765	13,920
Available Seats	1,902	1,770	1,657	1,556	1,368	1,193	1,093	930	771	616
90% Guideline	86.9%	87.8%	88.6%	89.3%	90.6%	91.8%	92.5%	93.6%	94.7%	95.8%

HS Design Capacity and Projections	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
HS Capacity	10,650	10,650	10,650	10,650	10,650	10,650	12,800	12,800	12,800	12,800
HS Projection	9,521	9,905	10,223	10,555	10,747	10,864	10,924	10,986	11,124	11,292
Available Seats	1,129	745	427	95	(97)	(214)	1,876	1,814	1,676	1,508
90% Guideline	89.4%	93.0%	96.0%	99.1%	100.9%	102.0%	85.3%	85.8%	86.9%	88.2%

Source: Proposed Elementary School Program Capacity January 23, 2018.

Enrollment Projections:

Below is the enrollment projections used in the development of the FY2020-2029 CIP.

ES Design Capacity and Projections	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
ES Capacity	14,536	14,536	14,536	14,536	14,536	14,536	14,536	14,536	14,536	14,536
ES projected Students	12,634	12,766	12,879	12,980	13,168	13,343	13,443	13,606	13,765	13,920
Available Seats	1,902	1,770	1,657	1,556	1,368	1,193	1,093	930	771	616
90% Guideline	86.9%	87.8%	88.6%	89.3%	90.6%	91.8%	92.5%	93.6%	94.7%	95.8%

HS Design Capacity and Projections	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
HS Capacity	10,650	10,650	10,650	10,650	10,650	10,650	12,800	12,800	12,800	12,800
HS Projection	9,521	9,905	10,223	10,555	10,747	10,864	10,924	10,986	11,124	11,292
Available Seats	1,129	745	427	95	(97)	(214)	1,876	1,814	1,676	1,508
90% Guideline	89.4%	93.0%	96.0%	99.1%	100.9%	102.0%	85.3%	85.8%	86.9%	88.2%

Source: Proposed Elementary School Program Capacity January 23, 2018.

CAPITAL IMPROVEMENT PROGRAM

FY2020 Adopted Budget

General Government

Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Information Technology 3R	\$0	\$1,022,930	\$32,000	\$169,503	\$468,363	\$186,000	\$970,000	\$897,000	\$1,031,000	\$1,906,000	\$1,381,930	\$1,878,797	\$6,185,930	\$8,064,727
ERP System	200,000	0	0	6,206,000	0	0	0	0	0	0	0	6,406,000	0	6,406,000
Fiber Network	0	0	874,000	0	0	1,028,400	700,000	1,189,900	0	0	0	1,902,400	1,889,900	3,792,300
Total Expenditures	\$200,000	\$1,022,930	\$906,000	\$6,375,503	\$468,363	\$1,214,400	\$1,670,000	\$2,086,900	\$1,031,000	\$1,906,000	\$1,381,930	\$10,187,197	\$8,075,830	\$18,263,027
Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
GF Allocation Transfer - 3% Guideline	\$0	\$1,022,930	\$906,000	\$169,503	\$468,363	\$1,214,400	\$1,670,000	\$2,086,900	\$1,031,000	\$1,906,000	\$1,381,930	\$3,781,197	\$8,075,830	\$11,857,027
Use of Prior Year Fund Balance General Fund	200,000	0	0	0	0	0	0	0	0	0	0	200,000	0	200,000
Master Lease Proceeds	0	0	0	6,206,000	0	0	0	0	0	0	0	6,206,000	0	6,206,000
Total Revenues	\$200,000	\$1,022,930	\$906,000	\$6,375,503	\$468,363	\$1,214,400	\$1,670,000	\$2,086,900	\$1,031,000	\$1,906,000	\$1,381,930	\$10,187,197	\$8,075,830	\$18,263,027
Operating Impacts		FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Debt Service		0	0	0	823,336	823,336	823,336	823,336	823,336	823,336	823,336	1,646,672	4,116,681	5,763,353
Total Operating Impacts		\$0	\$0	\$0	\$823,336	\$823,336	\$823,336	\$823,336	\$823,336	\$823,336	\$823,336	\$1,646,672	\$4,116,681	\$5,763,353

Project Code		Square Footage/Acreage	N/A
Project Type	3-R	Construction Cost per Sq. Ft.	
Project Status		Operating Cost per Sq. Ft.	
Functional Area	Information Technology	Student Capacity	
Estimated Project Cost	\$1,022,930	Est. Opening Date	
Current Year Cost		Funding Source	Current Revenue
Debt Service			
Full Year Operating Impact			

Information Technology: 3R Projects

Project Description:

- **Storage Area Network (SAN):** Increase storage area network (SAN) capacity. With the ever-growing network storage demands for On Base (document imaging), GIS, public safety, public works and utilities (fiber optic video imagery), the demands are going to grow at a rate necessitating expansion of the County's storage capacity every two years to keep up. The County deploys redundant storage with automatic failover between County Administration and the Public Safety Building (PSB). Each storage addition involves installing a new "shelf" to each of the two SAN arrays.
- **Replace Cisco Switches Remote Switches:** Serving fire stations, rescue stations, utilities facilities, and parks are using 12+ year old technology and the equipment is past end of life and end of support with Cisco. This eliminates patches, security updates, and other critical support necessary for the network and could directly affect public safety.
- **Cisco NetScaler and UCS Chassis:** These critical pieces of Cisco equipment including NetScaler and UCS Chassis will need to be replaced as they have reached end of life and Cisco support will be discontinued.
- **Server Replacement:** As part of a five year replacement cycle, County servers will need to be replaced.
- **Security Event and Incident Management System**

Operating Impact Summary:

All of these capital expenditures will be replacing existing equipment already covered under maintenance contracts, which should result in little or no changes to maintenance costs.

Location:

- County Administration and PSB
- All Remote Locations – fire stations, rescue stations, public works and utilities, and parks

Information Technology: 3R Projects

Relationship to Approved County Policy or Plan:

- IT Strategic Plan.
- Board of Supervisor's priorities under "organizational excellence."

Analysis of Need:

- With the ever-growing network storage demands for OnBase (document imaging), GIS, public safety, public works and utilities (fiber optic video imagery), the demands are going to grow at rate necessitating expansion of the County's storage capacity every two years to keep up.
- With the increase in storage capacity, the County's data backup capacity will also need to increase. Rubrik is an appliance-based backup system that backs up to the two appliances and this would increase the capacity of the two appliances. The appliances replicate to the Amazon Web Services (AWS) cloud. The County will need to increase AWS capacity on an annual basis and can do so through the operating budget.
- The SEIM will provide critical real-time monitoring of all network traffic and logs and using machine learning and AI, notify County staff when a potential emergency arises.
- In FY2020, all 38 remote switches have reached end of life and end of support with Cisco. These switches are at fire stations, rescue stations and parks and are using 12 year old technology and put service to all these facilities at risk.
- In FY2020, and each successive year through 2029, County servers will need to be replaced as part of a five-year replacement cycle. Server costs have decreased significantly over the past five years as the County has virtualized more than half of all servers.
- In FY2023 – 2029, the County will need to replace various Cisco routers and switches that reach end of life and end of Cisco support. Cisco announces equipment every year that impacts the County's network infrastructure and requires replacement.

Information Technology: 3R Projects

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Replace Servers 5 year replacement cycle	0	31,000	0	0	0	0	0	0	0	0	0
Add storage capacity for SAN	0	121,000	0	0	0	0	0	0	0	0	0
Netscaler and UCS Chasis to replace end of life equip	0	64,930	0	0	0	0	0	0	0	0	0
Security Event and Incident MGMT System	0	131,000	0	0	0	0	0	0	0	0	0
Replace Cisco Switches Remote Locations (38)	0	675,000	0	0	0	0	0	0	0	0	0
Replace Servers 5 year replacement cycle	0	0	32,000	0	0	0	0	0	0	0	0
Replace Servers 5 year replacement cycle	0	0	0	33,000	0	0	0	0	0	0	0
Add storage capacity for SAN	0	0	0	136,503	0	0	0	0	0	0	0
Replace Servers 5 year replacement cycle	0	0	0	0	34,000	0	0	0	0	0	0
Replace Cisco Switches/routers - End of Life	0	0	0	0	294,000	0	0	0	0	0	0
Add storage capacity for SAN	0	0	0	0	140,363	0	0	0	0	0	0
Replace Servers 5 year replacement cycle	0	0	0	0	0	35,000	0	0	0	0	0
Replace Security Event and Incident MGMT System	0	0	0	0	0	151,000	0	0	0	0	0
Replace Cisco Switches/routers - End of Life	0	0	0	0	0	0	312,000	0	0	0	0
Increase Capacity to Rubrik Backup System	0	0	0	0	0	0	310,000	0	0	0	0
Replace Cisco Switches/routers - End of Life	0	0	0	0	0	0	312,000	0	0	0	0
Replace Servers 5 year replacement cycle	0	0	0	0	0	0	36,000	0	0	0	0

Information Technology: 3R Projects

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Add storage capacity for SAN	0	0	0	0	0	0	0	153,000	0	0	0
Replace Cisco Call Managers -end of life	0	0	0	0	0	0	0	386,000	0	0	0
Replace Cisco Switches/routers - End of Life	0	0	0	0	0	0	0	321,000	0	0	0
Replace Battery Backup (UPS) - end of life	0	0	0	0	0	0	0	0	398,000	0	0
Replace Cisco Managed Wi-Fi system - End of Life	0	0	0	0	0	0	0	0	264,000	0	0
Replace Cisco Switches/routers - End of Life	0	0	0	0	0	0	0	0	331,000	0	0
Data Backup System End of Life	0	0	0	0	0	0	0	0	0	546,000	0
Replace phones that reached end of life	0	0	0	0	0	0	0	0	0	817,000	0
Replace Cisco Switches/routers - End of Life	0	0	0	0	0	0	0	0	0	341,000	0
Add storage capacity for SAN	0	0	0	0	0	0	0	0	0	163,000	0
Replace Servers 5 year replacement cycle	0	0	0	0	0	0	0	0	0	39,000	0
Replace Cisco Switches at All Remote Locations (38)	0	0	0	0	0	0	0	0	0	0	906,000
Replace Cisco Switches/routers - End of Life	0	0	0	0	0	0	0	0	0	0	351,000
NetScaler and UCS Chassis to replace end of life equip	0	0	0	0	0	0	0	0	0	0	84,930
Replace Servers 5 year replacement cycle	0	0	0	0	0	0	0	0	0	0	40,000
Replace Servers 5 year replacement cycle	0	0	0	0	0	0	0	0	38,000	0	0
Replace Servers 5 year replacement cycle	0	0	0	0	0	0	0	37,000	0	0	0
Total Project Cost	\$0	\$1,022,930	\$32,000	\$169,503	\$468,363	\$186,000	\$970,000	\$897,000	\$1,031,000	\$1,906,000	\$1,381,930

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
GF Allocation Transfer - 3% Guideline	0	1,022,930	32,000	169,503	468,363	186,000	970,000	897,000	1,031,000	1,906,000	1,381,930
Total	\$0	\$1,022,930	\$32,000	\$169,503	\$468,363	\$186,000	\$970,000	\$897,000	\$1,031,000	\$1,906,000	\$1,381,930

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Information Technology: ERP System

Project Code		Square Footage/Acreage	
Project Type	3-R	Construction Cost per Sq. Ft.	
Project Status	Planning	Operating Cost per Sq. Ft.	
Functional Area	Information Technology	Student Capacity	
Estimated Project Cost	\$6,406,000	Est. Opening Date	
Current Year Cost	\$5,000,000	Funding Source	Master Lease
Debt Service	\$757,002	Years Financed	10
Full Year Operating Impact		Tax Rate Equivalent	\$0.005

Project Description:

This project would involve the replacement of the County's H.T.E. financial, HR, and utility billing systems that are utilizing 20 year-old technology with a new ERP system. The current H.T.E. financial system is more than 20 years old and runs on an AS/400 mainframe computer and is long past its useful life. There is no doubt that a new ERP system is needed. A consultant will be hired in FY20 to conduct a needs assessment and provide recommendations on the scope of this project and what specific requirements will be needed in the ERP. It is anticipated that the software will be implemented in several phases with the first part beginning in FY22.

Operating Impact Summary:

It is anticipated that a new ERP system will cost a minimum of \$6,406,000 but will not be fully known until a consultant has done the needs analysis and cost estimation. Personnel and ongoing costs are also not known at this time.

Location:

All County locations, including: admin, public safety, parks, utilities, etc.

Relationship to Approved County Policy or Plan:

This is one of the Board's Strategic Priorities and is part of the County's Strategic Plan.

Information Technology: ERP System

Analysis of Need:

A consultant will be hired in FY20 to conduct a detailed needs assessment and make recommendations. After the consultant has completed the needs assessment, it is anticipated that an RFP would be developed utilizing the requirements from the consultant's study. The consultant will also conduct a detailed cost estimate to determine if the estimated project costs are sufficient. The County will then go out to bid for a new ERP system with implementation anticipated to begin FY2022 and will likely span more than one year.

Information Technology: Purchase and Implement ERP

Alternative:

The County can continue using H.T.E., but the same issues with reporting, ease of use, and integration with other enterprise applications will persist. Also, delaying this project will jeopardize the work the consultant will be undertaking in FY20 – FY21.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	Project Total
Planning/Design	200,000	0	0	0	0	0	0	0	0	0	0	200,000
Construction / Project	0	0	0	5,706,000	0	0	0	0	0	0	0	5,706,000
Other	0	0	0	500,000	0	0	0	0	0	0	0	500,000
Total Project Cost	\$200,000	\$0	\$0	\$6,206,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,406,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Use of Prior Year Fund Balance General Fund	200,000	0	0	0	0	0	0	0	0	0	0
Master Lease Proceeds	0	0	0	6,206,000	0	0	0	0	0	0	0
Total	\$200,000	\$0	\$0	\$6,206,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Master Lease	0	0	0	823,336	823,336	823,336	823,336	823,336	823,336	823,336
Total	\$0	\$0	\$0	\$823,336	\$823,336	\$823,336	\$823,336	\$823,336	\$823,336	\$823,336

Information Technology: Fiber Network

Project Code		Square Footage/Acreage	
Project Type		Construction Cost per Sq. Ft.	
Project Status	Construction	Operating Cost per Sq. Ft.	
Functional Area	Information Technology	Student Capacity	
Estimated Project Cost	\$1,902,400	Est. Opening Date	
Current Year Cost	\$1,695,400	Cost per Linear Ft.	\$27.50
Debt Service		Funding source	Current Revenue
Full Year Operating Impact			

Project Description:

FY2021: NCR Net Connection

FY2024: Extend Fiber to Mt. View F&R, Chichester Park, and Curtis Park

Operating Impact Summary:

The cost to deploy fiber includes the construction and termination of the fiber to each of the facilities and the necessary equipment to light the fiber.

Location:

FY2021: NCR Net Connection

FY2024: Extend Fiber to Mt. View F&R, Chichester Park, and Curtis Park

Relationship to Approved County Policy or Plan:

- This is an ongoing effort that has been previously approved by the Board
- Supports the Board's strategic priorities
- IT strategic plan

Information Technology: Fiber Network

Analysis of Need:

These projects are critical to ensuring reliable access to the County's network, CAD system, and critical business and public safety systems. This is part of the Board's ongoing interest in seeing all facilities with a priority towards public safety facilities, connected to the County's network with a reliable high speed connection. The current cable modem connections are slow and unreliable to these locations. Storms and power outages routinely bring down the cable modem service resulting in lost connectivity to the County's CAD system, email and other applications used by the Fire Department. Parks are also a priority after fire and rescue station fiber construction projects are complete. The County's network, recreation registration and point of sales system, email and other critical applications used by the Parks and Recreation Department are impacted by unreliable cable modem connections.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Extend Fiber Network to Unspecified Fire and Rescue	0	0	0	0	0	0	700,000	0	0	0	0
Extend Fiber to Mtn View F&R & Chichester Park	0	0	0	0	0	595,400	0	0	0	0	0
Extend Fiber to Widewater F.S.	0	0	0	0	0	0	0	812,400	0	0	0
Extend Fiber to Curtis Park	0	0	0	0	0	433,000	0	0	0	0	0
Extend Fiber to St. Clair Brooks & Duff McDuff Parks	0	0	0	0	0	0	0	377,500	0	0	0
NCR Net Connection	0	0	874,000	0	0	0	0	0	0	0	0
Total	\$0	\$0	\$874,000	\$0	\$0	\$1,028,400	\$700,000	\$1,189,900	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
GF Allocation Transfer - 3% Guideline	0	0	874,000	0	0	1,028,400	700,000	1,189,900	0	0	0
Total	\$0	\$0	\$874,000	\$0	\$0	\$1,028,400	\$700,000	\$1,189,900	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

CAPITAL IMPROVEMENT PROGRAM

FY2020 Adopted Budget

Public Safety: Fire and Rescue

Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Station Repairs - 3R	\$0	\$440,022	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$440,022	\$0	\$440,022
Public Safety Joint Training Center	0	0	0	0	0	0	0	0	199,888	1,129,573	10,192,430	0	11,521,891	11,521,891
Apparatus Replacement	0	2,531,000	3,079,000	2,700,000	2,763,000	1,926,000	1,984,000	2,042,000	2,104,000	2,634,000	2,231,000	12,999,000	10,995,000	23,994,000
Cardiac Equipment Replacement	0	1,716,000	270,000	0	0	0	0	0	90,000	0	0	1,986,000	90,000	2,076,000
Total Expenditures	\$0	\$4,687,022	\$3,349,000	\$2,700,000	\$2,763,000	\$1,926,000	\$1,984,000	\$2,042,000	\$2,393,888	\$3,763,573	\$12,423,430	\$15,425,022	\$22,606,891	\$38,031,913

Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Bond Proceeds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,569,274	\$0	\$9,569,274	\$9,569,274
GF Allocation Transfer - 3% Guideline	0	1,427,022	969,000	1,014,000	1,111,000	1,075,000	1,107,000	1,139,000	1,174,000	1,251,000	1,244,000	5,596,022	5,915,000	11,511,022
Master Lease Proceeds	0	3,260,000	2,185,521	1,485,686	1,445,677	638,487	658,112	677,545	787,781	1,143,815	740,639	9,015,371	4,007,892	13,023,263
Proffers	0	0	0	0	0	0	0	0	199,888	1,129,573	423,156	0	1,752,617	1,752,617
State Grants - Fire Programs	0	0	0	0	0	0	0	0	0	0	200,000	0	200,000	200,000
Dedicated Real Estate Tax Revenue	0	0	194,479	200,314	206,323	212,513	218,888	225,455	232,219	239,185	246,361	813,629	1,162,108	1,975,737
Total Revenues	\$0	\$4,687,022	\$3,349,000	\$2,700,000	\$2,763,000	\$1,926,000	\$1,984,000	\$2,042,000	\$2,393,888	\$3,763,573	\$12,423,430	\$15,425,022	\$22,606,891	\$38,031,913

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Operating	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43,000	\$0	\$43,000	\$43,000
Master Lease	0	606,847	924,074	1,121,074	1,313,074	1,398,074	1,043,183	1,110,000	1,224,076	1,376,076	3,965,070	6,151,410	10,116,480
Total Operating Impacts	\$0	\$606,847	\$924,074	\$1,121,074	\$1,313,074	\$1,398,074	\$1,043,183	\$1,110,000	\$1,224,076	\$1,419,076	\$3,965,070	\$6,194,410	\$10,159,480

Public Safety: Station Repairs 3R

Project Code		Square Footage/Acreage	
Project Type	3-R	Construction Cost per Sq. Ft.	
Project Status	Construction	Operating Cost per Sq. Ft.	
Functional Area	Public Safety - Fire & Rescue	Student Capacity	
Estimated Project Cost	\$440,022	Est. Opening Date	FY2020
Current Year Cost		Funding Source	Current Revenue
Debt Service		Years Financed	
Full Year Operating Impact			

Project Description:

Many of the fire and rescue stations operated by the volunteer organizations within the County of Stafford's Fire and Rescue Department are significantly aging and in serious need of repairs and upgrades to bring them to compliance with safety codes and federal law such as the Americans with Disabilities Act. In order to determine the needs of all stations and to assist in prioritizing those needs, a study through an Architectural & Engineering firm has been performed. Additionally, many of the volunteer stations are in need of modernization of infrastructure to include replacement of HVAC, electrical and plumbing/septic systems, repairs to roofs, and concrete apparatus floors and aprons, etc. Funding will be allocated annually based on location needs. Examples include cracked foundations, roofs with multiple failing layers, lacking dormitory space, and code non-compliance with egress.

Location:

All Career and Volunteer Fire and Rescue Stations located in Stafford County.

Relationship to Approved County Policy or Plan:

- Relates to the Board of Supervisor's Strategic Plan
- Comprehensive Plan (Response Time Standards)
- 2017 Fire and EMS Assessment (Safe Workplace, Volunteer Recruitment and Retention, Career Morale and Attrition)
- Numerous historical studies

Public Safety: Station Repairs 3R

Analysis of Need:

The County of Stafford has taken purposeful action steps towards working alongside the various Volunteer Fire and EMS Agencies. This continued effort will ensure a safe and effective response to emergencies by all of the Fire and Rescue Department's personnel.

Alternative:

The County of Stafford may choose to depend upon Volunteer Corporations for all facilities maintenance, repairs, and rehabilitation efforts.

The County of Stafford may choose to do a large project submission for the reconstruction of aged stations within the Stafford County Fire and Rescue Department's building-stock inventory.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	Project Total
Planning/Design	0	42,000	0	0	0	0	0	0	0	0	0	42,000
Construction / Project	0	398,022	0	0	0	0	0	0	0	0	0	398,022
Total	\$0	\$440,022	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$440,022

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
GF Allocation Transfer - 3% Guideline	0	440,022	0	0	0	0	0	0	0	0	0
Total	\$0	\$440,022	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Fire and Rescue: Public Safety Joint Training Center

Project Code		Square Footage/Acreage	24,300sq. ft./20+ac.
Project Type	Building Construction	Construction Cost per Sq. Ft.	\$300
Project Status	Planning	Operating Cost per Sq. Ft.	
Functional Area	Public Safety - Fire & Rescue	Student Capacity	
Estimated Project Cost	\$11,521,891	Est. Opening Date	FY2023
Current Year Cost	\$8,455,000	Funding Source	VRA, Proffers, Grants
Debt Service	\$653,231	Tax Rate Equivalent	\$0.005
Full Year Operating Impact			

Project Description:

A new Joint Training Center is needed to accommodate the Fire and Rescue Department's current education and fleet functions; including proper classrooms, securable equipment storage, appropriate housing of training simulators and safe apparatus repair facilities. Currently, the department depends upon a repurposed motorboat sales facility to accomplish these tasks. The land and building within this existing space are for sale and being actively marketed.

The project includes site development, 4,800 square feet of classroom space, 12,000 square feet of working space (materials storage, gear areas, locker rooms, etc.), 7,500 square feet of vehicle bays and exterior training grounds with a live fire burn building.

Education and training space is necessary to provide the means to meet classroom and practical needs for various emergency medical services (Paramedic), fire suppression (Career Firefighter and Volunteer), hazardous materials, and technical rescue course offerings.

Fleet maintenance, repair, and logistics high-bay spaces are needed for the safe upkeep of apparatuses. Additionally, planned shared space will incorporate a forensic bay for use by the Sheriff's Office and Fire Marshal.

The exterior training grounds includes a Class-A live fire burn building, training tower, and educational simulators for use by all Public Safety Personnel.

Operating an appropriately designed and constructed facility will allow for a convenient and centralized location to be used days, nights, and weekends; meeting the demands of our complex combination system.

Fire and Rescue: Public Safety Joint Training Center

Operating Impact Summary:

There will be minor one-time startup costs for the facility to include instructional supplies such as smart boards, a copy machine, fax machine, projectors, and computers. Other startup costs for the facility include kitchen and janitorial supplies. Current staff will transition to the new Central Training and Logistics Complex - no new staffing costs would be incurred.

Location:

Staff, at the direction of the Public Safety Committee, is pursuing available land options. One Option may be through cooperation with the Stafford Regional Airport, an area of 20+ Acres of land has been identified for the construction of the Fire and Rescue Department's Training and Logistics Center. The Airport Authority is amenable to providing the County of Stafford with deeded land ownership of 20+ Acres, in exchange for the relief of debt (at fair market price). The location is in the northeastern portion of the Airport Authority's land ownership, adjacent to Ramoth Church Road and Blaque Trax Lane.

Relationship to Approved County Policy or Plan:

- Relates to the Board of Supervisor's Strategic Plan
- Comprehensive Plan (Response Time Standards)
- 2017 Fire and EMS Assessment (Education/Training, Safe Workplace, Volunteer Recruitment and Retention, Career Morale)

Analysis of Need:

The existing commercial space (which is being used for Education, Training, and Fleet) is being marketed for sale. An appropriate replacement must be planned and constructed.

Change or Reasons for Revisions:

FY2012 - Project new to the CIP. Project cost \$5.5M. Project scheduled for completion in FY17.

FY2013 - Project moved out three years. Project scheduled for completion in FY20. Reduction in project cost. \$5.3M

FY2014 - No change

FY2015 - No change

FY2016 - Updated project costs \$6.6M

FY2017 - No Change

FY2018 – Updated project costs \$6.9M. Timing of project will be determined during the FY2019 process.

Fire and Rescue: Public Safety Joint Training Center

FY2019 – Removed from the CIP based on TRC ranking and lack of available funding. Scope and cost of project changed to include the needs of the departments of Fire and Rescue and the Sheriff.

FY2020 – Requested as a new project. \$9.6M

Alternative:

Removal of marketing efforts and sale of the existing space, with continued use by the Fire and Rescue Department.

3R funds budgeted and appropriated to modernize and ensure all safety aspects required within the various standards associated with a Training and Logistics Center (International Association of Emergency Vehicle Technicians, National Fire Protection Association, Virginia Office of Emergency Medical Services, International Association of Arson Investigators, etc.)

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	Project Total
Planning/Design	0	0	0	0	0	0	0	0	0	1,129,573	0	1,129,573
Property Acquisition	0	0	0	0	0	0	0	0	199,888	0	0	199,888
Construction / Project	0	0	0	0	0	0	0	0	0	0	9,772,430	9,772,430
Contingency	0	0	0	0	0	0	0	0	0	0	420,000	420,000
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$199,888	\$1,129,573	\$10,192,430	\$11,521,891

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Bond Proceeds	0	0	0	0	0	0	0	0	0	0	9,569,274
Proffers	0	0	0	0	0	0	0	0	199,888	1,129,573	423,156
State Grants - Fire Programs	0	0	0	0	0	0	0	0	0	0	200,000
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$199,888	\$1,129,573	\$10,192,430

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Operating	0	0	0	0	0	0	0	0	0	43,000
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43,000

Fire and Rescue: Replacement Apparatus

Project Code		Square Footage/Acreage	
Project Type	Vehicle/Apparatus/Equipment Replacement	Construction Cost per Sq. Ft.	
Project Status	Replacement Equipment/Apparatus	Operating Cost per Sq. Ft.	
Functional Area	Public Safety - Fire & Rescue	Student Capacity	
Estimated Project Cost	On-going	Est. Opening Date	On-going
Current Year Cost		Funding Source	Master lease & Current Revenue
Debt Service	Average \$187,000 per year (5 years) Average \$145,000 per year (10 years)	Years Financed	Apparatus is financed for 10 years. Equipment is funded with 3R
Full Year Operating Impact			

Project Description:

Stafford County's Fire and Rescue Department effectively ensures and maintains the viability of the fleet of emergency vehicles with scheduled replacement due to age, mileage and/or engine hour indication. This program provides for the regular replacement of department apparatuses based on service life estimates for each vehicle. This includes replacement of ambulances, engines, and specialty apparatuses (ladders, heavy rescue apparatuses, tankers, and/or boats). Typical service life is 15 years for boats and tankers; ten years for engines, ladders, heavy rescues, and pumper/tankers; and five years for ambulances. This plan replaces only primary apparatuses and supports fleet reduction by not replacing duplicate apparatuses.

Operating Impact Summary:

There will be additional debt service for equipment purchased using the Master Lease. There will be no additional costs for the operating of the replacement equipment.

Location:

All Fire and Rescue Stations located throughout Stafford County.

Fire and Rescue: Replacement Apparatus

Relationship to Approved County Policy or Plan:

- The Comprehensive Plan (Standards of Cover/Response Time)
- Stafford County Fire and Rescue Department Fleet Replacement and Rotation Policy
- 2017 Fire and Rescue Department Assessment
- NFPA Standards

Analysis of Need:

Fire and Emergency Medical Services field delivery requires the use of vehicles not only for transportation, but for the provision of services. Ambulances and Medic Units must be clean, neat, and in good working order to be licensed by the VA Dept. of Emergency Medical Services. Pumping Apparatuses (engines) are required for fire suppression activities and special service units (trucks, Rescues, etc.) are required for technical rescue and special functions where there is no substitute.

Change or Reasons for Revisions:

FY2020 – Program replacement policy change

Fire and Rescue: Replacement Apparatus

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	Project Total
Ambulance Replacement	0	867,000	906,000	948,000	975,000	1,005,000	1,035,000	1,065,000	1,098,000	1,131,000	1,164,000	10,194,000
Engine Replacement	0	734,000	767,000	802,000	1,652,000	851,000	877,000	903,000	930,000	958,000	987,000	9,461,000
Tanker Replacement	0	810,000	0	884,000	0	0	0	0	0	0	0	1,694,000
Heavy Equipment Replacement	0	0	1,343,000	0	0	0	0	0	0	0	0	1,343,000
Fire Boat Replacement	0	0	0	0	0	0	0	0	0	425,000	0	425,000
Equipment for Engines	0	60,000	63,000	66,000	136,000	70,000	72,000	74,000	76,000	78,000	80,000	775,000
Equipment for Heavy Equipment	0	0	0	0	0	0	0	0	0	0	0	0
Equipment for Tankers	0	60,000	0	0	0	0	0	0	0	0	0	60,000
Equipment for Fire Boat	0	0	0	0	0	0	0	0	0	42,000	0	42,000
Total	\$0	\$2,531,000	\$3,079,000	\$2,700,000	\$2,763,000	\$1,926,000	\$1,984,000	\$2,042,000	\$2,104,000	\$2,634,000	\$2,231,000	\$23,994,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
GF Allocation Transfer - 3% Guideline	0	987,000	969,000	1,014,000	1,111,000	1,075,000	1,107,000	1,139,000	1,174,000	1,251,000	1,244,000
Master Lease Proceeds	0	1,544,000	1,915,521	1,485,686	1,445,677	638,487	658,112	677,545	697,781	1,143,815	740,639
Dedicated Real Estate Tax Revenue	0	0	194,479	200,314	206,323	212,513	218,888	225,455	232,219	239,185	246,361
Total	\$0	\$2,531,000	\$3,079,000	\$2,700,000	\$2,763,000	\$1,926,000	\$1,984,000	\$2,042,000	\$2,104,000	\$2,634,000	\$2,231,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Master Lease	0	205,000	459,000	656,000	848,000	933,000	1,020,000	1,110,000	1,203,000	1,355,000
Total	\$0	\$205,000	\$459,000	\$656,000	\$848,000	\$933,000	\$1,020,000	\$1,110,000	\$1,203,000	\$1,355,000

Fire and Rescue: Cardiac Equipment Replacement

Project Code		Square Footage/Acreage	
Project Type	Vehicle/Apparatus/Equipment Replacement	Construction Cost per Sq. Ft.	
Project Status		Operating Cost per Sq. Ft.	
Functional Area	Public Safety - Fire & Rescue	Student Capacity	
Estimated Project Cost	\$1,887,000 FY2020, \$1,716,000 adjusted	Est. Opening Date	
Current Year Cost	\$292,000	Funding Source	Master Lease
Debt Service	\$441,891 FY2021	Years Financed	5
Full Year Operating Impact	\$441,891 FY2021		

Project Description:

This project will spread out the debt service costs associated with the replacement of all of the Fire and Rescue Department's cardiac/monitor/defibrillator and Cardio Pulmonary Resuscitation (CPR) equipment which was obtained in 2009 on a lease purchase program. The lease ended in 2014 and the department purchased the equipment at that time. In FY2019, (45) LifePak 500 Automated External Defibrillators (AEDs) that are now obsolete will be replaced with the LifePak CR+ (AED) that has a life span of eight years and does not require programming or a service agreement. The LifePak 12 Cardiac Monitor/Defibrillators that are equipped on advanced life support (ALS) Fire and Rescue apparatus are also now medically outdated and are no longer supported by Physio-Control. In FY2019, (5) LifePak 12 Monitor/Defibrillators will be replaced with the updated LifePak 15 version. In FY2020, (34) additional LifePak 15s are to be purchased, along with (25) LUCAS Chest Compression Systems both of which have a service life of ten years. Cardiac monitor/defibrillator equipment is essential to the departments' ALS and emergency medical services program. Replacement of the equipment in mass is necessary in order to maintain consistency, technological standards, and provide optimal care. FY2020's estimated project cost of \$1,887,000 will be offset by trading in (21) LifePak 15 Monitors (@ \$6,000/unit) and (15) LUCAS Systems (@ \$3,000/unit) for a savings of \$171,000; which will bring the total FY2020 acquisition cost down to \$1,716,000.00.

The following is the LifePak and LUCAS replacement plan:

- FY2020 – (34) LifePak 15 and 25 LUCAS
- FY2021 – (15) LUCAS
- FY2027 – (45) LifePak 15, 40 LUCAS and 45 LifePak CR+(AEDS)

Fire and Rescue: Cardiac Equipment Replacement

Operating Impact Summary:

No additional operating costs associated with this project.

Location:

Throughout Stafford County.

Relationship to Approved County Policy or Plan:

- Comprehensive Plan
- Heartsafe Community Designation
- Pulsepoint Connected Community
- VA Office of Emergency Medical Services Licensing Requirements

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	Project Total
LifePak15 Replacement	0	1,462,000	0	0	0	0	0	0	0	0	0	1,462,000
Lucas System Replacement	0	425,000	270,000	0	0	0	0	0	0	0	0	695,000
LifePak CR and AEDs	0	0	0	0	0	0	0	0	90,000	0	0	90,000
Trade in (21) LifePak 15 Monitors		(126,000)	0	0	0	0	0	0	0	0	0	(126,000)
Trade In (15) Lucas Chest Compression Systems		(45,000)	0	0	0	0	0	0	0	0	0	(45,000)
Total	\$0	\$1,716,000	\$270,000	\$0	\$0	\$0	\$0	\$0	\$90,000	\$0	\$0	\$2,076,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Master Lease Proceeds	0	1,716,000	270,000	0	0	0	0	0	90,000	0	0
Total	\$0	\$1,716,000	\$270,000	\$0	\$0	\$0	\$0	\$0	\$90,000	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Master Lease	0	401,847	465,074	465,074	465,074	465,074	23,183		21,076	21,076
Total	\$0	\$401,847	\$465,074	\$465,074	\$465,074	\$465,074	\$23,183	\$0	\$21,076	\$21,076

CAPITAL IMPROVEMENT PROGRAM

FY2020 Adopted Budget

Public Safety: Sheriff

Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Sheriff 3R	\$0	\$581,000	\$1,056,000	\$457,000	\$1,906,000	\$0	\$0	\$0	\$0	\$0	\$0	\$4,000,000	\$0	\$4,000,000
CAD	0	0	0	0	0	0	0	0	0	0	16,842,000	0	16,842,000	\$16,842,000
Total Expenditures	\$0	\$581,000	\$1,056,000	\$457,000	\$1,906,000	\$0	\$0	\$0	\$0	\$0	\$16,842,000	\$4,000,000	\$16,842,000	\$20,842,000

Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Current Revenue - County	\$0	\$329,923	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$329,923	\$0	329,923
GF Allocation Transfer - 3% Guideline	0	210,050	1,056,000	457,000	1,906,000	0	0	0	0	0	0	3,629,050	0	3,629,050
Master Lease Proceeds	0	0	0	0	0	0	0	0	0	0	11,242,000	0	11,242,000	11,242,000
Net Sale from Boat Property	0	0	0	0	0	0	0	0	0	0	5,600,000	0	5,600,000	5,600,000
Transfer in from Schools	0	41,027	0	0	0	0	0	0	0	0	0	41,027	0	41,027
Total Expenditures	\$0	\$581,000	\$1,056,000	\$457,000	\$1,906,000	\$0	\$0	\$0	\$0	\$0	\$16,842,000	\$4,000,000	\$16,842,000	\$20,842,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Operating	\$0	\$0	\$23,000	\$24,000	\$24,000	\$25,000	\$26,000	\$26,000	\$27,000	\$28,000	\$71,000	\$132,000	\$178,000
Total All Projects	\$0	\$0	\$23,000	\$24,000	\$24,000	\$25,000	\$26,000	\$26,000	\$27,000	\$28,000	\$71,000	\$132,000	\$178,000

Sheriff: 3R Projects

Project Code			
Project Type	3-R	Construction Cost per Sq. Ft.	
Project Status		Operating Cost per Sq. Ft.	
Functional Area	Public Safety - Sheriff	Student Capacity	
Estimated Project Cost	\$4,000,000	Est. Opening Date	On-going
Current Year Cost	\$3,542,000	Funding Source	Current Revenue
Debt Service			
Full Year Operating Impact			

Project Description:**FY2020 Microwave Radio Link Path Studies:**

A radio link path study needs to be completed to determine if there is anything blocking or potentially blocking the radio link path. The Stafford County Emergency Radio system operates on 14 tower sites linked by microwave antennas. Over time, tree growth, new structures, or other obstructions can come in between those antennas causing degradation in signal strength. Once that degradation elevates to an interference level, steps must be taken to restore the links between towers. The link between Novec and Glendie Towers is showing degradation to the level of interference and needs to possibly be raised to overcome the degradation. A tower path study has been included in the current replacement of the microwaves that already has funding through the FY2019 Capital Improvement Plan (CIP). Once a path study has been completed, it will determine the needs for this site and possibly others. It is expected by the level of degradation that raising these antennas will be required. Three paths are nearing a critical stage of degradation and need to be studied as soon as possible. All 14 of the paths need to be examined to see if there is a potential for blockage within the next few years.

FY2020 Emergency Communications Tower Sites Battery Replacement:

Stafford County Emergency Radio System operates on 14 tower sites that must maintain electrical service for the emergency radio to function. Each site has a generator powered by propane. Each site also has an Uninterruptable Power Supply (UPS) battery plant consisting of (24) two volt 2000 amp hour batteries. These batteries weight 365 lbs. each and are held in a metal rack in the tower shelter. These batteries keep the computers and other electrical equipment functioning when shore power is lost and until the generator is active. Without these batteries, the tower site will experience a hard shutdown with possible damage to hundreds of thousands of dollars in equipment. The generator automatically exercises weekly, so even without a power outage the tower will go through a hard shutdown and will be offline until the generator activates and the equipment resets. This can cause loss of radio connectivity in addition to damage. These large lead acid batteries do have a shelf life and are beyond their normal life expectancy and in need of replacement. This replacement is necessary to ensure the safety of the system.

Sheriff: 3R Projects

FY2020 Remote Provisioning Licensing and Automatic Vehicle Location:

This will allow the Radio Manager to remotely program installed radios across the radio system. This will keep the one employee from having to physically touch the 1,500 radios on the Stafford System when a change is necessary. This will allow a new radio added to the system to be provisioned for the employee immediately by remote access and not require the manager to program it in the field. The 285 buses, 500 Sheriff radios, 500 Fire radios, Parks and Recreation, Utilities, and others currently have to be programmed at each individual radio, causing a huge work load when a simple change must be made. This has caused needed changes to wait months to be implemented. The last programming took six employees two weeks to accomplish. Remote licensing will eliminate the need to have such programming and allow one employee to accomplish it remotely in minutes. The licensing will also allow 400 more county vehicles to be located remotely on the system for the purposes of dispatching the closest vehicle with savings in gas and response times.

FY2020 Public Safety Facilities Assessment Study:

This study is to assess the operational needs and location for a Sheriff's Office substation. Stafford County has experienced significant growth over recent years, which has created an increased demand on public safety including the infrastructure of public safety. Currently, the Stafford County Sheriff's Office houses all of its staff and assets at the Public Safety Center which can have a direct impact on response times of personnel and equipment. There are numerous individual infrastructure projects on the Capital Improvement Plan including an impound lot, back-up Emergency Communications Center, back-up radio core, a forensic lab, vehicle processing bay and a substation. Funds are being requested to conduct a study for a Facilities Assessment which consists of two distinct parts. One part will be the consolidation of the above listed projects into a single project while determining the fiscal impact. The second part will be conducting a location analysis of these facilities looking at land availability and the strategic placement of these facilities while weighing certain factors such as response times.

FY2020 Emergency Communications Generators:

Stafford County Emergency Radio System operates on 14 tower sites and each of the 14 towers has a generator in place. These large generators need maintenance and at times have been out of service. All but three of the tower sites have an auxiliary generator connection. This allows a towable generator to be brought in to power the site in the event of a power outage and generator failure. Three sites do not have the ability to have a towable generator connected to it. These tower sites need to be updated to add the connection. In the past, generators have been borrowed from Utilities when this has occurred. It is believed that in a serious emergency, the Utilities generators will be needed for utility operations and that having our own generator available will help ensure continuity of operations on our Emergency Radio System.

Operating Impact Summary:

- Operating impacts in FY22 assumes there will be additional maintenance costs associated with Public Safety Building recommended safety upgrades

Sheriff: 3R Projects

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Study of all microwave radio link paths to determine obstructions are between antennas	\$0	\$105,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tower site batteries to eliminate loss of radio connectivity and damage	0	314,000	0	0	0	0	0	0	0	0	0
Remote Licensing (AVL) To allow the Radio Manager to remotely program radios & locate vehicles	0	42,000	0	0	0	0	0	0	0	0	0
Facility study to determine operational needs/location for substation	0	47,000	0	0	0	0	0	0	0	0	0
Generator for tower maintenance & emergency use	0	73,000	0	0	0	0	0	0	0	0	0
Firing Range Butler building with classroom space	0	0	328,000	0	0	0	0	0	0	0	0
Install 2 radio frequencies	0	0	728,000	0	0	0	0	0	0	0	0
PSB safety phase in of recommended upgrades	0	0	0	457,000	0	0	0	0	0	0	0
Console replacement for ECC Life cycle replacement due to normal wear and tear	0	0	0	0	471,000	0	0	0	0	0	0
PSB safety phase in of recommended upgrades	0	0	0	0	471,000	0	0	0	0	0	0
Replacement of our current Command Bus	0	0	0	0	964,000	0	0	0	0	0	0
Total	\$0	\$581,000	\$1,056,000	\$457,000	\$1,906,000	\$0	\$0	\$0	\$0	\$0	\$0

Sheriff: 3R Projects

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Current Revenue - County	\$0	\$329,923	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
GF Allocation Transfer - 3% Guideline	0	210,050	1,056,000	457,000	1,906,000	0	0	0	0	0	0
Transfer in from General Fund	0	41,027	0	0	0	0	0	0	0	0	0
Total	\$0	\$581,000	\$1,056,000	\$457,000	\$1,906,000	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Operating	\$0	\$0	\$23,000	\$24,000	\$24,000	\$25,000	\$26,000	\$26,000	\$27,000	\$28,000
Total	\$0	\$0	\$23,000	\$24,000	\$24,000	\$25,000	\$26,000	\$26,000	\$27,000	\$28,000

Sheriff: Computer Aided Dispatch (CAD)

Project Code		Square Footage/Acreage	
Project Type	Vehicle/Apparatus/Equipment Replacement	Construction Cost per Sq. Ft.	
Project Status	Property Acquisition	Operating Cost per Sq. Ft.	
Functional Area	Public Safety - Sheriff	Student Capacity	
Estimated Project Cost	\$16,842,000	Est. Opening Date	
Current Year Cost	\$12,000,000	Funding Source	Master Lease
Debt Service	\$0	Years Financed	10
Full Year Operating Impact	\$0	Tax Rate Equivalent	\$0.006

Project Description:

Essential to the core of the processing of emergency calls is a Computer- Aided Dispatch (CAD) system. The CAD system is a hardware and software infrastructure that processes calls and dispatches public safety providers. The current CAD system is technologically outdated which diminishes its operational capabilities, and makes technical support difficult and expensive. The replacement of the system is critical as it is used to dispatch our public safety service providers. A new system will ensure reliability, improve response times and enhance capabilities.

Analysis of Need:

The current legacy based CAD system relays on local servers and hardware to house and process calls requesting service of all County emergency organizations. The current CAD system has had historical difficulty in maintaining stability during fast paced evolving emergency situations. The CAD system has experienced slowdowns as well as a complete loss of function during critical incidents. This prevents first responders from receiving the necessary emergency information in a timely manner. The current CAD system relies on upgrades to computer systems which cause temporary outages. The CAD system has had difficulty with Automatic Vehicle Locating for dispatching the appropriate apparatus(s). The current CAD Mobile platform for field users does not offer cutting edge ability and has been in development by our CAD vendor for an extended period of time. A fully functional mobile CAD platform has not been delivered. Newer CAD platforms are promising a more stable and capable Computer Aided Dispatch system with features not currently offered by our CAD system. These new systems may provide critical information to first responders as well as capture data that will allow future planning and response plans to be more efficient and capable.

Sheriff: Computer Aided Dispatch (CAD)

Alternative:

Stafford County is currently looking into alternatives to a Legacy Based CAD system by requesting expression of interest in companies willing to provide a no cost pilot of a Cloud Based CAD product. This pilot was requested to test the viability of a Cloud Based CAD system as well as compare new features available on the Cloud Based CAD. A cloud based CAD system may provide a different purchasing possibility as some vendors charge based on users and not on an initial purchase price and maintenance as with our current system. The different way of pricing may allow the migration to a new CAD system with little cost difference than the current yearly maintenance costs. It is unknown if a Cloud Based CAD system would be reliable enough for critical incidents. The pilot is intended to first determine if a Cloud Based system would be appropriate for a critical system, then to determine if the features, speed and stability are better than a server based system.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	Project Total
Construction / Project	0	0	0	0	0	0	0	0	0	0	16,842,000	16,842,000
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,842,000	\$16,842,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Master Lease Proceeds	0	0	0	0	0	0	0	0	0	0	11,242,000
One-Time Funding	0	0	0	0	0	0	0	0	0	0	5,600,000
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,842,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

CAPITAL IMPROVEMENT PROGRAM

FY2020 Adopted Budget

Public Safety: Brooks Park Stream Restoration

Project	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Brooks Park Steam Restoration	\$467,000	\$0	\$0	\$1,100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,567,000	\$0	\$1,567,000
Total Expenditures	\$467,000	\$0	\$0	\$1,100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,567,000	\$0	\$1,567,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
GF Allocation Transfer - 3% Guideline	\$0	\$0	\$0	\$400,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$400,000	\$0	\$400,000
Use of Prior Year Fund Balance General Fund	467,000	0	0	0	0	0	0	0	0	0	0	467,000	0	467,000
State Grants	0	0	0	700,000	0	0	0	0	0	0	0	700,000	0	700,000
Total Revenues	\$467,000	\$0	\$0	\$1,100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,567,000	\$0	\$1,567,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Total Operating Impacts	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Storm Water: Brooks Park Stream Restoration

Project Code		Square Footage/Acreage	
Project Type	3-R	Construction Cost per Sq. Ft.	
Project Status	Design/Engineering	Est. Opening Date	
Total Project Cost	\$1,567,000	Student Capacity	
Functional Area	Public Works Stormwater		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This Project will restore approximately 1,400 linear feet of an unnamed tributary to the Rappahannock River. The stream segment receives water from 175 acres of urbanized area. The project improvements will restore geomorphic stability, enhance removal of pollutants, and improve water quality of the Rappahannock River Watershed through adjustment of the dimension, pattern, and profile of the stream.

Stafford County has a Multiple Separate Storm Sewer System (MS4) permit [VAR040056] from Virginia's Department of Environmental Quality. One aspect of the MS4 permit is compliance with the U.S. Environmental Protection Agency's (EPA)/Virginia Department of Environmental Quality (VDEQ) Chesapeake Bay Total Maximum Daily Load (TMDL) 'pollution diet' plan. The TMDL establishes a "pollution diet" for the entire Chesapeake Bay watershed to address pollution (i.e. nutrients/sediment). A state-wide Watershed Implementation Plan (WIP) was developed with pollutant removal goals assigned.

The County has identified and completed final site design for the St. Clair Brooks Park Stream Restoration project to assist with meeting the Pollutant of Concerns (POC) load reduction requirements for total nitrogen, total phosphorus, and sediment as identified in the County's Chesapeake Bay Total Maximum Daily Load (TMDL) Action Plan developed in accordance with the Multiple Separate Storm Sewer System (MS4) permit [VAR040056] from Virginia's Department of Environmental Quality.

Location:

St. Clair Brooks Memorial Park.

Storm Water: Brooks Park Stream Restoration

Relationship to Approved County Policy or Plan:

- The stream restoration project located in St. Clair Brooks Memorial Park is related to the EPA-issued TMDL for the Chesapeake Bay, which is coordinated by the VDEQ. Per Stafford County's storm water permit (issued July 1, 2013), we are required to meet 100% of the pollution reductions associated with the TMDL by June 30, 2028. A draft Phase II Chesapeake Bay TMDL Action Plan was required for the MS4 permit renewal (June 2018); within that document, the stream restoration was recognized as the manner to accommodate the pollutant reductions.

Analysis of Need:

Federal and state regulations have signified the need for Stafford County to identify, design, and construct certain storm water retrofit projects that would satisfy the County's TMDL requirement. It is imperative that Stafford County meet this requirement to avoid non-compliance, consent orders, violations and/or fines associated with federal and state regulations. Currently, Stafford County has met the June 30, 2018 deadline for the 5% TMDL reduction goal. However, the County is required to meet the 40% reduction goal by June 30, 2023 and the 100% reduction goal by June 30, 2028.

Change or Reasons for Revisions:

The stream restoration project located in St. Clair Brooks Memorial Park will satisfy the 100% MS4 TMDL reduction goal required for June 30, 2028. Due to the extent of the design and construction, it is safe to assume that the estimated schedule for completion would be 18-24 months.

Alternative:

Additional storm water retrofit projects have been identified in the Rappahannock River watershed to help meet the TMDL requirement. However, the stream restoration project in St. Clair Brooks Memorial Park was selected based on numerous factors that favor Stafford County.

Storm Water: Brooks Park Stream Restoration

Project Summary:

Project	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	Project Total
Brooks Park Steam Restoration	\$467,000	\$0	\$0	\$1,100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,567,000
Total Expenditures	\$467,000	\$0	\$0	\$1,100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,567,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	Project Total
GF Allocation Transfer - 3% Guideline	\$0	\$0	\$0	\$400,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$400,000
Use of Prior Year Fund Balance General Fund	467,000	0	0	0	0	0	0	0	0	0	0	467,000
State Grants	0	0	0	700,000	0	0	0	0	0	0	0	700,000
Total Revenues	\$467,000	\$0	\$0	\$1,100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,567,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total Operating Impacts	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

CAPITAL IMPROVEMENT PROGRAM

FY2020 Adopted Budget

Judicial

Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	2025	2026	2027	2028	2029	5 Year Plan (Includes PY Funding)	Future Plan	Ten Year Plan (Includes PY Funding)
Courthouse	\$0	\$2,600,000	\$28,991,575	\$3,150,000	\$5,940,000	\$0	\$0	\$0	\$0	\$0	\$0	\$40,681,575	\$0	\$40,681,575
Parking Lot & Initial Start of Downtown Stafford	\$0	\$1,800,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,800,000	\$0	1,800,000
Total Expenditures	\$0	\$4,400,000	\$28,991,575	\$3,150,000	\$5,940,000	\$0	\$0	\$0	\$0	\$0	\$0	\$42,481,575	\$0	\$42,481,575

Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	2025	2026	2027	2028	2029	5 Year Plan (Includes PY Funding)	Future Plan	Ten Year Plan (Includes PY Funding)
Bond Proceeds	\$0	\$0	\$28,774,241	\$3,150,000	\$5,940,000	\$0	\$0	\$0	\$0	\$0	\$0	\$37,864,241	\$0	\$37,864,241
Current Revenue - County	0	724,919	0	0	0	0	0	0	0	0	0	724,919	0	724,919
GF Allocation Transfer - 3% Guideline	0	188,581	0	0	0	0	0	0	0	0	0	188,581	0	188,581
Use of Prior Year Fund Balance General Fund	0	3,486,500	0	0	0	0	0	0	0	0	0	3,486,500	0	3,486,500
Proffers	0	0	217,334	0	0	0	0	0	0	0	0	217,334	0	217,334
Total Revenues	\$0	\$4,400,000	\$28,991,575	\$3,150,000	\$5,940,000	\$0	\$0	\$0	\$0	\$0	\$0	\$42,481,575	\$0	\$42,481,575

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Plan	Future Plan	Ten Year Plan
Personnel	\$0	\$0	\$0	\$395,500	\$807,000	\$823,000	\$1,193,000	\$1,217,000	\$1,241,000	\$1,266,000	\$1,202,500	\$5,740,000	\$6,942,500
Operating	0	0	0	411,000	546,000	562,000	578,000	595,000	612,000	630,000	957,000	\$2,977,000	3,934,000
Debt Service	0	0	1,204,000	2,672,000	3,169,000	3,169,000	3,169,000	3,169,000	3,169,000	3,169,000	7,045,000	\$15,845,000	22,890,000
Total Operating Impact	\$0	\$0	\$1,204,000	\$3,478,500	\$4,522,000	\$4,554,000	\$4,940,000	\$4,981,000	\$5,022,000	\$5,065,000	\$9,204,500	\$24,562,000	\$33,766,500

Judicial: New Circuit Court and Renovation/Expansion of Existing Facility

Project Code		Square Footage/Acreage	80,006 ft ² New Finished 18,202 ft ² New Shell 64,900 ft ² Renovation 400 ft ² Expansion
Project Type	Building Construction	Construction Cost per Sq. Ft.	New Finished: \$352 New Shell: \$176 Renovation: \$100 Expansion: \$386
Project Status	Design/Engineering	Operating Cost per Sq. Ft.	\$5.91
Functional Area	Circuit Court	Student Capacity	
Estimated Project Cost	\$40.7 million	Est. Opening Date	FY2023
Current Year Cost		Funding Source	Virginia Resource Authority (VRA)
Total Debt Service	\$3,169,000	Tax Rate Equivalent	\$0.019
Full Year Operating Impact	\$1,353,000		

Project Description:

The proposed project includes the construction of a new 98,208 ft² Circuit Court building. 80,006 ft² of that will be finished and include four circuit courtrooms and spaces for judges' chambers, Circuit Court Clerk, security, and other associated court functions. 18,202 ft² will be shelled for the eventual finishing for two additional circuit courtrooms and associated spaces. The project also includes extensive renovation and minor expansion of the existing facility. This renovation will expand the space for the Juvenile and Domestic Relations court needs as well as the General District Court.

Judicial: New Circuit Court and Renovation/Expansion of Existing Facility

Operating Impact Summary:

Below are the operating impacts for the new Circuit Court building:

For building security: a total of seven additional deputies would be required to operate a safe and efficient courthouse.

- (2) For front security / magnetometer and X-Ray machine.
- (1) For Control Room: Deputy will monitor all cameras, control cell doors, and certain courtroom doors.
- (2) For security of inmates: Escorting inmates to and from the jail vans to the court holding cells, serving various papers, escorts through the building, high risk inmates, emergency situations and the like.
- (2) Deputies for the fourth circuit court

The total number to support the building is 13. We have considered the fact that we will be bringing six over from the current courthouse staffing level.

For maintenance and custodial:

- (2) Building Maintenance Mechanics.
- (2) Custodians.
- Start-up Costs include equipment and supplies.
- On-going operating costs include additional costs for utilities, contracts, and maintenance.

Location:

1300 Courthouse Road.

Relationship to Approved County Policy or Plan:

Public Safety has been identified by the Board of Supervisors as a major Board priority. Providing the necessary court facilities to handle the growing caseload and ensuring all court facilities meet or exceed the safety standards is essential to our overall public safety mission. The proposed circuit court building and renovation of the existing facility will ensure that these needs are met for the next 10-15 years.

Judicial: New Circuit Court and Renovation/Expansion of Existing Facility

Analysis of Need:

Moseley Architects conducted a detailed court needs analysis in 2016. The result of this analysis was a proposed new court building that would provide for all court needs for the next 20 years at an estimated cost of \$74 million. The proposal would abandon the current facility for future administration use. At the request of the Board, staff reengaged Moseley to reevaluate the proposal utilizing the existing building and keeping all new construction on the current Government Center site with additional parking across Courthouse Road. Utilizing the needs analysis completed in 2016 and updating the data to reflect the most recent years, Moseley presented the proposed circuit court building and the renovated existing facility as the preferred option that was later approved by the Board of Supervisors with the adoption of the FY19 CIP.

Change or Reasons for Revisions:

FY2007 - New project in CIP \$20.6M

FY2008 - Updated construction costs \$33.8M

FY2009 - No change

FY2010 - No change

FY2011 - Consolidate a renovation of the current courthouse project and reduce existing project to an addition due to current conditions in the economy. Project to begin in FY13. \$21.7M

FY2012 - Changed the scope of the project. Added a Courthouse annex project. Due to shortage in affordability, project to begin planning and design in FY17. \$22.9M

FY2013 - Due to conditions in the economy and changes in affordability project will begin planning and design work in FY19. No other changes have been made. \$22.2M

FY2014 - Scope of the project changed to include parking improvements and significant ADA upgrades. \$26.8M

FY2015 - No change

FY2016 - Project cost update. No change in scope of project. \$29M

FY2017 - No change

FY2018 - Change in the scope of project. Project is a new construction for all three courts. New proposed cost is \$71M

FY2019 - As provided above, the proposed project replaces the previously recommended \$71 million project in order to utilize existing facilities to the maximum extent possible and reduce project costs while still providing for all necessary safety improvements and court space needs. New estimated cost is \$42.5M

FY2020 – Change in ramp-up philosophy. Project now presented as two separate projects, Courthouse construction and a temporary parking lot.

Alternative:

The previously approved CIP court project for new court complex across Courthouse Road.

Judicial: New Circuit Court and Renovation/Expansion of Existing Facility

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	Project Total
Planning/Design	0	2,600,000	0	0	0	0	0	0	0	0	0	2,600,000
Construction / Project	0	0	25,391,575	3,150,000	5,940,000	0	0	0	0	0	0	34,481,575
Contingency	0	0	3,600,000	0	0	0	0	0	0	0	0	3,600,000
Total	\$0	\$2,600,000	\$28,991,575	\$3,150,000	\$5,940,000	\$0	\$0	\$0	\$0	\$0	\$0	\$40,681,575

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Bond Proceeds	0	0	28,774,241	3,150,000	5,940,000	0	0	0	0	0	0
Current Revenue - County	0	724,919	0	0	0	0	0	0	0	0	0
GF Allocation Transfer - 3% Guideline	0	188,581	0	0	0	0	0	0	0	0	0
Use of Prior Year Fund Balance General Fund	0	1,686,500	0	0	0	0	0	0	0	0	0
Proffers	0	0	217,334	0	0	0	0	0	0	0	0
Total	\$0	\$2,600,000	\$28,991,575	\$3,150,000	\$5,940,000	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Personnel	0	0	0	395,500	807,000	823,000	1,193,000	1,217,000	1,241,000	1,266,000
Operating	0	0	0	411,000	546,000	562,000	578,000	595,000	612,000	630,000
Debt Service	0	0	1,204,000	2,672,000	3,169,000	3,169,000	3,169,000	3,169,000	3,169,000	3,169,000
Total	\$0	\$0	\$1,204,000	\$3,478,500	\$4,522,000	\$4,554,000	\$4,940,000	\$4,981,000	\$5,022,000	\$5,065,000

Judicial: Temporary Parking Lot and Initial Start of “Downtown Stafford”

Project Code		Square Footage/Acreage	
Project Type		Construction Cost per Sq. Ft.	
Project Status	Construction	Operating Cost per Sq. Ft.	
Functional Area	Circuit Court	Student Capacity	
Estimated Project Cost	\$1.8 million	Est. Opening Date	
Current Year Cost	\$1.7M	Funding Source	Prior Use of Fund Balance
Total Debt Service		Tax Rate Equivalent	
Full Year Operating Impact			

Project Description:

The proposed project is for the construction of a new temporary parking lot to accommodate the established parking at the George L. Gordon Government Center while the new Circuit Court building is being constructed, and to introduce the site and initial start of the “Downtown Stafford” project across from the Government Center.

Operating Impact Summary:

No operating impacts associated with this project.

Location:

1300 Courthouse Road.

Relationship to Approved County Policy or Plan:

Stafford County 2040 Strategic Plan 5.1

Judicial: Temporary Parking Lot and Initial Start of “Downtown Stafford”

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	Project Total
Planning/Design	0	76,000	0	0	0	0	0	0	0	0	0	76,000
Construction / Project	0	1,724,000	0	0	0	0	0	0	0	0	0	1,724,000
Total Project Cost	\$0	\$1,800,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,800,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Use of Prior Year Fund Balance General Fund	0	1,800,000	0	0	0	0	0	0	0	0	0
Total	\$0	\$1,800,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Parks, Recreation, and Cultural

Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Parks Recreation 3R	\$0	\$895,000	\$332,000	\$1,334,000	\$323,170	\$1,063,000	\$821,561	\$475,300	\$1,047,000	\$1,882,000	\$0	\$3,947,170	\$4,225,861	\$8,173,031
Library	0	0	0	0	0	0	0	0	0	0	50,000	0	50,000	\$50,000
Total Expenditures	\$0	\$895,000	\$332,000	\$1,334,000	\$323,170	\$1,063,000	\$821,561	\$475,300	\$1,047,000	\$1,882,000	\$50,000	\$3,947,170	\$4,275,861	\$8,223,031
Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Bond Proceeds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,000	\$0	\$50,000	\$50,000
GF Allocation Transfer - 3% Guideline	0	832,000	244,000	1,334,000	323,170	1,063,000	699,435	475,300	1,047,000	1,882,000	0	3,796,170	4,103,735	7,899,905
Proffers	0	63,000	88,000	0	0	0	122,126	0	0	0	0	151,000	122,126	273,126
Total Revenues	0	\$895,000	\$332,000	\$1,334,000	\$323,170	\$1,063,000	\$821,561	\$475,300	\$1,047,000	\$1,882,000	\$50,000	\$3,947,170	\$4,275,861	\$8,223,031
Operating Impacts		FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Total Operating Impacts		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Parks, Recreation, and Cultural: 3R Projects

Project Code		Square Footage/Acreage	
Project Type	3-R	Construction Cost per Sq. Ft.	
Project Status		Operating Cost per Sq. Ft.	
Functional Area	Parks & Recreation	Student Capacity	
Estimated Project Cost	FY20 - \$895,000	Est. Opening Date	On-going
Current Year Cost			
Debt Service	N/A		
Full Year Operating Impact	N/A		

Project Description:

Parks and Recreation 3R projects for FY2020:

- Replacement of Turf on two multipurpose fields at Smith Lake Park and Musselman Park master plan

Operating Impact Summary:

There will be no additional operating impacts associated with this project.

Location:

Smith Lake Park

Relationship to Approved County Policy or Plan:

- The 2014 Park Utilization Study: Phase I had an emphasis on identifying current service levels and projecting future service levels for athletic fields. Recommendations from this study included: Improve current athletic field conditions by using funding to repair, replace, and renovate existing park athletic fields to maximize current user experience.

Parks, Recreation, and Cultural: 3R Projects

Analysis of Need:

Existing turf is at the end of its expected life cycle. High use of these fields since opening in April of 2010 have worn down the carpet fibers to a length that no longer supports the required amount of infill material to provide a safe and reliable surface. This increases the risk of injury.

Alternative:

Without resurfacing the synthetic turf the field will become unsafe for use and would need to be closed to rentals and citizens until replaced. This could lead to a loss of tournaments and have an economic impact on the local economy.

Project Summary:

Description	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Smith Lake Park turf replacement - Field 1	0	416,000	0	0	0	0	0	0	0	0	0
Smith Lake Park turf replacement - Field 2	0	416,000	0	0	0	0	0	0	0	0	0
Musselman Park master plan	0	63,000	0	0	0	0	0	0	0	0	0
Chichester Park live cameras	0	0	36,000	0	0	0	0	0	0	0	0
Embrey Mill Park conference building study	0	0	17,000	0	0	0	0	0	0	0	0
Patawomeck Park master plan	0	0	88,000	0	0	0	0	0	0	0	0
Willowmere parking lot	0	0	191,000	0	0	0	0	0	0	0	0
Renovate existing athletic fields	0	0	0	115,000	0	0	0	0	0	0	0
Pavilion Lake Mooney	0	0	0	115,000	0	0	0	0	0	0	0
Pratt Park agility course and exercise equipment	0	0	0	300,000	0	0	0	0	0	0	0
Curtis/Pratt Park pavilion maintenance	0	0	0	171,000	0	0	0	0	0	0	0
Duff Park master plan	0	0	0	92,000	0	0	0	0	0	0	0
Pratt Park parking lot	0	0	0	217,000	0	0	0	0	0	0	0

Parks, Recreation, and Cultural: 3R Projects

Description	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Widewater/Garrisonville ES field lights	0	0	0	324,000	0	0	0	0	0	0	0
Civil War Park trail, signage, and bronze replicas	0	0	0	0	29,170	0	0	0	0	0	0
Pratt Park restroom renovations	0	0	0	0	294,000	0	0	0	0	0	0
North Stafford dog park	0	0	0	0	0	278,000	0	0	0	0	0
Willowmere restroom	0	0	0	0	0	303,000	0	0	0	0	0
Brooks Park skate park	0	0	0	0	0	482,000	0	0	0	0	0
Woodland baby pool addition	0	0	0	0	0	0	258,000	0	0	0	0
Chichester maintenance shop	0	0	0	0	0	0	441,435	0	0	0	0
Mountain view master plan	0	0	0	0	0	0	122,126	0	0	0	0
Curtis Skate Park	0	0	0	0	0	0	0	443,300	0	0	0
Various ball fields - replace fencing	0	0	0	0	0	0	0	32,000	0	0	0
Carl Lewis new playground	0	0	0	0	0	0	0	0	55,000	0	0
Pratt Entrance	0	0	0	0	0	0	0	0	992,000	0	0
Curtis Park shelter 7 restroom	0	0	0	0	0	0	0	0	0	476,000	0
Rowser Kitchen	0	0	0	0	0	0	0	0	0	239,000	0
Willowmere ball field lights	0	0	0	0	0	0	0	0	0	383,000	0
Chichester Park SBL Building	0	0	0	0	0	0	0	0	0	784,000	0
Total	\$0	\$895,000	\$332,000	\$1,334,000	\$323,170	\$1,063,000	\$821,561	\$475,300	\$1,047,000	\$1,882,000	\$0

	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
GF Allocation Transfer - 3% Guideline	0	832,000	244,000	1,334,000	323,170	1,063,000	699,435	475,300	1,047,000	1,882,000	0
Proffers	0	63,000	88,000	0	0	0	122,126	0	0	0	0
Total	\$0	\$895,000	\$332,000	\$1,334,000	\$323,170	\$1,063,000	\$821,561	\$475,300	\$1,047,000	\$1,882,000	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Parks, Recreation, and Cultural: Library

Project Code		Square Footage/Acreage	
Project Type	Building Construction	Construction Cost per Sq. Ft.	
Project Status	Construction	Operating Cost per Sq. Ft.	
Functional Area	Parks & Recreation	Student Capacity	
Estimated Project Cost	\$19,863,500	Est. Opening Date	
Current Year Cost	\$0		
Debt Service	No Debt Service in this Planning Period		
Full Year Operating Impact	No Operating Costs in this Planning Period		

Project Description:

The Central Rappahannock Regional Library (CRRL) Board of Trustees is recommending the opening of a new branch library in the County to meet current unmet demands and to accommodate projected new population growth. High demand for books, programming, meeting rooms, computers and other library services at the Porter and William H. Howell libraries will be relieved by a third library facility in the developing residential/commercial Courthouse area. The facility will be needed to keep pace with population growth and the development of core infrastructure by Stafford County to provide comprehensive education and quality of life opportunities for all County residents. Three options for a new facility could include a traditional branch which would be similar to Porter and William H. Howell libraries, a store front facility which could be located at a retail venue, or a partnership with Germanna Community College.

Operating Impact Summary:

No operating costs are associated with the projects in this planning period

Location:

Recommended to be included in the proposed new Downtown Stafford project

Relationship to Approved County Policy or Plan:

Stafford County 2040 Strategic Plan

Parks, Recreation, and Cultural: Library

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Plan	Future Plan	Total Project Cost
Planning/Design	0	0	0	0	0	0	0	0	0	0	50,000	0	50,000	50,000
Total	0	0	0	0	0	0	0	0	0	0	50,000	0	50,000	50,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Plan	Future Plan
Bond Proceeds	0	0	0	0	0	0	0	0	0	0	50,000	0	50,000
Total	0	0	0	0	0	0	0	0	0	0	50,000	0	50,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Plan	Future Plan
Total	0	0	0	0	0	0	0	0	0	0	0	0

Public Works: Community Facilities

Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Community Facilities 3R	\$0	\$285,451	\$584,000	\$615,000	\$333,000	\$915,000	\$1,394,282	\$707,000	\$1,253,000	\$0	\$1,633,000	\$2,732,451	\$4,987,282	\$7,719,733
Total Expenditures	\$0	\$285,451	\$584,000	\$615,000	\$333,000	\$915,000	\$1,394,282	\$707,000	\$1,253,000	\$0	\$1,633,000	\$2,732,451	\$4,987,282	\$7,719,733

Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
GF Allocation Transfer - 3% Guideline	0	285,451	584,000	615,000	333,000	915,000	1,394,282	707,000	1,253,000	0	1,633,000	2,732,451	4,987,282	7,719,733
Total Revenues	\$0	\$285,451	\$584,000	\$615,000	\$333,000	\$915,000	\$1,394,282	\$707,000	\$1,253,000	\$0	\$1,633,000	\$2,732,451	\$4,987,282	\$7,719,733

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Total Operating Impacts	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Public Works: Community Facilities 3R Projects

Project Code		Square Footage/Acreage	
Project Type	3-R	Construction Cost per Sq. Ft.	
Project Status		Operating Cost per Sq. Ft.	
Functional Area	Parks & Recreation	Student Capacity	
Estimated Project Cost	FY20 - \$285,451	Est. Opening Date	
Current Year Cost	\$259,626		
Debt Service	N/A		
Full Year Operating Impact	N/A		

Project Description:

Community Facilities 3R projects for FY2020:

- Renovate elevator in the Health Department Building. The Health Department Elevator is failing. Loss of unit will hinder ADA access to facility.
- Add heater packs to Rowser AC system. Two AC units in Rowser are not equipped with heater packs.
- Courthouse AC Unit 10 HVAC replacement. Courthouse AC Unit #10 is at its end of life cycle and failing.
- Water purification

Operating Impact Summary:

- There are no additional operating costs associated with these projects

Location:

- Health Department
- Rowser Building
- Courthouse

Relationship to Approved County Policy or Plan:

County is building an asset management system to identify replacement and end of life systems.

Public Works: Community Facilities 3R Projects

Analysis of Need:

- The Heath Department Elevator parts are obsolete and soon will be unavailable. The loss of this elevator will hinder expectant mothers and disabled citizens from a reasonable egress to the health department. Failure during occupancy could result in harm.
- The Rowser building has experienced freezing water pipes. To offset this problem, it is recommend adding heater packs to the AC units. This will reduce load and assist the heating unit during freezing weather.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Renovate Elevator - Health Department	0	192,000	0	0	0	0	0	0	0	0	0
Add Heaters - Rowser	0	43,000									
Courthouse AC	0	26,000	0	0	0	0	0	0	0	0	0
Building water purification - Gov. Center	0	24,451	0	0	0	0	0	0	0	0	0
Roof replacement - CCC	0	0	432,000	0	0	0	0	0	0	0	0
Speaker/Intercom system - JRSSC	0	0	54,000	0	0	0	0	0	0	0	0
CRRL maintenance upgrades	0	0	98,000	0	0	0	0	0	0	0	0
Sidewalk Repair - Gov. Center	0	0	0	28,000	0	0	0	0	0	0	0
WIFI - County Facilities	0	0	0	56,000	0	0	0	0	0	0	0
Rain Garden rehab - Gov. Center	0	0	0	143,000	0	0	0	0	0	0	0
Parking Lot Sealing - Gov. Center	0	0	0	86,000	0	0	0	0	0	0	0
Roof Replacement/Repairs - Courthouse	0	0	0	97,000	0	0	0	0	0	0	0
Rowser Field Restroom	0	0	0	205,000	0	0	0	0	0	0	0
Energy Upgrade - Gov. Center	0	0	0	0	206,000	0	0	0	0	0	0
Roof Replacement/Repairs - Courthouse	0	0	0	0	127,000	0	0	0	0	0	0

CAPITAL IMPROVEMENT PROGRAM

FY2020 Adopted Budget

Public Works: Community Facilities 3R Projects

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Energy Management - Station 2	0	0	0	0	0	102,000	0	0	0	0	0
Energy Upgrade - PSB	0	0	0	0	0	359,000	0	0	0	0	0
Government Center Maintenance Building	0	0	0	0	0	454,000	0	0	0	0	0
Government Complex Security Study	0	0	0	0	0	0	439,280	0	0	0	0
Fire Rescue Station Roof Repairs	0	0	0	0	0	0	109,664	0	0	0	0
Gov. Complex Exterior Siding Clean/Paint	0	0	0	0	0	0	197,338	0	0	0	0
Gov. Complex ADA/Security/Master Plan	0	0	0	0	0	0	57,000	0	0	0	0
Gov. Complex Security Study	0	0	0	0	0	0	426,000	0	0	0	0
Fire Rescue Station Roof Repairs	0	0	0	0	0	0	108,000	0	0	0	0
ADA/Security/Master Plan	0	0	0	0	0	0	57,000	0	0	0	0
ADA/Security/Master Plan - Gov. Center	0	0	0	0	0	0	0	707,000	0	0	0
PSB HVAC Replacement	0	0	0	0	0	0	0	0	656,000	0	0
Gov. Complex Energy Management study	0	0	0	0	0	0	0	0	61,000	0	0
Gov. Complex Roof repair	0	0	0	0	0	0	0	0	134,000	0	0
Roof Rehab PSB	0	0	0	0	0	0	0	0	369,000	0	0
Chichester Building HVAC replacement	0	0	0	0	0	0	0	0	33,000	0	0
Gov. Complex Paint interior	0	0	0	0	0	0	0	0	0	0	268,000
Fire Station HVAC replacements	0	0	0	0	0	0	0	0	0	0	210,000
Gov. Center Floor renovation	0	0	0	0	0	0	0	0	0	0	280,000
Gov. Complex Energy Management System	0	0	0	0	0	0	0	0	0	0	665,000
Gov. Complex Security Safety	0	0	0	0	0	0	0	0	0	0	210,000
Elevator	0	0	0	0	0	0	0	0	0	0	0
Total	\$0	\$285,451	\$584,000	\$615,000	\$333,000	\$915,000	\$1,394,282	\$707,000	\$1,253,000	\$0	\$1,633,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
GF Allocation Transfer - 3% Guideline	0	285,451	584,000	615,000	333,000	915,000	1,394,282	707,000	1,253,000	0	1,633,000
Total	\$0	\$285,451	\$584,000	\$615,000	\$333,000	\$915,000	\$1,394,282	\$707,000	\$1,253,000	\$0	\$1,633,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Education

Expenditures	Prior Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
High School #6	0	0	2,000,000	4,500,000	39,200,000	49,771,000	24,744,000	1,125,000	0	0	0	95,471,000	25,869,000	121,340,000
Ferry Farm Elementary Renovation	1,650,800	11,139,200	0	0	0	0	0	0	0	0	0	12,790,000	0	12,790,000
Elementary School Capacity	0	0	0	0	0	0	1,000,000	1,800,000	13,900,000	8,300,000	0	0	25,000,000	25,000,000
Drew Middle School Renovation	0	0	0	0	0	0	0	0	0	1,000,000	6,000,000	0	7,000,000	7,000,000
3R Funded	0	6,130,865	6,593,865	6,577,280	6,622,865	6,588,280	6,615,865	6,454,865	6,473,865	6,489,865	6,498,865	32,513,155	32,533,325	65,046,480
Total	1,650,800	17,270,065	8,593,865	11,077,280	45,822,865	56,359,280	33,359,865	11,179,865	34,273,865	24,089,865	12,498,865	140,774,155	115,402,325	256,176,480
Project Revenues	Prior Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Bond Proceeds	172,086	14,523,185	7,023,000	8,484,579	36,424,216	52,133,409	31,209,389	9,734,000	32,828,000	22,644,000	11,053,000	118,760,475	107,468,389	226,228,864
Current Revenue - County Designated 3R	0	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	7,229,325	7,229,325	14,458,650
Current Revenue - Schools	0	1,181,015	0	0	0	0	0	0	0	0	0	1,181,015	0	1,181,015
Use of Prior Year Fund Balance General Fund	1,478,714	0	0	0	0	0	0	0	0	0	0	1,478,714	0	1,478,714
Proffers	0	0	0	1,015,836	1,517,784	2,641,006	561,611	0	0	0	0	5,174,626	561,611	5,736,237
Nutrition Capital Funding	0	120,000	125,000	131,000	135,000	139,000	143,000	0	0	0	0	650,000	143,000	793,000
One-Time Funding	0	0	0	0	6,300,000	0	0	0	0	0	0	6,300,000	0	6,300,000
Total	1,650,800	17,270,065	8,593,865	11,077,280	45,822,865	56,359,280	33,359,865	11,179,865	34,273,865	24,089,865	12,498,865	140,774,155	115,402,325	256,176,480
Operating Impacts		FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Ten Year Plan (Includes PY Funding)
Personnel		0	0	0	0	0	284,000	3,666,000	3,740,000	3,815,000	3,891,300	0	15,396,300	15,396,300
Operating		0	0	0	0	0	1,150,000	1,769,000	1,226,000	1,251,080	1,276,642	0	6,672,722	6,672,722
Debt Service		0	1,333,000	1,856,000	2,504,000	5,486,000	9,786,000	12,334,000	13,086,000	15,768,000	17,597,538	11,179,000	68,571,538	79,750,538
Total		0	1,333,000	1,856,000	2,504,000	5,486,000	11,220,000	17,769,000	18,052,000	20,834,080	22,765,480	11,179,000	90,640,560	101,819,560

High School 6

Project Code		Square Footage/Acreage	300,000/65
Project Type	Building Construction	Construction Cost per Sq. Ft.	\$237.08/sf + site work
Project Status	Planning	Operating Cost per Sq. Ft.	
Functional Area	Education	Student Capacity	2,150
Estimated Project Cost	\$121,340,000	Est. Opening Date	August 2025 (FY2026)
Current Year Cost	\$100,734,464	Funding Source	VP SA
Debt Service	\$	Years Financed	20
Full Year Operating Impact	\$	Tax Rate Equivalent	\$

Project Description:

High School (HS) 6 is planning to house 2,150 students and serve grades ninth through twelfth. HS 6 will be designed and constructed utilizing the most current Stafford County Public Schools high school education specifications and in accordance with the Stafford County Public Schools Facility Design Standards. This project includes the construction of the school building, all outbuildings, site development, all on-site road improvements, any necessary off-site road improvements, parking lots, storm water management requirements, utilities, and athletic fields to include bleachers, stadium, and track. Planning and design requirements are included in the project cost, as are furniture, fixtures, equipment, technology infrastructure, and project management.

SCPS high school education specifications will be updated prior to the start of design, however, staff estimates the total square footage requirement to be at, or near, 300,000 square feet. The Division hired a cost-estimating consultant to provide an accurate cost per square footage for the building, as well as costs associated with the site. These experts have concluded that a rough order magnitude programming level cost estimate of \$237.08 per square foot in current dollars should be used for building only.

HS 6 is planning to be a LEED Silver rated facility and will be designed to achieve an Energy Star rating of 80 or better, as well as an Energy Utilization Index rating of less than 24. Rainwater will be collected and used for irrigation and/or grey water. Additionally, photovoltaic panels will be used to not only supplement energy consumption, but also as a teaching tool for students. It is assumed (by proffer) the developer will have utilities and road access completed prior to construction starting.

High School 6

Operating Impact Summary:

The principal, librarian, administrative assistant V, and an administrative assistant IV will be funded and hired one year prior to HS 6 opening. When the school opens, there will be 71 positions funded, excluding grade-level teachers, to support the new facility. The instructional startup costs one year prior to HS 6 opening include the purchasing of textbooks, library books, and other instructional startup requirements. After the school has been open for one year, expect a noteworthy drop in operational funds to be observed as the result of all one-time startup items being purchased. HS 6 will be a LEED Silver, energy efficient building with approximately 300,000 square feet. Estimated utilities are included in the operating costs.

Location:

The current location for HS 6 is to be determined.

Relationship to Approved County Policy or Plan:

Stafford County School Board's Strategic Plan:

- Goal 1: Engage, challenge, and prepare every student for success
- Goal 3: Resource stewardship

Stafford County Comprehensive Plan:

- Goal 1: Manage growth and development in a sustainable manner
- Goal 3: Preserve and protect environmental resources
- Goal 8: Support Stafford County as a community for superior education

Stafford County Board of Supervisors' Priorities (Education, Infrastructure)

Analysis of Need:

The methodology for determining the need for additional high school capacity is when the cumulative high school enrollment exceeds 100% capacity utilization. The total capacity of the five high schools within Stafford County amounts to 10,650. The student enrollment projections completed in the fall of 2018 indicates the need for a new high school beginning in the 2023-24 school year, when the high school level is projected to be at 100.9% capacity utilization.

High School 6

Change or Reasons for Revisions:

FY2016 – New project in CIP, open in FY2026; \$106.3M.

FY2017 – Project moved from FY2026 to FY2028, updated construction cost; \$120.3M.

FY2018 – No change

FY2019 – Project moved from FY2028 to FY2026, project cost lowered at request of BOS; \$121.3M.

FY2020 – No Change.

Alternative:

The alternative to this project is overcrowding at the high school level as the student population increases with no additional capacity added.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	2,000,000	4,500,000	2,000,000	621,000	450,000	0	0	0	0
Construction / Project	0	0	0	0	35,800,000	46,800,000	23,384,000	1,000,000	0	0	0
Contingency	0	0	0	0	1,400,000	2,350,000	910,000	125,000	0	0	0
Total Project Cost	\$0	\$0	\$2,000,000	\$4,500,000	\$39,200,000	\$49,771,000	\$24,744,000	\$1,125,000	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Bond Proceeds	0	0	2,000,000	3,484,164	31,382,216	47,129,994	24,182,389	1,125,000	0	0	0
Proffers	0	0	0	1,015,836	1,517,784	2,641,006	561,611	0	0	0	0
One-Time Funding	0	0	0	0	6,300,000	0	0	0	0	0	0
Total	\$0	\$0	\$2,000,000	\$4,500,000	\$39,200,000	\$49,771,000	\$24,744,000	\$1,125,000	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Personnel	0	0	0	0	0	284,000	3,666,000	3,740,000	3,815,000	3,891,300
Operating	0	0	0	0	0	1,150,000	1,769,000	1,204,000	1,228,080	1,252,642
Debt Service	0	0	167,000	459,000	3,085,000	7,029,000	9,053,000	9,147,000	9,147,000	9,147,000
Total	\$0	\$0	\$167,000	\$459,000	\$3,085,000	\$8,463,000	\$14,488,000	\$14,091,000	\$14,190,080	\$14,290,942

Ferry Farm Elementary School Renovation

Project Code		Square Footage/Acreage	40,390/0
Project Type	Building Addition & Renovation	Construction Cost per Sq. Ft.	\$309/\$158
Project Status	Design/Engineering	School Board Priority Number	N/A
Functional Area	Education	Student Capacity	0
Estimated Project Cost	\$12,790,000	Est. Opening Date	FY2021
Current Year Cost		Funding Source	Bond/Current Revenue/Prior Year Fund Balance
Debt Service	\$799,000	Years Financed	20
Full Year Operating Impact		Tax Rate Equivalent	\$0.005

Project Description:

Renovate Ferry Farm Elementary School (ES) is currently under design. This project will contain a mixture of renovating existing spaces as well as constructing additional square footage. For the renovation component of this project, a total of 46,900 square feet will be renovated including redesigned spaces and enhancements to student safety. The main office will be relocated and expanded, addressing existing space constraints that currently require the clinic to be housed in a classroom. The library will be renovated and expanded, which will benefit every student in the school. Safety will be improved by enhancing ADA accessibility to building entrances and creating a security vestibule. Mechanically, this project replaces the HVAC and electrical systems, and upgrades plumbing in the 1955 wing. The scope of this renovation project includes renovating the 1966 wing's lower level to address concerns with air quality and the learning environment as a whole. The 1966 wing's HVAC system will be replaced, benefitting both the upper and lower levels. Additionally, the lower level will be renovated, resulting in increased daylighting, integrated elementary school education specifications, and efficient learning spaces being created.

This project also incorporates an addition of 7,250 square feet to better align Ferry Farm Elementary School with the elementary school education specifications. As part of this addition, collaborative space will be added. The square footage of the art and music classrooms will be increased and some classrooms displaced by the renovation work will be relocated within the addition. Accessibility will be improved by the relocated classrooms having ADA accessible bathrooms and an ADA accessible elevator will be added to facilitate student movement.

The following milestones must be achieved for this project to be completed by December 2020 (FY2021): design is currently ongoing and must be completed in July 2019. This project should bid in August 2019 and be awarded in September. Construction should start October 2019 and be complete in December 2020, allowing the newly renovated and constructed building to open.

Renovate Ferry Farm Elementary School

Operating Impact Summary:

This project will result in a new portion of building that is more energy efficient than the current facility. Space within the school will better align with educational specifications and ADA accessibility entering and traversing within the school facility will be improved. Swing space in the form of modular buildings will be utilized to house the affected areas of the school while construction is occurring. The square footage that is being built addresses identified programmatic deficiencies. Therefore, no additional personnel or operating costs are associated with this renovation and addition project.

Location:

Ferry Farm Elementary School is located at 20 Pendleton Road, Fredericksburg, VA 22405.

Relationship to Approved County Policy or Plan:

Stafford County School Board's Strategic Plan:

- Goal 1: Engage, challenge, and prepare every student for success
- Goal 3: Resource Stewardship

Stafford County Comprehensive Plan:

- Goal 1: Manage growth and development in a sustainable manner
- Goal 3: Preserve and protect environmental resources
- Goal 8: Support Stafford County as a community for superior education

Stafford County Board of Supervisors' Priorities (Education, Infrastructure)

Analysis of Need:

A 2007 HLA study recommended a rebuild of Ferry Farm ES because the cost of renovating the whole building exceeded 70% of the replacement cost. A facility assessment conducted in 2008 evaluated the condition of the school and provided recommendations on the levels and timing of investments made to critical building systems. This facility assessment was updated in 2017 and shows a significant level of investment needed by FY2022. The firm VMDO also completed an analysis in 2018 to establish a renovation plan and areas of focus for any renovation effort that takes place at Ferry Farm Elementary School.

Change or Reasons for Revisions:

FY2007 – New renovation project in CIP, open FY2012; \$11.3M

FY2008 – Change in scope, additional square footage, change in escalation rate, opening moved to FY2013; \$21.3M

FY2009 – Project moved from FY2013 to FY2014; \$22.9M

FY2010 – Decrease in project scope, opening moved from FY2014 to FY2013; \$7.2M

Renovate Ferry Farm Elementary School

FY2011 – Increase in scope, opening moved back to FY2014; \$8.7M

FY2012 – Increase in scope, project changed from renovation to rebuild, opening moved to FY2019; \$19M

FY2013 – Increased square footage, escalation rate changed, project moved from FY2019 to FY2021; \$25M

FY2014 – No change

FY2015 – Change in escalation rate; \$25.5M

FY2016 – No change

FY2017 – Decreased planned capacity, new education specifications, opening moved from FY2021 to FY2022; \$29.9M

FY2018 – No change

FY2019 – Change in scope, project changed from rebuild to renovation, opening moved to FY2021; \$10.8M

FY2020 – Increase in scope – 1966 Wing lower level added by Resolution R19-58, Dated February 19, 2019

Alternative:

The alternative to this project is the current building continues to need a substantial level of investment to address critical building systems' deficiencies within the original building and part of the second addition. The office and library would continue to be located off-center inside the building, while the clinic remains located within a classroom that could be available to house educational programs.

CAPITAL IMPROVEMENT PROGRAM

FY2020 Adopted Budget

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	Total Project
Planning/Design	1,076,000	0	0	0	0	0	0	0	0	0	0	1,076,000
Construction / Project	574,800	10,679,200	0	0	0	0	0	0	0	0	0	11,254,000
Contingency	0	460,000	0	0	0	0	0	0	0	0	0	460,000
Total Project Cost	\$1,650,800	\$11,139,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,790,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Bond Proceeds	172,086	9,958,185	0	0	0	0	0	0	0	0	0
Current Revenue - Schools	0	1,181,015	0	0	0	0	0	0	0	0	0
Use of Prior Year Fund Balance General Fund	1,478,714	0	0	0	0	0	0	0	0	0	0
Total	\$1,650,800	\$11,139,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts		FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Debt Service		0	833,000	833,000	833,000	833,000	833,000	833,000	833,000	833,000	833,000
Total		\$0	\$833,000	\$833,000	\$833,000	\$833,000	\$833,000	\$833,000	\$833,000	\$833,000	\$833,000

Elementary School Capacity

Project Code		Square Footage/Acreage	107,500/20
Project Type	Building Construction	Construction Cost per Sq. Ft.	\$220/sf + site work
Project Status	Planning	Operating Cost per Sq. Ft.	
Functional Area	Education	Student Capacity	964
Estimated Project Cost	\$25,000,000	Est. Opening Date	August 2028 (FY2029)
Current Year Cost	\$	Funding Source	VP SA
Debt Service	\$	Years Financed	20
Full Year Operating Impact	N/A	Tax Rate Equivalent	\$

Project Description:

The Board supports the capacity needs that have been identified by the School Board. Specifically, the Hartwood ES and the lack of County water and sewer is a need that the Board desires to address within the next CIP planning process. The Board does not support construction on the existing Hartwood ES site. Further evaluation of existing schools will occur.

Operating Impact Summary:

The operating impact is dependent on the direction this additional elementary capacity project ultimately takes. This section will be updated once the project has been defined in upcoming capital improvement programs.

Location:

The current location for additional elementary school capacity is to be determined.

Elementary School Capacity

Relationship to Approved County Policy or Plan:

Stafford County School Board's Strategic Plan:

- Goal 1: Engage, challenge, and prepare every student for success
- Goal 3: Resource stewardship

Stafford County Comprehensive Plan:

- Goal 1: Manage growth and development in a sustainable manner
- Goal 3: Preserve and protect environmental resources
- Goal 8: Support Stafford County as a community for superior education

Stafford County Board of Supervisors' Priorities (Education, Infrastructure)

Analysis of Need:

This section will be updated once the project has been defined in upcoming capital improvement programs.

Change or Reasons for Revisions:

FY2013 – New project in CIP, included Head Start, open FY2022; \$36.9M.

FY2014 – Project moved from FY2022 to FY2023; \$37.9M.

FY2015 – Change in scope, finalized site location; \$39.8M.

FY2016 – Change in scope, Head Start removed, project moved from FY2023 to FY2028; \$32.3M.

FY2017 – Change in scope, new elementary educational specification, \$38M.

FY2018 – No change.

FY2019 – Project cost updated, cost per square foot and escalation rate adjusted; \$50.9M.

FY2020 – Project cost lowered at request of BOS, \$25M.

Alternative:

This section will be updated once the project has been defined in upcoming capital improvement programs.

Elementary School Capacity

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000,000	\$1,800,000	\$13,900,000	\$8,300,000	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Bond Proceeds	0	0	0	0	0	0	1,000,000	1,800,000	13,900,000	8,300,000	0
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000,000	\$1,800,000	\$13,900,000	\$8,300,000	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$84,000	\$235,000	\$1,398,000	\$2,092,538

Drew Middle School Renovation/Addition

Project Code		Square Footage/Acreage	106,900/0
Project Type	Building Renovation	Construction Cost per Sq. Ft.	\$170/\$275 + site work
Project Status	Planning	Operating Cost per Sq. Ft.	
Functional Area	Education	Student Capacity	
Estimated Project Cost	\$25,000,000	Est. Opening Date	August 2031 (FY2032)
Current Year Cost	\$	Funding Source	Bond
Debt Service	\$	Years Financed	20
Full Year Operating Impact	N/A	Tax Rate Equivalent	\$

Project Description:

The Board supports leaving a placeholder for the FY2020-24 CIP, with planning years of FY2025-29. This section will be updated once the project has been defined in upcoming capital improvement programs.

Operating Impact Summary:

This section will be updated once the project has been defined in upcoming capital improvement programs.

Location:

Drew Middle School is located at 501 Cambridge Street, Fredericksburg, VA 22405.

Drew Middle School Renovation/Addition

Relationship to Approved County Policy or Plan:

Stafford County School Board's Strategic Plan:

- Goal 1: Engage, challenge, and prepare every student for success
- Goal 3: Resource stewardship

Stafford County Comprehensive Plan:

- Goal 1: Manage growth and development in a sustainable manner
- Goal 3: Preserve and protect environmental resources
- Goal 8: Support Stafford County as a community for superior education

Stafford County Board of Supervisors' Priorities (Education, Infrastructure)

Analysis of Need:

This section will be updated once the project has been defined in upcoming capital improvement programs.

Change or Reasons for Revisions:

FY2017 – New project approved in CIP, open FY2028; \$24.2M.

FY2018 – No change.

FY2019 – Project not included in approved CIP.

FY2020 – Escalation rate adjusted, project open FY2032, project cost lowered at request of BOS; \$25M.

Alternative:

The alternative to this project is the continuation of the degradation to the existing Drew Middle School building. If renovating this building does not occur in a timely manner, the School Division will be forced to expend funds to address areas of need. Any pre-renovation dollars spent in areas that would be impacted by this project feature a low return on investment.

Drew Middle School Renovation/Addition

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	0	0	0	0	0	0	1,000,000	2,000,000
Construction / Project	0	0	0	0	0	0	0	0	0	0	3,500,000
Contingency	0	0	0	0	0	0	0	0	0	0	500,000
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000,000	\$6,000,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Bond Proceeds	0	0	0	0	0	0	0	0	0	1,000,000	6,000,000
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000,000	\$6,000,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Debt Service	0	0	0	0	0	0	0	0	0	84,000
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$84,000

Capital Maintenance: Schools Infrastructure

Project Code		Square Footage/Acreage	
Project Type	3R Projects	Construction Cost per Sq. Ft.	
Project Status		Operating Cost per Sq. Ft.	
Functional Area	Education	Student Capacity	
Estimated Project Cost	\$4,565,000 – Bond Projects	Est. Opening Date	
Current Year Cost	\$4,368,000 – Bond Projects	Funding Source	Bonds/Current Revenue/Nutrition
Debt Service	N/A	Years Financed	Bonds 20 years
Full Year Operating Impact		Tax Rate Equivalent	\$0.003

Project Description:

Improvements and upgrades to various schools, facilities, equipment, and grounds to correct deficiencies in safety, maintenance, and repair.

Operating Impact Summary:

These improvement and upgrade projects are needed to continue to supply the students in Stafford County with learning environments that are conducive to learning, poising students for educational success.

Location:

Various Stafford County Public Schools' facilities across the county.

Relationship to Approved County Policy or Plan:

Stafford County School Board's Strategic Plan:

- Goal 1: Engage, challenge, and prepare every student for success
- Goal 3: Resource stewardship

Stafford County Comprehensive Plan:

- Goal 1: Manage growth and development in a sustainable manner
- Goal 3: Preserve and protect environmental resources
- Goal 8: Support Stafford County as a community for superior education

Stafford County Board of Supervisors' Priorities (Education, Infrastructure)

Analysis of Need:

Ongoing improvements and upgrades are a necessary component of preparing facilities, equipment, and grounds to promote superior education.

SCHOOL'S 3R PROJECTS

FY2020 Adopted Budget

Education

Project	Location	Funding Source	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Repair Mechanical Systems - Phase II	RES	Bond Proceeds	1,359,000	0	0	0	0	0	0	0	0	0
Repair Exterior Envelope	NSHS	Bond Proceeds	2,456,000	0	0	0	0	0	0	0	0	0
Repair Track	MVHS	Bond Proceeds	750,000	0	0	0	0	0	0	0	0	0
Repair Mechanical Systems (Replace Building Automation Controls)	Fifteen (15) Sites		366,000	0	0	0	0	0	0	0	0	0
Repair Pavement & Parking Lot Lighting	GMC		1,014,000	0	0	0	0	0	0	0	0	0
Replace Chiller	PRES		627,700	0	0	0	0	0	0	0	0	0
Repair Cafeteria Flooring	BPHS		105,000	0	0	0	0	0	0	0	0	0
Repair Pavement & Parking Lot Lighting	FFES		941,000	0	0	0	0	0	0	0	0	0
Install Generator	Support Services		157,000	0	0	0	0	0	0	0	0	0
Replace Generator	HOES		65,700	0	0	0	0	0	0	0	0	0
Repair Roof (SS)	HES		301,750	0	0	0	0	0	0	0	0	0
Repair Phone, Media Retrieval & PA Systems	SMS		209,000	0	0	0	0	0	0	0	0	0
Repair Main Road Entrances	NSHS		836,000	0	0	0	0	0	0	0	0	0
Install Additional Aiphone Console	All Facilities		67,000	0	0	0	0	0	0	0	0	0
Repair Phone System	HOES		45,659	0	0	0	0	0	0	0	0	0
Convert ES Computer Rooms	GES, GVES, KWBES & WES		69,196	0	0	0	0	0	0	0	0	0
Replace Fire Alarm System	RTMS		261,000	0	0	0	0	0	0	0	0	0
Construct Snow Removal Storage (Salt)	Support Services		261,000	0	0	0	0	0	0	0	0	0
Install Additional Security Lighting - ES Playgrounds	All 17 ES		97,500	0	0	0	0	0	0	0	0	0
Repair Mechanical Systems (Chiller) - Addition	SES		133,000	0	0	0	0	0	0	0	0	0
Upgrade CTE Lab	CFHS		37,000	0	0	0	0	0	0	0	0	0
Repair Chillers	BPHS & MVHS		316,000	0	0	0	0	0	0	0	0	0
Repair Erosion & Drainage - Phases 4, 7 - 9	DSMS		342,500	0	0	0	0	0	0	0	0	0
Replace & Add Storage Buildings	CFHS, HOES, RES & RRES		352,600	0	0	0	0	0	0	0	0	0
Replace HVAC	Support Services		20,293	0	0	0	0	0	0	0	0	0
Install Playground & Play Area	WCES		167,000	0	0	0	0	0	0	0	0	0
Upgrade Library	KWBES		52,000	0	0	0	0	0	0	0	0	0
Replace Auditorium Audio/Lighting	MVHS		183,000	0	0	0	0	0	0	0	0	0
Upgrade Black Boards to White Boards	Various		105,000	0	0	0	0	0	0	0	0	0
Painting	SHS		102,000	0	0	0	0	0	0	0	0	0
Replace Hallway Lockers	SMS		120,560	0	0	0	0	0	0	0	0	0
Repair Tennis Court	NSHS		366,000	0	0	0	0	0	0	0	0	0
Replace Gym/Team Lockers	BPHS		119,245	0	0	0	0	0	0	0	0	0
Repair Exterior (Paint)	GMC & SCHMS		43,400	0	0	0	0	0	0	0	0	0
Repair Bathroom Floor	ABES		158,000	0	0	0	0	0	0	0	0	0
Install Messaging Marquees (Manual)	RTMS		68,000	0	0	0	0	0	0	0	0	0
Install Messaging Marquees (Manual)	AGWMS/GES/RES		68,000	0	0	0	0	0	0	0	0	0
Replace Walk-In Freezer & Refrigerators	PRES	Nutrition Capital Funding	120,000	0	0	0	0	0	0	0	0	0
Repair Interior Finishes - Phase I	HPHMS	Bond Proceeds	0	2,621,000	0	0	0	0	0	0	0	0
Repair Mechanical Systems - Phase I	NSHS	Bond Proceeds	0	2,402,000	0	0	0	0	0	0	0	0
Replace Fiber Optic Cabling (Interior)	BPHS, TBGMS, NSHS & RTMS		0	382,000	0	0	0	0	0	0	0	0
Replace Roof (SS)	FFES		0	382,000	0	0	0	0	0	0	0	0
Repair Mechanical Systems (RTAA Chiller-MDF HVAC)	CFHS		0	355,000	0	0	0	0	0	0	0	0
Upgrade Network (IT) Plant - (ES IT Standard Specs)	ABES, KWBES, MBES, CES, HES & RRES		0	328,000	0	0	0	0	0	0	0	0
Replace Roof (Addition SS & Library Overhang)	GVES		0	382,000	0	0	0	0	0	0	0	0
Replace Roof (Area E & Outbuildings SS)	SES		0	349,000	0	0	0	0	0	0	0	0
Replace Generator	PRES		0	110,000	0	0	0	0	0	0	0	0
Replace Generator	RES		0	110,000	0	0	0	0	0	0	0	0
Repair Phone, Media Retrieval & PA Systems	NSHS		0	328,000	0	0	0	0	0	0	0	0
Replace Phone, Media Retrieval & PA Systems	PRES		0	218,000	0	0	0	0	0	0	0	0
Repair Long Jump & South D Ring	SHS		0	294,000	0	0	0	0	0	0	0	0
Replace Fire Alarm System	MBES		0	328,000	0	0	0	0	0	0	0	0
Repair Field Drainage	CFHS		0	218,000	0	0	0	0	0	0	0	0
Construct Storage Buildings	ABES, AYBAC, GVES & WCES		0	273,000	0	0	0	0	0	0	0	0

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Education

Project	Location	Funding Source	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Repair Pavement	PRES		0	874,000	0	0	0	0	0	0	0	0
Repair Tennis Courts	CFHS		0	382,000	0	0	0	0	0	0	0	0
Upgrade CTE Tech Ed Lab	HHPMS		0	218,000	0	0	0	0	0	0	0	0
Renovate Aimee Building	SHS		0	273,000	0	0	0	0	0	0	0	0
Construct Stairs at Football Stadium	RTMS		0	146,100	0	0	0	0	0	0	0	0
Repair Library	PRES		0	54,000	0	0	0	0	0	0	0	0
Replace Walk-In Freezer & Refrigerators	WCES	Nutrition Capital Funding	0	125,000	0	0	0	0	0	0	0	0
Repair Mechanical Systems - Phase II	NSHS	Bond Proceeds	0	0	3,651,000	0	0	0	0	0	0	0
Repair Interior Finishes - Phase II	HHPMS	Bond Proceeds	0	0	1,349,415	0	0	0	0	0	0	0
Replace Generator	DMS		0	0	457,000	0	0	0	0	0	0	0
Replace Generator	WES		0	0	457,000	0	0	0	0	0	0	0
Replace Phone, Media Retrieval & PA Systems	CFHS		0	0	285,000	0	0	0	0	0	0	0
Replace Phone, Media Retrieval & PA Systems	HES		0	0	228,000	0	0	0	0	0	0	0
Replace Fire Alarm System	WCES		0	0	343,000	0	0	0	0	0	0	0
Construct Bus Parking - Phase I	TBD		0	0	512,500	0	0	0	0	0	0	0
Repair Interior Finishes	RES		0	0	1,349,415	0	0	0	0	0	0	0
Replace Roof (Area A SS)	RES		0	0	388,000	0	0	0	0	0	0	0
Repair Exterior Envelope (Windows) and Board Room Overhang	AYBAC		0	0	251,000	0	0	0	0	0	0	0
Construct Snow Removal Storage (Salt)	Coal Landing		0	0	343,000	0	0	0	0	0	0	0
Replace CTE Dust Collection Systems	SMS		0	0	285,000	0	0	0	0	0	0	0
Repair Roof (Standing seam & Outbuildings; Ext painting)	BPHS		0	0	799,000	0	0	0	0	0	0	0
Repair Pavement	RES		0	0	684,000	0	0	0	0	0	0	0
Repair Pavement	SMS		0	0	572,000	0	0	0	0	0	0	0
Construct Vehicle and Equipment Canopy	Support Services		0	0	143,000	0	0	0	0	0	0	0
Repair Athletic Fields	TBGMS, HHPMS, RTMS & SMS		0	0	228,000	0	0	0	0	0	0	0
Upgrade CTE Labs - FACS	DMS		0	0	228,000	0	0	0	0	0	0	0
Repair Tracks	RRES & WCES		0	0	171,000	0	0	0	0	0	0	0
Repair Playground & Play Area	PRES		0	0	92,000	0	0	0	0	0	0	0
Install Sound System Gym/Activity Room	GVES & HES		0	0	115,000	0	0	0	0	0	0	0
Repair Library	RRES		0	0	56,000	0	0	0	0	0	0	0
Replace Walk-In Freezer & Refrigerators	WES	Nutrition Capital Funding	0	0	131,000	0	0	0	0	0	0	0
Repair Mechanical Systems (VAV-AHU-BAS-Kitchen A/C)	PRES	Bond Proceeds	0	0	0	2,350,000	0	0	0	0	0	0
Repair Roof	AYBAC	Bond Proceeds	0	0	0	1,046,000	0	0	0	0	0	0
Repair Interior Finishes - Phase I	NSHS	Bond Proceeds	0	0	0	1,646,000	0	0	0	0	0	0
Replace Generator	SMS		0	0	0	471,000	0	0	0	0	0	0
Replace Phone, Media Retrieval & PA Systems	RRES		0	0	0	235,000	0	0	0	0	0	0
Replace Roof (SS)	FES		0	0	0	376,000	0	0	0	0	0	0
Replace Roof (SS-All areas)	RTMS		0	0	0	2,704,000	0	0	0	0	0	0
Install Kitchen A/C	WES		0	0	0	441,000	0	0	0	0	0	0
Upgrade CTE Labs - FACS & Tech Ed Lab	NSHS		0	0	0	705,000	0	0	0	0	0	0
Repair Tracks	PRES		0	0	0	176,000	0	0	0	0	0	0
Repair Playground & Play Area	GES		0	0	0	95,000	0	0	0	0	0	0
Repair Library	AGWMS		0	0	0	58,000	0	0	0	0	0	0
Replace Walk-In Freezer & Refrigerators	FFES	Nutrition Capital Funding	0	0	0	135,000	0	0	0	0	0	0
Repair Mechanical Systems (O'Shannessy Building)	GMC	Bond Proceeds	0	0	0	0	1,029,000	0	0	0	0	0
Repair Interior Finishes	PRES	Bond Proceeds	0	0	0	0	1,431,415	0	0	0	0	0
Repair Interior Finishes - Phase II	NSHS	Bond Proceeds	0	0	0	0	2,543,000	0	0	0	0	0
Replace Generator	FFES		0	0	0	0	485,000	0	0	0	0	0
Repair Mechanical Systems	FFES		0	0	0	0	2,421,000	0	0	0	0	0
Replace Phone, Media Retrieval & PA Systems	TBGMS		0	0	0	0	242,000	0	0	0	0	0
Replace Fire Alarm System	RRES		0	0	0	0	364,000	0	0	0	0	0
Replace Roof (SS)	PRES		0	0	0	0	423,000	0	0	0	0	0
Repair Pavement	AYBAC		0	0	0	0	787,000	0	0	0	0	0

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Project	Location	Funding Source	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Repair Tracks	AGWMS & RES		0	0	0	0	181,000	0	0	0	0	0
Repair Tracks	KWBES		0	0	0	0	181,000	0	0	0	0	0
Repair Playground & Play Area	RES		0	0	0	0	194,000	0	0	0	0	0
Upgrade CTE Labs	TBD		0	0	0	0	242,000	0	0	0	0	0
Repair Playground & Play Area	GMC		0	0	0	0	98,000	0	0	0	0	0
Repair Library	CES		0	0	0	0	60,000	0	0	0	0	0
Replace Walk-In Freezer & Refrigerators	HES	Nutrition Capital Funding	0	0	0	0	139,000	0	0	0	0	0
Replace Roof	AGWMS/GES	Bond Proceeds	0	0	0	0	0	3,155,000	0	0	0	0
Repair Interior Finishes - Phase III	NSHS	Bond Proceeds	0	0	0	0	0	1,872,000	0	0	0	0
Repair Mechanical Systems	AYBAC		0	0	0	0	0	1,091,000	0	0	0	0
Repair Mechanical Systems	WCES		0	0	0	0	0	2,494,000	0	0	0	0
Repair Mechanical Systems - Phase I	SMS		0	0	0	0	0	1,123,000	0	0	0	0
Repair Pavement	HES		0	0	0	0	0	748,000	0	0	0	0
Repair Pavement - (Student Lot)	NSHS		0	0	0	0	0	748,000	0	0	0	0
Repair Exterior Envelope	AGWMS/GES		0	0	0	0	0	625,000	0	0	0	0
Repair Library	HHPMS		0	0	0	0	0	62,000	0	0	0	0
Repair Phone, Media Retrieval & PA Systems	FFES		0	0	0	0	0	249,000	0	0	0	0
Replace Fire Alarm System	PRES		0	0	0	0	0	375,000	0	0	0	0
Replace Walk-In Freezer & Refrigerators	HOES	Nutrition Capital Funding	0	0	0	0	0	143,000	0	0	0	0
Repair Mechanical Systems - Phase I	BPHS	Bond Proceeds	0	0	0	0	0	0	2,440,000	0	0	0
Replace Roof	WCES	Bond Proceeds	0	0	0	0	0	0	2,569,000	0	0	0
Install Kitchen A/C	HOES		0	0	0	0	0	0	482,000	0	0	0
Repair Mechanical Systems - Phase II	SMS		0	0	0	0	0	0	2,506,000	0	0	0
Repair Athletic Fields	NSHS		0	0	0	0	0	0	770,000	0	0	0
Repair Electrical System (Complex)	GMC		0	0	0	0	0	0	995,000	0	0	0
Repair Exterior Envelope	HHPMS		0	0	0	0	0	0	1,223,000	0	0	0
Repair Exterior Envelope	WES		0	0	0	0	0	0	644,000	0	0	0
Repair Library	ABES		0	0	0	0	0	0	64,000	0	0	0
Repair Phone, Media Retrieval & PA Systems	KWBES		0	0	0	0	0	0	256,000	0	0	0
Repair Playground & Play Area	KWBES		0	0	0	0	0	0	109,000	0	0	0
Repair Playground & Play Area	RRES		0	0	0	0	0	0	109,000	0	0	0
Upgrade CTE Labs	TBD		0	0	0	0	0	0	256,000	0	0	0
Repair Mechanical Systems - Phase II	BPHS	Bond Proceeds	0	0	0	0	0	0	0	2,251,000	0	0
Repair Pavement	DMS	Bond Proceeds	0	0	0	0	0	0	0	992,000	0	0
Repair Interior Finishes	WCES	Bond Proceeds	0	0	0	0	0	0	0	1,785,000	0	0
Construct Bus Parking - Phase II	TBD		0	0	0	0	0	0	0	926,000	0	0
Construct Storage Buildings	DSMS, FFES, TBGMW & KWBES		0	0	0	0	0	0	0	331,000	0	0
Renovate Front Office Suite	NSHS		0	0	0	0	0	0	0	198,000	0	0
Repair Athletic Fields	BPHS		0	0	0	0	0	0	0	663,000	0	0
Repair Athletic Fields	MVHS		0	0	0	0	0	0	0	663,000	0	0
Repair Exterior Envelope	RES		0	0	0	0	0	0	0	663,000	0	0
Repair Exterior Envelope (Doors & Windows)	GMC		0	0	0	0	0	0	0	663,000	0	0
Repair Library	RTMS		0	0	0	0	0	0	0	66,000	0	0
Repair Playground & Play Area	MBES		0	0	0	0	0	0	0	112,000	0	0
Repair Stormwater Management	SHS		0	0	0	0	0	0	0	1,986,000	0	0
Repair Mechanical Systems (AHU, Chiller, Fans)	RRES	Bond Proceeds	0	0	0	0	0	0	0	0	2,319,000	0
Repair Roof (SS-All Areas)	HOES	Bond Proceeds	0	0	0	0	0	0	0	0	2,725,000	0
Install Kitchen A/C	AGWMS/GES		0	0	0	0	0	0	0	0	683,000	0

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Project	Location	Funding Source	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Repair Pavement	CFHS		0	0	0	0	0	0	0	0	1,773,000	0
Construct Exterior Bleachers	DSMS		0	0	0	0	0	0	0	0	410,000	0
Construct Outdoor Classroom	GVES & RRES		0	0	0	0	0	0	0	0	817,000	0
Repair Athletic Fields	CFHS		0	0	0	0	0	0	0	0	683,000	0
Repair Exterior Envelope	HOES		0	0	0	0	0	0	0	0	683,000	0
Repair Playground & Play Area	CES		0	0	0	0	0	0	0	0	115,000	1,615,000
Repair Mechanical Systems - Phase I	RTMS	Bond Proceeds	0	0	0	0	0	0	0	0	0	1,684,000
Repair Interior Finishes	AYBAC	Bond Proceeds	0	0	0	0	0	0	0	0	0	1,754,000
Repair Interior Finishes - Phase I	SMS	Bond Proceeds	0	0	0	0	0	0	0	0	0	703,000
Repair Pavement	KWBES		0	0	0	0	0	0	0	0	0	913,000
Repair Pavement	MBES		0	0	0	0	0	0	0	0	0	1,826,000
Repair Pavement	MVHS		0	0	0	0	0	0	0	0	0	142,000
Construct Outdoor Classroom	SHS		0	0	0	0	0	0	0	0	0	703,000
Repair Athletic Fields	SHS		0	0	0	0	0	0	0	0	0	70,000
Repair Library	DSMS		0	0	0	0	0	0	0	0	0	118,000
Total Yearly Project Cost			12,863,103	11,152,100	13,118,330	10,438,000	10,820,415	12,685,000	12,423,000	11,299,000	10,208,000	9,646,000

Project Revenues			FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Bond Proceeds			4,565,000	5,023,000	5,000,415	5,042,000	5,003,415	5,027,000	5,009,000	5,028,000	5,044,000	5,053,000
Current Revenue - County (Unallocated)			1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865	1,445,865
Current Revenue - Schools (Unfunded)			0	0	0	0	0	0	0	0	0	0
Nutrition Capital Funding			120,000	125,000	131,000	135,000	139,000	143,000	0	0	0	0
Total			\$6,130,865	\$6,593,865	\$6,577,280	\$6,622,865	\$6,588,280	\$6,615,865	\$6,454,865	\$6,473,865	\$6,489,865	\$6,498,865

Operating Impacts			FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Debt Service				382,000	802,000	1,220,000	1,642,000	2,061,000	2,482,000	2,901,000	3,322,000	3,744,000
Total			\$0	\$382,000	\$802,000	\$1,220,000	\$1,642,000	\$2,061,000	\$2,482,000	\$2,901,000	\$3,322,000	\$3,744,000

Transportation

Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Total Projected Uses (Includes PY Funding)
Stefaniga - Mountain View Road Intersection	\$0	\$0	\$0	\$0	\$600,000	\$900,000	\$2,200,000	\$0	\$0	\$0	\$0	\$1,500,000	\$2,200,000	\$3,700,000
Route 1 - Enon Road Improvements	0	0	1,200,000	0	2,700,000	5,774,932	925,068	0	0	0	0	9,674,932	925,068	\$10,600,000
Belmont - Ferry Farm Trail - Phase 6	815,943	0	1,700,000	0	0	0	0	0	0	0	0	2,515,943	0	\$2,515,943
Berea Church Road (SR-654) Improvements	2,344,000	2,234,781	1,515,575	0	0	0	0	0	0	0	0	6,094,356	0	\$6,094,356
Courthouse Road (SR-630) @ Route 1 Intersection Improvement	5,390,576	3,963,029	8,866,301	0	0	0	0	0	0	0	0	18,219,906	0	\$18,219,906
Route 1 @ Potomac Creek Drive (SR-761)	300,000	500,000	1,000,000	0	0	0	0	0	0	0	0	1,800,000	0	\$1,800,000
Tech Center Drive	0	0	0	0	0	0	0	0	0	25,000	0	0	25,000	\$25,000
Telegraph Rd (SR-637) and Woodstock Ln (SR-639) @ Route 1 Safety Improvements	1,100,000	3,200,000	4,500,000	0	0	0	0	0	0	0	0	8,800,000	0	\$8,800,000
Flatford Road Sidewalk	91,000	39,130	519,870	0	0	0	0	0	0	0	0	650,000	0	\$650,000
Onville Road Sidewalk	186,000	115,000	746,631	0	0	0	0	0	0	0	0	1,047,631	0	\$1,047,631
Wedge Widening/Safety Improvements	0	912,556	912,556	912,556	912,556	912,556	912,556	912,556	912,556	912,556	912,556	4,562,780	4,562,780	\$9,125,560
Total Expenditures	\$10,227,519	\$10,964,496	\$20,960,933	\$912,556	\$4,212,556	\$7,587,488	\$4,037,624	\$912,556	\$912,556	\$937,556	\$912,556	\$54,865,548	\$7,712,848	\$62,578,396

Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Total Projected Sources (Includes PY Funding)
Current Revenue - County	1,100,000	0	0	0	0	0	0	0	0	0	0	\$1,100,000	\$0	\$1,100,000
Use of Prior Year Fund Balance Transportation	2,534,732	3,213,029	340,000	0	600,000	400,000	0	0	0	25,000	0	7,087,761	25,000	\$7,112,761
Proffers	1,411,347	0	878,486	0	0	0	0	0	0	0	0	2,289,833	0	\$2,289,833
Service District	355,400	1,148,217	1,011,088	0	0	0	0	0	0	0	0	2,514,704	0	\$2,514,704
TAP - Transportation Alternative Program	874,355	123,304	2,373,201	0	0	0	0	0	0	0	0	3,370,860	0	\$3,370,860
CMAQ - Congestion Mitigation and Air Quality	0	154,000	736,799	0	1,671,150	900,000	925,068	0	0	0	0	3,461,949	925,068	\$4,387,017
RSTP - Regional Service Transportation Program	0	0	519,522	0	100,000	314,125	0	0	0	0	0	933,647	0	\$933,647
Smart Scale	300,000	3,546,000	9,785,300	0	0	4,744,336	2,200,000	0	0	0	0	18,375,636	2,200,000	\$20,575,636
Fuel Tax (CROC)	0	912,556	912,556	912,556	912,556	912,556	912,556	912,556	912,556	912,556	912,556	4,562,780	4,562,780	\$9,125,560
Revenue Sharing	3,651,685	1,867,391	4,099,303	0	0	0	0	0	0	0	0	9,618,378	0	\$9,618,378
Impact Fees	0	0	304,679	0	928,850	316,471	0	0	0	0	0	1,550,000	0	\$1,550,000
Total Revenues	\$10,227,519	\$10,964,496	\$20,960,933	\$912,556	\$4,212,556	\$7,587,488	\$4,037,624	\$912,556	\$912,556	\$937,556	\$912,556	\$54,865,548	\$7,712,848	\$62,578,396

Use of Prior Year Fund Balance General Fund ⁽¹⁾	0	4,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	8,000,000	5,000,000	\$13,000,000
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⁽¹⁾ FY2021-FY2029 Use of General Fund Prior Year Fund Balance is dependant on Positive Results of Operation (PRO)

Transportation: Stefaniga Road and Mountain View Road Intersection Improvements

Project Code		Project Length	0.5 miles
Project Type	Road Improvements	Cost per Mile	\$7.400 million
Project Status	Planning	Est. Opening Date	May 1, 2029
Total Project Cost	\$3,700,000	Avg. Annual Daily Traffic	7,000 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

Project Description:

The project will realign Stefaniga Road at the intersection with Mountain View Road. This will shift the intersection north to line up with the existing intersection at Lightfoot Drive and convert the intersection into a roundabout.

Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

Location:

Proposed improvements are at two intersections of Mountain View Road, Stefaniga Road, and Lightfoot Drive.

Relationship to Approved County Policy or Plan:

- The County's Comprehensive Plan calls for safety improvements along Mountain View Road.
- On March 20, 2018, the Board of Supervisors (BOS) supported the submission of an application to compete for VDOT's Smart Scale funding program.
- Supports the BOS Strategic Priority – Responsive Transportation System.

Transportation: Stefaniga Road and Mountain View Road Intersection Improvements

Analysis of Need:

There is a lack of proper sight distance at the intersection of Stefaniga Road and Mountain View Road due to an existing vertical curve on Mountain View Road that makes it difficult to see oncoming traffic. There have been several accidents at this intersection due to this lack of sight distance. This project seeks to improve the safety of this intersection by realigning the Stefaniga Road and Mountain View intersection so that the roadway is directly across from the Lightfoot Drive and Mountain View intersection which is approximately 200' to the north. The realigned intersection will be converted into a roundabout to improve the safety and sight distance, as well as reduce the delays associated with a stop-controlled intersection. A sidewalk around the roundabout and corresponding curb ramps will be constructed and connected to the existing sidewalk along Lightfoot Drive.

Change or Reasons for Review:

- New Smart Scale Project.

Alternative:

- Roadway stays in current condition.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	0	600,000	0	0	0	0	0	0
Property Acquisition	0	0	0	0	0	900,000	0	0	0	0	0
Construction / Project	0	0	0	0	0	0	2,200,000	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$600,000	\$900,000	\$2,200,000	\$0	\$0	\$0	\$0

Transportation: Stefaniga Road and Mountain View Road Intersection Improvements

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Use of Prior Year Fund Balance Transportation	0	0	0	0	600,000	400,000	0	0	0	0	0
Smart Scale	0	0	0	0	0	500,000	2,200,000	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$600,000	\$900,000	\$2,200,000	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Transportation: Route 1 and Enon Road Improvements

Project Code		Project Length	0.63 miles
Project Type	Road Improvements	Cost per Mile	\$16.825 million
Project Status	Planning	Est. Opening Date	November 1, 2026
Total Project Cost	\$10,600,000	Avg. Annual Daily Traffic	6,000 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

Project Description:

Project will widen approximately 0.63 miles on Enon Road from 0.02 miles west of the intersection with Beauregard Drive to the intersection with Jefferson Davis Highway (RT 1). The project will provide a continuous two-way left turn lane from the intersection with Beauregard Drive to Stafford Indians Lane. An additional left turn lane will be added to RT 1 and additional receiving and departure lanes will be added to Enon Road between RT 1 and Stafford Indians Lane. The intersection with Porter Lane will also be improved to a 90 degree connection to provide sight distance to current standards. It will also add an additional receiving lane to Enon Rd to accommodate dual left turns. Add a dedicated left, through, and right lanes for traffic exiting Enon onto RT 1. A 5' concrete sidewalk will also be provided on both sides of Enon Road.

Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

Location:

Proposed improvements are planned at the intersection of RT 1 and Enon Road, and along Enon Road from RT 1 to Beauregard Drive.

Relationship to Approved County Policy or Plan:

- The County's Comprehensive Plan calls for Enon Road to be improved to a 2-lane upgrade as well as safety improvements along it.
- On March 20, 2018, the Board of Supervisors (BOS) supported the submission of an application to compete for VDOT's Smart Scale funding program.
- Supports the BOS Strategic Priority – Responsive Transportation System.

Transportation: Route 1 and Enon Road Improvements

Analysis of Need:

A traffic study was conducted by staff that highlights the current volumes (approximately 11,000 vehicles per day; multiple peak hours exceeding 900 vehicles per hour) traveling on Enon Road between RT 1 and Stafford Indians Lane (main entrance into Stafford High School). Enon Road is currently a two-lane roadway facility which is not designed to handle this high traffic volume.

Change or Reasons for Revisions:

- Resubmitted new Smart Scale application with revised costs based on VDOT estimates.

Alternative:

- Roadway stays in current condition.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	1,200,000	0	0	0	0	0	0	0	0
Property Acquisition	0	0	0	0	2,700,000	0	0	0	0	0	0
Construction / Project	0	0	0	0	0	5,774,932	925,068	0	0	0	0
Total	0	0	\$1,200,000	0	\$2,700,000	\$5,774,932	\$925,068	0	0	0	0

Transportation: Route 1 and Enon Road Improvements

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Use of Prior Year Fund Balance Transportation	0	0	0	0	0	4,558,461	0	0	0	0	0
CMAQ - Congestion Mitigation and Air Quality	0	0	375,799	0	1,671,150	900,000	925,068	0	0	0	0
RSTP - Regional Service Transportation Program	0	0	519,522	0	100,000	0	0	0	0	0	0
Fuel Tax	0	0	0	0	50,000	0	0	0	0	0	0
Impact Fees	0	0	304,679	0	878,850	316,471	0	0	0	0	0
Total	\$0	\$0	\$1,200,000	\$0	\$2,700,000	\$5,774,932	\$925,068	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Transportation: Belmont: Ferry Farm Trail: Phase 6

Project Code		Project Length	3,500 feet
Project Type	Trails and Sidewalks	Cost per Linear Foot	\$719 per foot
Project Status	Design/Engineering	Estimated Opening Date	December 31, 2021
Total Project Cost	\$2,515,943		
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

Project Description:

The project consists of constructing a portion of the Belmont-Ferry Farm Trail. The target segment is Phase 6, which is from the Chatham Bridge to the existing bike lanes on Cool Springs Drive. Design of Phase 6 of the Belmont-Ferry Farm Trail is at the conceptual stage. This project will complete the design, permitting, and construction of Phase 6. This project has been awarded Transportation Alternatives Program (TAP) grant money through VDOT.

Operating Impact Summary:

Once completed, county staff will have personnel provide upkeep of the trail. Staff will be tasked with keeping the trail free of debris and vegetation, repair of damage to the trail over time, etc.

Location:

Proposed improvements are from Chatham Bridge to Jett Drive/Cool Springs Drive.

Relationship to Approved County Policy or Plan:

- The adopted 2016-2036 Comprehensive Plan supports this project.
- The County's Bicycle and Pedestrian Plan calls for the development of a safe, comprehensive and connected regional network of on-road and off-road bicycle and pedestrian corridors and related facilities.
- Supports the Board of Supervisors Strategic Priority – Responsive Transportation System.

Transportation: Belmont: Ferry Farm Trail: Phase 6

Analysis of Need:

Constructing this final phase of the trail would connect pedestrians to existing bicycle lanes which currently run along Cool Springs Drive.

Change or Reasons for Revisions:

FY2019: Through lengthy coordination efforts with the George Washington Foundation, staff was directed to change the terminus of the trail to connect to the bike lanes located at Cool Springs Road/Jett Drive and Kings Highway (Route 3). The projected costs will likely be reduced, however, for the purposes of this Capital Improvement Program, the existing cost estimates of this project remain the same.

Alternative:

Trail will end with phase 4 on the downstream side of the Chatham Bridge.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	599,943	0	0	0	0	0	0	0	0	0	0
Property Acquisition	216,000	0	0	0	0	0	0	0	0	0	0
Construction / Project	0	0	1,700,000	0	0	0	0	0	0	0	0
Total	\$815,943	\$0	\$1,700,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Use of Prior Year Fund Balance Transportation	163,188	0	340,000	0	0	0	0	0	0	0	0
TAP - Transportation Alternative Program	652,755	0	1,360,000	0	0	0	0	0	0	0	0
Total	\$815,943	\$0	\$1,700,000	\$0	\$0	\$0	0	0	0	0	0

Transportation: Belmont: Ferry Farm Trail: Phase 6

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Personnel	0	0	58,000	60,000	62,000	63,000	65,000	\$67,000	\$69,000	\$71,000
Operating	0	0	35,000	2,000	2,000	2,000	2,000	\$2,000	\$2,000	
Total	\$0	\$0	\$93,000	\$62,000	\$64,000	\$65,000	\$67,000	\$69,000	\$71,000	\$71,000

Transportation: Berea Church Road Improvements

Project Code		Project Length	1.28 miles
Project Type	Road Improvements	Cost per Mile	\$4.761 million
Project Status	Property Acquisition	Estimated Opening Date	June 1, 2022
Total Project Cost	\$6,094,356	Avg. Annual Daily Traffic	3,400 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project will reconstruct Berea Church Road from Truslow Road to Warrenton Road using VDOT 3R standards. Improvements will include improved shoulders, drainage and wider lanes. Bicycle accommodations will also be included in this project.

Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

Location:

Proposed improvements are planned from Truslow Road to Warrenton Road along Berea Church Road.

Relationship to Approved County Policy or Plan:

- The County's Comprehensive Plan calls for Berea Church Road to be improved to a 2-lane upgrade.
- Supports the Board of Supervisors Strategic Priority – Responsive Transportation System.

Analysis of Need:

To provide needed roadway safety improvements from Warrenton Road to Truslow Road. The project includes vertical profile and horizontal improvements for ride and safety. Drainage will be improved with new roadway ditches, culverts, and storm water management swales.

Transportation: Berea Church Road Improvements

Change or Reasons for Revisions:

FY2020: Project costs increased due to additional Right-of-Way impacts on residential properties (impacted parcels increased from 14 to 22) and increased construction costs associated with inflation. Additional cost was offset by additional funds from the Warrenton Road Service District.

Alternative:

Roadway stays in current condition.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	894,000	0	0	0	0	0	0	0	0	0	0
Property Acquisition	1,450,000	0	0	0	0	0	0	0	0	0	0
Construction / Project	0	2,234,781	1,515,575	0	0	0	0	0	0	0	0
Total	\$2,344,000	\$2,234,781	\$1,515,575	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Proffers	1,087,603	0	0	0	0	0	0	0	0	0	0
Service District	300,000	1,117,391	757,788	0	0	0	0	0	0	0	0
Revenue Sharing	956,397	1,117,391	757,788	0	0	0	0	0	0	0	0
Total	\$2,344,000	\$2,234,781	\$1,515,575	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Transportation: Courthouse Road and Route 1 Intersection Improvement

Project Code		Project Length	0.65 miles
Project Type	Road Improvements	Cost per Mile	\$19.967 million
Project Status	Property Acquisition	Est. Opening Date	June 1, 2024
Total Project Cost	\$14,884,567	Avg. Annual Daily Traffic	18,000 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

Project Description:

The Jefferson Davis Highway (RT 1) and Courthouse Road Intersection Improvement Project will widen approximately 0.65 miles of RT 1 to provide dedicated left-turn lanes onto Courthouse Road and Bells Hill/Hope Road. RT 1 will be improved to a 4-lane, divided roadway with a concrete median separating northbound and southbound traffic. Dedicated left-turn lanes will be added to RT 1 at Courthouse Road and the Bells Hill/Hope Road intersection to improve traffic signal function and reduce intersection delays. Eastbound Courthouse Road will be widened to provide a dedicated left-turn, right-turn, and through lane. Westbound Courthouse Road will be re-stripped to provide a dedicated left-turn, right-turn, and through lane. An 8 foot sidewalk will also be installed along both sides of RT 1.

Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

Location:

Proposed improvements are planned at the intersection of Courthouse Road and RT 1.

Relationship to Approved County Policy or Plan:

- On September 15, 2015, the Board of Supervisors (BOS) supported the submission of an application to compete for VDOT's Smart Scale funding program.
- Supports the BOS Strategic Priority – Responsive Transportation System.

Transportation: Courthouse Road and Route 1 Intersection Improvement

Analysis of Need:

The intersection of Courthouse Road and RT 1 has a “Level of Service” of "F" during peak morning and afternoon traffic periods. Furthermore, RT 1 serves as the primary alternate route for when backups occur on I-95.

Change or Reasons for Revisions:

Project cost has increased due to increase in Right-of-Way acquisition costs (7-Eleven total take) and increase in construction costs associated with inflation. This cost increase has been offset through the addition of proffer funds.

Alternative:

Roadway stays in current condition.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	950,576	0	0	0	0	0	0	0	0	0	0
Property Acquisition	4,440,000	0	0	0	0	0	0	0	0	0	0
Construction / Project	0	3,963,029	8,866,301	0	0	0	0	0	0	0	0
Total	\$5,390,576	\$3,963,029	\$8,866,301	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Transportation: Courthouse Road and Route 1 Intersection Improvement

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Use of Prior Year Fund Balance Transportation	2,371,544	3,213,029	0	0	0	0	0	0	0	0	0
Proffers	323,744	0	878,486	0	0	0	0	0	0	0	0
Smart Scale	0	0	4,646,300	0	0	0	0	0	0	0	0
Revenue Sharing	2,695,288	750,000	3,341,515	0	0	0	0	0	0	0	0
Total	\$5,390,576	\$3,963,029	\$8,866,301	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Transportation: Route 1 and Potomac Creek Drive

Project Code		Project Length	0.32 miles
Project Type	Road Improvements	Cost per Mile	\$5.625 million
Project Status	Design/Engineering	Estimated Opening Date	June 1, 2021
Total Project Cost	\$1,800,000	Avg. Annual Daily Traffic	18,000 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

Project Description:

Minor widening of Jefferson Davis Highway (RT 1) southbound for approximately 1,600 feet to accommodate a dedicated left turn lane onto Potomac Creek Drive. The project will restripe existing and new pavement to maintain two through lanes southbound. The project will mill and overlay existing pavement as part of the project.

Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

Location:

Proposed improvements are planned at the intersection of RT 1 and Potomac Creek Drive.

Relationship to Approved County Policy or Plan:

- On September 15, 2015, the Board of Supervisors (BOS) supported the submission of an application to compete for VDOT's Smart Scale funding program.
- Supports the BOS Strategic Priority – Responsive Transportation System.

Transportation: Route 1 and Potomac Creek Drive

Analysis of Need:

This project will reduce accidents by adding a 200 foot left turn lane by partially widening RT 1 for approximately 1,600 feet to separate left turn movements from the main southbound through lanes. It will also help provide a steady flow of traffic by maintaining two through lanes; reducing congestion and delays.

Alternative:

Roadway stays in current condition.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	300,000	0	0	0	0	0	0	0	0	0	0
Construction / Project	0	500,000	1,000,000	0	0	0	0	0	0	0	0
Total	\$300,000	\$500,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
CMAQ - Congestion Mitigation and Air Quality	0	154,000	361,000	0	0	0	0	0	0	0	0
Smart Scale	300,000	346,000	639,000	0	0	0	0	0	0	0	0
Total	\$300,000	\$500,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Transportation: Technology Center Drive Improvements

Project Code		Project Length	0.5 miles
Project Type	Road Improvements	Cost per Mile	\$5.200 million
Project Status	Planning	Est. Opening Date	June 1, 2029
Total Project Cost	\$2,600,000	Avg. Annual Daily Traffic	0 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

Project Description:

Road construction that will serve the Technology and Research Park within the Quantico Corporate Center which will include improvements to the intersection with Telegraph Road.

Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

Location:

Proposed improvements are planned from where Corporate Drive currently terminates to the intersection of Telegraph Road.

Relationship to Approved County Policy or Plan:

- The project promotes economic development opportunities.
- Supports the Board of Supervisors Strategic Priority – Responsive Transportation System.

Analysis of Need:

This is an Economic Development opportunity for the County.

Transportation: Technology Center Drive Improvements

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	0	0	0	0	0	0	0	0	0	25,000	0
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,000	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Use of Prior Year Fund Balance Transportation	0	0	0	0	0	0	0	0	0	25,000	0
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,000	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Transportation: Telegraph Road, Woodstock Lane, and Route 1 Safety Improvements

Project Code		Project Length	0.57 miles
Project Type	Road Improvements	Cost per Mile	\$15.439 million
Project Status	Design/Engineering	Est. Opening Date	June 1, 2022
Total Project Cost	\$8,800,000	Avg. Annual Daily Traffic	28,000 vehicles
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project will consist of performing lane widening at the intersections of Telegraph Road, Woodstock Lane, and Jefferson Davis Highway (RT 1). Some widening will be on RT 1 southbound to provide for a dedicated, slotted left turn lane onto Woodstock Lane by installing raised medians to prevent lefts out from connecting roadways including onto RT 1 southbound from Woodstock Lane. A future traffic signal at this intersection would be optional (cost of signal not included in submitted project estimate). This project will consist of a right turn lane northbound RT 1 onto Woodstock Lane. This project will realign the intersection of Woodstock Lane and RT 1 to accept the left turn movements from southbound RT 1. This project will allow right turns only from Woodstock Lane onto RT 1 northbound. The Guinns Lane connection/entrance directly across this intersection on the southbound side of RT 1 is proposed as a right-in /right-out. At the southern intersection of RT 1 and Telegraph Road, this project will realign Telegraph Road for a better approach to a signalized intersection. A traffic signal will be installed at this location. The project will provide for two dedicated left turn lanes from Telegraph Road onto southbound RT 1 and one dedicated right turn lane onto northbound RT 1. There will be minor widening on RT 1 southbound to accept dual left turns. There will be construction of a northbound right turn lane on RT 1 onto Telegraph Road. Installation of a small raised median on Telegraph Road is to preclude left turns from RT 1 southbound.

Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

Location:

Proposed improvements are planned at the intersections of Telegraph Road, Woodstock Lane, and RT 1.

Transportation: Telegraph Road, Woodstock Lane, and Route 1 Safety Improvements

Relationship to Approved County Policy or Plan:

- On September 15, 2015, the Board of Supervisors (BOS) supported the submission of an application to compete for VDOT's Smart Scale funding program.
- Supports the BOS Strategic Priority – Responsive Transportation System.

Analysis of Need:

VDOT prepared an Intersection Safety Study in 2014 for these two intersections which identified the need for improvements. The improvements will reduce accidents along this stretch of RT 1. It will also help provide a steady flow of traffic by maintaining two through lanes reducing congestion and delays.

Change or Reasons for Revisions:

FY2020: The project scope has changed, but the project remains fully funded.

Alternative:

Roadway stays in current condition.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	1,100,000	0	0	0	0	0	0	0	0	0	0
Construction / Project	0	3,200,000	4,500,000	0	0	0	0	0	0	0	0
Total	\$1,100,000	\$3,200,000	\$4,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Current Revenue - County	1,100,000	0	0	0	0	0	0	0	0	0	0
Smart Scale	0	3,200,000	4,500,000	0	0	0	0	0	0	0	0
Total	\$1,100,000	\$3,200,000	\$4,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Transportation: Flatford Road Sidewalk

Project Code		Project Length	1,200 feet
Project Type	Trails and Sidewalks	Cost per Linear Foot	\$542 per foot
Project Status	Planning	Est. Opening Date	June 1, 2022
Total Project Cost	\$650,000		
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

Project Description:

The Project will consist of a five-foot wide sidewalk on the east side of Flatford Road, with a crosswalk to be installed just north of the entrance to Horizons Church to help safely connect pedestrians to the west side of Flatford Road. The proposed sidewalk will then extend to Walpole Street, with another crosswalk installed on Winding Creek Road to connect with the existing sidewalk.

Operating Impact Summary:

All sidewalk improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

Location:

Proposed improvements are from the terminus of Parkway Boulevard to the terminus of Walpole Street.

Relationship to Approved County Policy or Plan:

- The adopted 2016-2036 Comprehensive Plan supports this project.
- The County's Bicycle and Pedestrian Plan calls for the development of a safe, comprehensive and connected regional network of on-road and off-road bicycle and pedestrian corridors and related facilities.
- Supports the Board of Supervisors Strategic Priority – Responsive Transportation System.

Transportation: Flatford Road Sidewalk

Analysis of Need:

Constructing this “missing link” will safely connect pedestrians to public facilities including Rodney Thompson Middle School, Park Ridge Elementary School, and John M. Porter Library.

Alternative:

No sidewalk will exist at this location.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	91,000	0	0	0	0	0	0	0	0	0	0
Construction / Project	0	39,130	519,870	0	0	0	0	0	0	0	0
Total Project Cost	\$91,000	\$39,130	\$519,870	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Service District	18,200	7,826	103,974	0	0	0	0	0	0	0	0
TAP - Transportation Alternative Program	72,800	31,304	415,896	0	0	0	0	0	0	0	0
Total	\$91,000	\$39,130	\$519,870	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Transportation: Onville Road Sidewalk

Project Code		Project Length	1,600 feet
Project Type	Trails and Sidewalks	Cost per Linear Foot	\$655 per foot
Project Status	Design/Engineering	Est. Opening Date	May 1, 2023
Total Project Cost	\$1,047,631		
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

Project Description:

The proposed sidewalk will connect existing sidewalks along Onville Road. It will be constructed as a five foot wide, approximately 1,100 linear foot long concrete sidewalk.

Operating Impact Summary:

All sidewalk improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

Location:

Proposed improvements are from Garrison Woods Drive to Worth Avenue.

Relationship to Approved County Policy or Plan:

- The adopted 2016-2036 Comprehensive Plan supports this project.
- The County's Bicycle and Pedestrian Plan calls for the development of a safe, comprehensive and connected regional network of on-road and off-road bicycle and pedestrian corridors and related facilities.
- Supports the Board of Supervisors Strategic Priority – Responsive Transportation System.

Analysis of Need:

Constructing this "missing link" from Worth Avenue to Garrison Woods Drive will provide for safer pedestrian movement along a busy roadway that is frequently used by pedestrians traveling between their homes and nearby commercial areas along Garrisonville Road.

Transportation: Onville Road Sidewalk

Change or Reasons for Revisions:

FY2020: Initial estimates for the project of \$550,000 have increased due to the additional length of sidewalk, increasing construction costs, and right of way estimates.

Alternative:

No sidewalk will exist at this location.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	186,000	0	0	0	0	0	0	0	0	0	0
Property Acquisition	0	115,000	0	0	0	0	0	0	0	0	0
Construction / Project	0	0	746,631	0	0	0	0	0	0	0	0
Total	\$186,000	\$115,000	\$746,631	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Service District	37,200	23,000	149,326	0	0	0	0	0	0	0	0
TAP - Transportation Alternative Program	148,800	92,000	597,305	0	0	0	0	0	0	0	\$0
Total	\$186,000	\$115,000	\$746,631	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Transportation: Wedge Widening/Safety Improvements

Project Code		Project Length	Varies
Project Type	Road Improvements	Cost per Mile	\$100K
Project Status	Construction	Est. Opening Date	N/A
Total Project Cost	\$912,556	Avg. Annual Daily Traffic	Varies
Functional Area	Transportation		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project will provide annual funding to VDOT to trench/wedge widen the sub-standard shoulders of existing roadways. Each year, VDOT identifies County roadways in need of maintenance paving and/or resurfacing. In conjunction with the scheduled VDOT maintenance paving, these funds will be utilized by VDOT to widen and pave the roadway shoulders while they are working on re-paving the road. Improvements will include improved roadway surface and widened, paved shoulders.

Operating Impact Summary:

All roadway improvements are done within VDOT right-of-way and therefore the maintenance of this roadway will continue to be VDOT's responsibility.

Location:

Proposed improvements are at two intersections of Mountain View Road, Stefaniga Road, and Lightfoot Drive.

Relationship to Approved County Policy or Plan:

- Supports the Board of Supervisors Strategic Priority – Responsive Transportation System.

Transportation: Wedge Widening/Safety Improvements

Analysis of Need:

This project will increase the safety of County roadways and reduce vehicle run-offs. The project includes widened and paved shoulders along with a refreshed roadway surface.

Change or Reasons for Review:

FY2020: This is a new initiative to widen the existing shoulders on a variety of roadways in order to increase the safety of the roads and reduce vehicle run-offs. Project costs are estimated at \$100,000 for every lane mile of trench/wedge widening.

Alternative:

Roadway stays in current condition.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	0	912,556	912,556	912,556	912,556	912,556	912,556	912,556	912,556	912,556	912,556
Total Project Cost	\$0	\$912,556	\$912,556	\$912,556	\$912,556	\$912,556	\$912,556	\$912,556	\$912,556	\$912,556	\$912,556

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Fuel Tax (CROC)	0	912,556	912,556	912,556	912,556	912,556	912,556	912,556	912,556	912,556	912,556
Total	\$0	\$912,556	\$912,556	\$912,556	\$912,556	\$912,556	\$912,556	\$912,556	\$912,556	\$912,556	\$912,556

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities

Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Total Projected Uses (Included PY Funding)
Water	1,772,200	8,542,000	6,040,000	8,175,000	10,635,000	3,925,200	9,206,800	11,700,000	7,542,000	3,643,000	3,100,000	39,089,400	35,191,800	74,281,200
Waste Water	2,822,000	10,305,500	12,026,860	12,500,800	17,900,700	3,624,600	6,371,800	6,897,100	2,516,000	4,002,000	2,746,000	59,180,460	22,532,900	81,713,360
Other	2,697,000	2,349,200	1,028,700	878,200	977,800	3,015,300	820,500	555,200	1,008,300	585,300	585,000	10,946,200	3,554,300	14,500,500
Total Expenditures	\$7,291,200	\$21,196,700	\$19,095,560	\$21,554,000	\$29,513,500	\$10,565,100	\$16,399,100	\$19,152,300	\$11,066,300	\$8,230,300	\$6,431,000	\$109,216,060	\$61,279,000	\$170,495,060

Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Total Projected Uses (Included PY Funding)
Bond Proceeds	0	0	8,800,000	0	10,440,000	0	0	0	0	0	0	19,240,000	0	19,240,000
Pro Rata	225,000	6,416,750	1,729,500	7,212,500	5,434,500	270,200	1,780,750	620,550	462,000	2,249,000	0	21,288,450	5,112,300	26,400,750
Availabilities	650,000	250,000	250,000	4,219,650	2,676,850	1,245,000	545,000	2,155,000	450,000	500,000	550,000	9,291,500	4,200,000	13,491,500
User Fees	6,416,200	14,529,950	8,316,060	10,121,850	10,962,150	8,779,900	11,673,350	16,376,750	10,154,300	5,481,300	5,881,300	59,126,110	49,567,000	108,693,110
Regional Contribution	0	0	0	0	0	270,000	2,400,000	0	0	0		270,000	2,400,000	2,670,000
Total Revenues	\$7,291,200	\$21,196,700	\$19,095,560	\$21,554,000	\$29,513,500	\$10,565,100	\$16,399,100	\$19,152,300	\$11,066,300	\$8,230,300	\$6,431,300	\$109,216,060	\$61,279,300	\$170,495,360

Water Project Expenditures:	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Total Projected Uses (Included PY Funding)
342-01 24" Main from Olde Forge Drive to Cambridge Street	0	0	0	6,000,000	0	0	0	0	0	0	0	6,000,000	0	6,000,000
342-02 24" Main from Cambridge Street to Cool Springs Road	0	0	0	0	5,000,000	0	0	0	0	0	0	5,000,000	0	5,000,000
342-06 - 24" Main from Truslow Road/I-95 to Enon Road Water Tank	0	300,000	3,060,000	0	0	0	0	0	0	0	0	3,360,000	0	3,360,000
342-15 24" Main from Enon Road Tank to Centerport Parkway	100,000	4,000,000	0	0	0	0	0	0	0	0	0	4,100,000	0	4,100,000
410-300 Construct PRV between 480/410 Zone along Warrenton Road near Sanford Drive	0	81,000	0	0	0	0	0	0	0	0	0	81,000	0	81,000
410-301: Construct PRV between 480/410 Zone along CVA Parkway near Sanford Drive	0	81,000	0	0	0	0	0	0	0	0	0	81,000	0	81,000
433-05 16" Main along Courthouse Road from PS at 433/370 Zone to Rollinswood Lane	0	0	0	0	0	0	0	0	0	793,000	0	0	793,000	793,000
472-100 - Construct 0.5 Million Gallon Storage Tank along Garrisonville Road near Ripley Road	0	0	0	0	0	145,200	1,306,800	0	0	0	0	145,200	1,306,800	1,452,000
472-200 Construct 0.9 MGD pumping station along Mountain View Road near Lightfoot Road	0	0	0	0	0	0	0	0	292,000	0	0	0	292,000	292,000
480-01 Construct 16" main from the existing 16" main at Celebrate VA Tank to the existing 12" main at Jewett Lane and Celebrate Virginia Parkway	0	0	0	0	418,000	0	0	0	0	0	0	418,000	0	418,000
480-02 Construct 16" main to connect existing 12" main at CVA Parkway under US 17 to existing 12" main at Warrenton Road and International Parkway	0	0	0	0	0	535,000	0	0	0	0	0	535,000	0	535,000
Hydrant Valves Replacement Program	100,000	100,000	100,000	100,000	100,000	150,000	200,000	250,000	300,000	350,000	400,000	650,000	1,500,000	2,150,000
Lake Mooney Additional Modules for Interconnection	0	0	0	0	0	945,000	0	0	0	0	0	945,000	0	945,000
Lake Mooney Permanganate	0	0	350,000	0	0	0	0	5,000,000	4,650,000	0	0	350,000	9,650,000	10,000,000
LMWTP -002 Lake Mooney Thickner Tank and Equipment	0	0	800,000	0	0	0	0	0	0	0	0	800,000	0	800,000
LMWTP-001 Lake Mooney WTP - Install Second Centrifuge	0	700,000	0	0	0	0	0	0	0	0	0	700,000	0	700,000
LMWTP-005 - Lake Mooney WTP Water Treatment Optimization Studies	0	500,000	0	0	0	0	0	0	0	0	0	500,000	0	500,000
LMWTP-007 - Lake Mooney WTP Replace membrane cassettes	0	0	0	0	0	0	1,500,000	0	0	0	0	0	1,500,000	1,500,000
SLWTP-001 Smith Lake WTP - Filter Repairs	0	0	0	0	0	0	300,000	4,350,000	0	0	0	0	4,650,000	4,650,000
SLWTP-002 Smith Lake WTP - Facility Upgrades	0	0	0	400,000	2,700,000	0	0	0	0	0	0	3,100,000	0	3,100,000
SLWTP-003 Smith Lake WTP - Water Treatment optimization Studies	0	100,000	0	0	0	0	0	0	0	0	0	100,000	0	100,000
Redundant Gate Replacement for Abel Lake and Smith Lake	0	80,000	80,000	0	0	0	0	0	0	0	0	160,000	0	160,000
Regional Water Interconnection	0	0	0	0	0	450,000	4,000,000	0	0	0	0	450,000	4,000,000	4,450,000
Smith Lake Pump Station Replacement	0	1,200,000	0	0	0	0	0	0	0	0	0	1,200,000	0	1,200,000

Water Project Expenditures:	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Total Projected Uses (Included PY Funding)
Tank Removal	0	0	100,000	0	0	0	0	0	0	0	0	100,000	0	100,000
Water Distribution Rehab - Neighborhood Systems	500,000	500,000	500,000	500,000	500,000	550,000	600,000	650,000	700,000	750,000	800,000	3,050,000	3,500,000	6,550,000
Water Distribution Rehab - Small Water Projects	322,200	150,000	300,000	250,000	250,000	300,000	350,000	400,000	450,000	500,000	550,000	1,572,200	2,250,000	3,822,200
Water Distribution Rehab - Transmission Lines Replacement	500,000	500,000	500,000	500,000	500,000	550,000	600,000	650,000	700,000	750,000	800,000	3,050,000	3,500,000	6,550,000
310-10 Construct 24" main from I-95 to 12" main along Jefferson Davis Highway near Sunnyside Drive	0	0	0	175,000	917,000	0	0	0	0	0	0	1,092,000	0	1,092,000
Water Extension Projects	250,000	250,000	250,000	250,000	250,000	300,000	350,000	400,000	450,000	500,000	550,000	1,550,000	2,250,000	3,800,000
Total	\$1,772,200	\$8,542,000	\$6,040,000	\$8,175,000	\$10,635,000	\$3,925,200	\$9,206,800	\$11,700,000	\$7,542,000	\$3,643,000	\$3,100,000	\$39,089,400	\$35,191,800	\$74,281,200

Utilities: Water Main Installation: Olde Forge Drive to Cambridge Street

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Mid 2023
Total Project Cost	\$6,000,000	Student Capacity	
Functional Area	Utilities	Length of Pipeline	8,200'
Total Debt Service		Construction Cost per LF.	\$730
Full Year Operating Impact			

Project Description:

This project (342-01) involves design and construction of a 24" water main from Olde Forge Drive to Cambridge Street.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed from Old Forge Drive through undeveloped property passing near Belmont; then connects with existing water distribution lines near Cambridge Street.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

This transmission main is necessary to convey water to the southeastern portion of the 342 Pressure Zone as water demands increase through the planning period.

Utilities: Water Main Installation: Olde Forge Drive to Cambridge Street

Change or Reasons for Revisions:

This project has been reconfigured to better reflect the intent and content of the Adopted 2018 Water and Sewer Master Plan.

Alternative:

If the project is not constructed there will be insufficient water transmission capability.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	0	0	0	6,000,000	0	0	0	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$6,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Pro Rata	0	0	0	6,000,000	0	0	0	0	0	0	0
Total	\$0	\$0	\$0	\$6,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Water Main Installation: Cambridge Street to Cool Springs Road

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Mid 2024
Total Project Cost	\$5,000,000	Student Capacity	
Functional Area	Utilities	Length of Pipeline	7,100'
Total Debt Service		Construction Cost per LF.	\$700
Full Year Operating Impact			

Project Description:

This project (342-02) involves design and construction of a 24" water main from Cambridge Street to Cools Springs Road.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed from Cambridge Street along the Rappahannock River, through St. Claire Brooks Park to Cool Springs Road.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

This transmission main is necessary to convey water to the southeastern portion of the 342 Pressure Zone as water demands increase through the planning period.

Utilities: Water Main Installation: Cambridge Street to Cool Springs Road

Change or Reasons for Revisions:

This project has been reconfigured to better reflect the intent and content of the Adopted 2018 Water and Sewer Master Plan.

Alternative:

If the project is not constructed there will be insufficient water transmission capability.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	0	0	0	0	5,000,000	0	0	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$5,000,000	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Pro Rata	0	0	0	0	5,000,000	0	0	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$5,000,000	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Water Main Installation: Truslow Road to Enon Road

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2021
Total Project Cost	\$3,360,000	Student Capacity	
Functional Area	Utilities	Length of Pipeline	8,400'
Total Debt Service		Construction Cost per LF.	\$400
Full Year Operating Impact			

Project Description:

This project (342-06) involves design and construction of a 24" main from Truslow Road /I-95 to the Enon Road Water Storage Tank.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed from the northern end of Truslow/I-95 and either along Truslow Road or through undeveloped land to the Enon Road Water Storage Tank (342-101).

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Utilities: Water Main Installation: Truslow Road to Enon Road

Analysis of Need:

The purpose of the project is to convey flows from the 30" main connecting Lake Mooney WTP to the northern 342 Pressure Zone. This project is in conjunction with the Enon Road Elevated Water Storage Tank (342-101) and will serve the 342 Pressure Zone and the expected/desired growth in the Centerport/Airport Area.

Alternative:

If the project is not constructed there will be insufficient water transmission capability.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	300,000	0	0	0	0	0	0	0	0	0
Construction / Project	0	0	3,060,000	0	0	\$0	\$0	\$0	\$0	\$0	\$0
Total Project Cost	\$0	\$300,000	\$3,060,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Pro Rata	0	150,000	1,530,000	0	0	0	0	0	0	0	0
User Fees	0	150,000	1,530,000	0	0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$0	\$300,000	\$3,060,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Water Main Installation: Enon Road Tank to Centerport Parkway

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2021
Total Project Cost	\$4,100,000	Student Capacity	
Functional Area	Utilities	Length of Pipeline	8,800'
Total Debt Service		Construction Cost per LF.	\$466
Full Year Operating Impact			

Project Description:

This project (342-15) involves design and construction of a 24 inch main from the Enon Road Water Storage Tank to Centerport Parkway.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed from the Enon Road Elevated Water Storage Tank, along Hulls Chapel Road, then along the Morewood Lane, through Lake Estates to Mountain View Road/Centerport Parkway.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Utilities: Water Main Installation: Enon Road Tank to Centerport Parkway

Analysis of Need:

This transmission main is necessary to convey water to the northern portion of the 342 Pressure Zone as water demands increase through the planning period. This transmission main will serve the pressure zone as well as convey emergency water needed in the northern part of the County in the event of system failures. This transmission main is also critical for the expected and desired growth in the Centerport/Airport Area.

Change or Reasons for Revisions:

This project was changed from 342-15, 16 to 342-15 as the Adopted Water and Sewer Master Plan combined them into one project to be called 342-15.

Alternative:

If the project is not constructed there will be insufficient water transmission capability.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	100,000	0	0	0	0	0	0	0	0	0	0
Construction / Project	0	4,000,000	0	0	0	0	0	0	0	0	0
Total Project Cost	\$100,000	\$4,000,00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Pro Rata	100,000	4,000,000	0	0	0	0	0	0	0	0	0
Total	\$100,000	\$4,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Debt Service	0	0	0	0	0	0	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: PRV Construction: Warrenton Road and South Gateway Drive

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2019
Total Project Cost	\$81,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project (410-300) includes the installation of a pressure reducing valve (PRV).

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The valve will be installed on an existing 12 inch main at Warrenton Road and South Gateway Drive.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan and is part of the Board of Supervisors (BOS) proposed Healthy Growth priority.

Utilities: PRV Construction: Warrenton Road and South Gateway Drive

Analysis of Need:

This pressure reducing valve will be the northern boundary for the 410 Pressure Zone. This pressure zone is being expanded to reduce residual pressures in the southeastern quadrant of the I-95 and Warrenton Road interchange. The elevations in this area are at a lower elevation than the general elevation of the 480 Pressure Zone.

Alternative:

If the pressure reducing valve is not installed, customers and our local system will continue to have high pressure issues.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	0	81,000	0	0	0	0	0	0	0	0	0
Total Project Cost	\$0	\$81,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	81,000	0	0	0	0	0	0	0	0	0	0
Total	\$0	\$81,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: PRV Construction: Celebrate Virginia Parkway and Sanford Drive

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2019
Total Project Cost	\$81,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project (410-301) includes the installation of a pressure reducing valve (PRV).

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The valve will be installed on an existing 12 inch main at the intersection of Celebrate Virginia Parkway and Sanford Drive.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Utilities: PRV Construction: Celebrate Virginia Parkway and Sanford Drive

Analysis of Need:

This pressure reducing valve will be in the western boundary for the 410 Pressure Zone. This pressure zone is being expanded to reduce residual pressures in the southeastern quadrant of the I-95 and Warrenton Road interchange. The elevations in this area are at a lower elevation than the general elevation of the 480 Pressure Zone.

Alternative:

If the pressure reducing valve is not installed, customers and our local system will continue to have high pressure issues.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	0	81,000	0	0	0	0	0	0	0	0	0
Total Project Cost	\$0	\$81,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2028	FY2029
User Fees	0	81,000	0	0	0	0	0	0	0	0	0	0
Total	\$0	\$81,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Water Main Construction: Courthouse Road and Rollinswood Lane

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	2029
Total Project Cost	\$793,000	Student Capacity	
Functional Area	Utilities	Length of Pipeline	2,720'
Total Debt Service		Construction Cost per LF.	\$292
Full Year Operating Impact			

Project Description:

This project (433-05) includes design and construction of a 16 inch water main along Courthouse Road from the pump station located at the 433/370N Zone boundary to Rollinswood Lane.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed along Courthouse Road from the pump station located at the 433/370 Pressure Zone Boundary and connecting to an existing 12 inch water main at Rollinswood Lane.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Utilities: Water Main Construction: Courthouse Road and Rollinswood Lane

Analysis of Need:

The purpose of the project is to provide flow from the pumping station to the 12 inch mains on Courthouse Road, Danielle Way, and Ramoth Church Road. This pumping station will provide a second source of supply to the 433 Zone and utilize the transmission system in the southern portion of the 433 Zone to deliver flow to the customers in the southern portion of the 433 Zone and to the 472 Zone. The timing for construction of this main will be concurrent with the 433 Zone Pumping Station (433-200).

Alternative:

If the project is not constructed there will be insufficient water transmission capability.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	0	0	0	0	0	0	135,000	0
Construction / Project	0	0	0	0	0	0	0	0	0	658,000	0
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$793,000	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Pro Rata	0	0	0	0	0	0	0	0	0	793,000	0
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$793,000	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Water Tank Construction: Garrisonville Road

Project Description:

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2025
Total Project Cost	\$1,452,000	Student Capacity	
Functional Area	Utilities	Volume of Tank	500,000 Gal
Total Debt Service		Construction Cost per Gallon	\$2.90
Full Year Operating Impact			

This project (472-100) includes design and construction of a 500,000 gallon elevated water storage tank.

Operating Impact Summary:

This project has minimal operating costs such as electricity and fuel for the emergency generator. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed along Garrisonville Road in the area of Ripley Lane.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan

Analysis of Need:

This tank will provide water storage to the northern portion of the 472 Pressure Zone.

Alternative:

If the project is not constructed there will be insufficient water transmission capability.

Utilities: Water Tank Construction: Garrisonville Road

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	0	0	145,200	0	0	0	0	0
Construction / Project	0	0	0	0	0	0	1,306,800	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$145,200	\$1,306,800	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Pro Rata	0	0	0	0	0	145,200	1,306,800	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$145,200	\$1,306,800	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Pump Station Construction: Mountain View Road

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2027
Total Project Cost	\$292,000	Student Capacity	
Functional Area	Utilities	Volume of Pumping Station	0.9 MGD
Total Debt Service		Construction Cost per MGD	\$325,000
Full Year Operating Impact			

Project Description:

This project (472-200) includes the design and construction of a 0.9 million gallons a day (MGD) water booster pump station.

Operating Impact Summary:

This project has minimal operating costs such as electricity and fuel for the emergency generator. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed along Mountain View Road in the area of Lightfoot Road.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Utilities: Pump Station Construction: Mountain View Road

Analysis of Need:

This booster pump station will provide water into elevated storage areas in the northern portion of the 472 Pressure Zone. This is needed as demand rises in the pressure zone.

Alternative:

If the project is not constructed there will be insufficient water transmission capability.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	0	0	0	0	0	30,000	0	0
Construction / Project	0	0	0	0	0	0	0	0	262,000	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$292,000	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Pro Rata	0	0	0	0	0	0	0	0	292,000	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$292,000	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Water Main Construction: Celebrate Virginia Tank to Jewett Lane

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2024
Total Project Cost	\$418,000	Student Capacity	
Functional Area	Utilities	Length of Pipeline	600'
Total Debt Service		Construction Cost per LF.	\$697
Full Year Operating Impact			

Project Description:

This project (480-01) includes the design and construction of 600 feet of a 16 inch water main.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed from an existing 16 inch water main at Celebrate Virginia Water Storage Tank along Jewett Lane to an existing 12 inch water main at Celebrate Virginia Parkway.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

This water line will provide additional flow and pressure as demands along Warrenton Road increases.

Utilities: Water Main Construction: Celebrate Virginia Tank to Jewett Lane

Alternative:

If the project is not constructed there will be insufficient water transmission capability.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	0	0	0	0	418,000	0	0	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$418,000	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	0	0	0	418,000	0	0	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$418,000	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Water Main Construction: Celebrate Virginia Parkway and Warrenton Road to International Parkway

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2024
Total Project Cost	\$535,000	Student Capacity	
Functional Area	Utilities	Length of Pipeline	500'
Total Debt Service		Construction Cost per LF.	\$1,070
Full Year Operating Impact			

Project Description:

This project (480-02) includes the design and construction of 500 feet of a 16 inch water main.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed from an existing 12 inch main at Celebrate Virginia Parkway and Warrenton Road, under Warrenton Road, and connect to an existing 12 inch main at International Parkway.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Utilities: Water Main Construction: Celebrate Virginia Parkway and Warrenton Road to International Parkway

Analysis of Need:

This water line will provide additional flow and pressure as demands along Warrenton Road increases.

Alternative:

If the project is not constructed there will be insufficient water transmission capability.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	0	0	0	0	0	535,000	0	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$535,000	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	0	0	0	0	535,000	0	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$535,000	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Fire Hydrant and Valve Replacement Program

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$100,000	Student Capacity	
Functional Area	Utilities	Number of FH's/Valves	Varies
Total Debt Service		Construction Cost per Unit	Varies
Full Year Operating Impact			

Project Description:

This project includes the programmatic replacement of defective, obsolete, and failing fire hydrants and in-line valves in the general distribution system.

Operating Impact Summary:

The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

Location:

The project focuses on fire hydrants and in-line valves in the general distribution system.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each fiscal year of the Utilities Division's Capital Improvement Program as a part of the Board of Supervisors proposed Healthy Growth priority.

Utilities: Fire Hydrant and Valve Replacement Program

Analysis of Need:

This annual program is dedicated to identifying and replacing defective, obsolete, and failing fire hydrants and in-line valves. These items are critical in the overall operation of the system and are used often for a variety of operational needs. When these items are needed and it is not known that they are non-functioning, it burdens the Field Crews during emergencies to resort to alternative plans on very short notice. Fire hydrants are critical for fire suppression and valves are most critical for isolating sections of pipe to be replaced in the event of a break. This work is intended to be performed by the Utilities Division Field Crews.

Alternative:

Non-functioning valves and fire hydrants will remain a part of the system.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	100,000	100,000	100,000	100,000	100,000	150,000	200,000	250,000	300,000	350,000	400,000
Total Project Cost	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$150,000	\$200,000	\$250,000	\$300,000	\$350,000	\$400,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	100,000	100,000	100,000	100,000	100,000	150,000	200,000	250,000	300,000	350,000	400,000
Total	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$150,000	\$200,000	\$250,000	\$300,000	\$350,000	\$400,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Lake Mooney: Additional Modules for Interconnection

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2025
Total Project Cost	\$945,000	Student Capacity	
Functional Area	Utilities	Number of Modules	5 MGD
Total Debt Service		Construction Cost per Mod.	\$189,000
Full Year Operating Impact			

Project Description:

This project includes purchase and installation of five million gallons a day (MGD) of additional water treatment modules at the Lake Mooney Water Treatment Facility.

Operating Impact Summary:

These modules have minimal operating costs. The modules have a useful life of approximately ten years. The replacement costs will be factored into the appropriate yearly budget cycle or will be included in future Capital Improvement Programs.

Location:

Lake Mooney Water Treatment Facility.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program.

Utilities: Lake Mooney: Additional Modules for Interconnection

Analysis of Need:

These modules will provide water treatment capacity at the Lake Mooney Water Treatment Facility as part of the Regional Water Interconnection between Stafford County, Spotsylvania County, and the City of Fredericksburg.

Alternative:

There will continue to be no regional interconnection.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Contingency	0	0	0	0	0	945,000	0	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$945,000	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Availabilities	0	0	0	0	0	945,000	0	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$945,000	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Lake Mooney: Permanganate

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2025
Total Project Cost	\$1,452,000	Student Capacity	
Functional Area	Utilities	Volume of Tank	500,000 Gal
Total Debt Service		Construction Cost per Gallon	\$2.90
Full Year Operating Impact			

Project Description:

This project consists of the installation of a manganese removal system in addition to the permanganate contact process currently in place at the Lake Mooney Water Treatment Facility.

Operating Impact Summary:

This project has minimal operating costs such as electricity, periodic maintenance, and chemicals. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed at the Lake Mooney Water Treatment Facility.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and embodies the Board of Supervisors proposed Healthy Growth priority.

Utilities: Lake Mooney: Permanganate

Analysis of Need:

This additional equipment at a new facility is due to the existing chemical make-up of the raw water in the new reservoir. Manganese is a naturally occurring element and is currently removed in the water treatment process, but due to the amount, additional treatment capacity is necessary. This process study and equipment cost is a place-holder and will allow the installation upon complete analysis and recommendations by the consulting engineers and staff.

Alternative:

The Lake Mooney Water Treatment Facility will not have the ability to efficiently treat spiked levels of manganese.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	0	0	350,000	0	0	0	0	5,000,000	4,650,000	0	0
Total Project Cost	\$0	\$0	\$350,000	\$0	\$0	\$0	\$0	\$5,000,000	\$4,650,000	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	0	350,000	0	0	0	0	5,000,000	4,650,00	0	0
Total	\$0	\$0	\$350,000	\$0	\$0	\$0	\$0	\$5,000,000	\$4,650,00	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Installation: Lake Mooney Water Treatment Plant

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2022
Total Project Cost	\$800,000	Student Capacity	
Functional Area	Utilities	Volume of Tank	235,000 Gal
Total Debt Service		Construction Cost per Gallon	\$3.40
Full Year Operating Impact			

Project Description:

This project (LMWTP-002) includes the design and construction of a 235,000 gallon sludge thickener storage tank.

Operating Impact Summary:

This project has minimal operating costs. This second thickener will not increase operating costs as both centrifuges will not be operated at the same time.

Location:

The project will be constructed at the Lake Mooney Water Treatment Plant.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

This additional sludge thickener tank will provide the ability for maintenance on the primary sludge thickener tank and equipment. During the initial design of the Lake Mooney Water Treatment Plant, a value engineering exercise eliminated the second sludge thickener tank. This decision was based on adding the additional tank within 5 to 10 years after the facility begins to operate.

Utilities: Installation: Lake Mooney Water Treatment Plant

Alternative:

If the single thickener is taken offline for maintenance, the plant will have to be shut down. The Lake Mooney Water Treatment Plant is a 24-hour facility and taking the plant off line is risky.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2028
Construction/Project	0	0	800,000	0	0	0	0	0	0	0	0
Total	\$0	\$0	\$800,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Bond Proceeds	0	0	785,140	0	0	0	0	0	0	0	0
User Fees	0	0	14,860	0	0	0	0	0	0	0	0
Total	\$0	\$0	\$800,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$66,000	\$66,000	\$66,000	\$0	\$0	\$0	\$0	\$0

Utilities: Installation: Lake Mooney Water Treatment Plant

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	2021
Total Project Cost	\$700,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project (LMWTP-001) consists of installation of a second centrifuge. This will allow the existing centrifuge to be taken off-line for maintenance.

Operating Impact Summary:

This project has minimal operating costs. This second centrifuge will not increase operating costs as both centrifuges will not be operated at the same time.

Location:

This work is located at the Lake Mooney Water Treatment Plant.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is part of the Board Of Supervisors proposed “Healthy Growth” priority.

Analysis of Need:

As the Lake Mooney Water Treatment Facility ages, certain elements will begin to require more and more maintenance. As an initial cost savings measure, only one centrifuge was installed. Now that the existing centrifuge will begin to require maintenance, a second centrifuge is necessary when the other is taken offline.

Utilities: Installation: Lake Mooney Water Treatment Plant

Alternative:

If the single centrifuge is taken offline for maintenance, the plant will have to be shut down. The Lake Mooney Water Treatment Facility is a 24-hour facility and taking the plant off line is inefficient.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2028
Construction/Project	0	700,000	0	0	0	0	0	0	0	0	0
Total	\$0	\$700,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	700,000	0	0		0	0	0	0	0	0
Total	\$0	\$700,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Lake Mooney Water Treatment Plant Optimization Studies

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	2021
Total Project Cost	\$500,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project (LMWTP-005) will assess how the Utilities Division can address challenges related to drinking water constituents such as Disinfection by-products, Manganese, and Algal Toxins. The plant is currently performing above regulatory requirements.

Operating Impact Summary:

This project has no direct operational costs.

Location:

This work is located at the Lake Mooney Water Treatment Plant.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is part of the Board Of Supervisor's proposed "Healthy Growth" priority.

Analysis of Need:

The Utilities Division anticipates that the United States Environmental Protection Agency (USEPA) will continue to enact more stringent standards and regulations governing drinking water quality. While the County's drinking water meets all current requirements of the Safe Drinking Water Act (SDWA), this project will assess how the Department Of Utilities can address challenges related to these drinking water constituents.

Utilities: Lake Mooney Water Treatment Plant Optimization Studies

Alternative:

There will be no pro-active treatment studies to ensure Stafford County is keeping up with regulatory trends.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	500,000	0	0	0	0	0	0	0	0	0
Total	\$0	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	500,000	0	0	0	0	0	0	0	0	0
Total	\$0	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Cartridge Replacement: Lake Mooney Water Treatment Plant

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	2025
Total Project Cost	\$1,500,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project (LMWTP-007) consists of replacing the membrane cartridges at 10 years of operation.

Operating Impact Summary:

This project has periodic (approximately 10 years) replacement costs.

Location:

This work is located at the Lake Mooney Water Treatment Plant.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is part of the Board Of Supervisor's proposed "Healthy Growth" priority.

Analysis of Need:

Lake Mooney Water Treatment Plant went into operation in December 2014. The membrane cartridges which are a key part of the filtration process have an expected useful life of about 10 years. The Utilities Division has therefore programmed the replacement of the existing membrane cassettes when they reach 10 years of operation.

Utilities: Cartridge Replacement: Lake Mooney Water Treatment Plant

Alternative:

The existing membrane cartridges will exceed their use-full life and fail.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$1,500,00	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$1,500,000	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Filter Repairs: Smith Lake Water Treatment Plant

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	2026
Total Project Cost	\$4,650,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project (SLWTP-001) consists of replacing the existing eight filters.

Operating Impact Summary:

This project will replace existing filters and will not add any operational costs.

Location:

This work is located at the Smith Lake Water Treatment Plant.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is part of the Board of Supervisor's proposed "Healthy Growth" priority.

Analysis of Need:

Smith Lake Water Treatment Plant has experienced failures in the existing filter underdrains. The failures have been investigated and it has been determined that the filters must be repaired in order to maintain rated plant capacity and to achieve water quality objectives.

Utilities: Filter Repairs: Smith Lake Water Treatment Plant

Change or Reasons for Revisions:

This project was previously projected to occur in FY 18 or FY19. It was determined by careful analysis that only the filter media materials need replacement.

Alternative:

If filters need replacement and it is not performed, the water treatment plant will fail to meet demand.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	0	0	0	300,000	0	0	0	0
Construction/Project	0	0	0	0	0	0	0	4,350,000	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$300,000	\$4,350,000	\$0	\$0	\$0

Project Revenues	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	0	0	0	0	300,000	4,350,000	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$300,000	\$4,350,000	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Facility Upgrades: Smith Lake Water Treatment Plant

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2023
Total Project Cost	\$3,100,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project (SLWTP-002) may consist of upgrading or replacing electrical motor controls, instrumentation, clarification, structural facilities, and the finished water pumps.

Operating Impact Summary:

This project will not increase operational costs. These replacements will be in-kind and likely create a more efficient operation.

Location:

This work is located at the Smith Lake Water Treatment Plant.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is part of the Board of Supervisor's proposed "Healthy Growth" priority.

Utilities: Facility Upgrades: Smith Lake Water Treatment Plant

Analysis of Need:

In addition to planning for more treatment capacity and excellent water quality, the Utilities Division is also committed to meeting its customer's expectations for a high level of reliability. With aging assets, Smith Lake Water Treatment Plant is now approaching 30 years of reliable operations. Most mechanical and electrical components have useful lifetimes of 15 to 30 years. The Utilities Division expects the need for reinvestment into critical equipment at Smith Lake Water Treatment Plant to increase in the future. A detailed condition assessment is being performed to define and schedule renovations. Until that assessment is completed, this project assumes the need of upgrade or replacement of several systems.

Alternative:

If any part of the required repair/replacement/rehabilitation is not performed, the water treatment plant may fail to meet demand.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	400,000	0	0	0	0	0	0	0
Construction/Project	0	0	0	0	2,700,000	0	0	0	0	0	0
Total	\$0	\$0	\$0	\$400,000	\$2,700,000	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	0	0	400,000	2,700,000	0	0	0	0	0	0
Total	\$0	\$0	\$0	\$400,000	\$2,700,000	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Optimization Studies: Smith Lake Water Treatment Plant

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	2020
Total Project Cost	\$100,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project (SLWTP-003) will assess how the Utilities Division can address challenges related to drinking water constituents such as Disinfection by-products, Manganese, and Algal Toxins. The plant is currently performing above regulatory requirements.

Operating Impact Summary:

This project has no direct operational costs.

Location:

This work is located at the Smith Lake Water Treatment Plant.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is part of the Board of Supervisor's proposed "Healthy Growth" priority.

Analysis of Need:

The Utilities Division anticipates that the United States Environmental Protection Agency (USEPA) will continue to enact more stringent standards and regulations governing drinking water quality. While the County's drinking water meets all current requirements of the Safe Drinking Water Act (SDWA), this project would assess how the Department of Utilities (DOU) can address challenges related to these drinking water constituents.

Utilities: Optimization Studies: Smith Lake Water Treatment Plant

Alternative:

There will be no pro-active treatment studies to ensure Stafford County is keeping up with regulatory trends.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	100,000	0	0	0	0	0	0	0	0	0
Total	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	100,000	0	0	0	0	0	0	0	0	0
Total	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Abel and Smith Lakes: Gate Replacements and Installations

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2019
Total Project Cost	\$300,000	Student Capacity	
Functional Area	Utilities	Number of Gates	4
Total Debt Service		Construction Cost per Gate	\$75,000
Full Year Operating Impact			

Project Description:

This project includes the design and construction of two replacement spillway sluice gates and two additional redundant sluice gates on the emergency spillways at Abel and Smith Lakes.

Operating Impact Summary:

These gates are exercised periodically, but have no direct operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

Location:

These gates will be installed on the emergency spillways at Abel and Smith Lakes.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Plan.

Utilities: Abel and Smith Lakes: Gate Replacements and Installations

Analysis of Need:

The original existing sluice gates, two at both emergency spillways have reached their useful lives. Both gates have been submerged in the water for more than 40 years and 30 years. They are not dependable on being used for lowering the lake level for dam repairs or preemptive flooding control. In addition to replacing the existing gates, a redundant gate will be installed at both emergency spillways in the event the primary gates are actuated and will not close.

Change or Reasons for Revisions:

In the FY19 Capital Improvement Program, only the redundant gates were planned. After additional inspections and risk evaluation, redundant gates will be installed for reliability. The cost increase is primarily attributed to the cost of replacing the existing gates, which are both in 70' of water and require specialty underwater construction crews for installation.

Alternative:

The spillway at Abel Lake will continue to have a non-functioning primary release gate and Smith Lake will continue to have a tenuous release gate system.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	0	80,000	80,000	0	0	0	0	0	0	0	0
Total Project Cost	\$0	\$80,000	\$80,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	80,000	80,000	0	0	0	0	0	0	0	0
Total	\$0	\$80,000	\$80,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Regional Water Interconnection

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2025
Total Project Cost	\$4,450,000	Student Capacity	
Functional Area	Utilities	Length of Pipeline	7,500'
Total Debt Service		Construction Cost per LF.	\$593
Full Year Operating Impact			

Project Description:

This project is a construction of a 24" water transmission pipeline between Stafford County and Spotsylvania County (provides water to City of Fredericksburg).

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

This project will be constructed between the end of Greenbank Road in Stafford County and near the Motts Run Water Treatment Facility in Spotsylvania County.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program. This interconnection embodies the Board of Supervisors proposed Healthy Growth priority as it pertains to public safety. Water is important to the public health of the citizens both for drinking and fire protection. The funding of this project in the Capital Improvement Program is based on a Study Agreement with Spotsylvania County and City of Fredericksburg and is shared 40/40/20. This project will need a formal agreement prior to moving forward.

Utilities: Regional Water Interconnection

Analysis of Need:

These regional partners have long worked to create an interconnection for water transmission. This project is proposed to address that need.

Alternative:

There will continue to be no regional water interconnection.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	0	0	450,000	4,000,000	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$450,000	\$4,000,000	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	0	0	0	0	180,000	1,600,000	0	0	0	0
Regional Contributions	0	0	0	0	0	270,000	2,400,000	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$450,000	\$4,000,000	\$0	\$0	\$0	

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Replacement: Smith Lake Pump Station

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	2021
Total Project Cost	\$1,200,000		
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project includes the complete replacement of most of the functional systems of the Smith Lake Pump Station. This pump station pumps finished water from the Smith Lake Water Storage Tank into the distribution system.

Operating Impact Summary:

This project does not have any direct operational costs. It replaces existing operational costs.

Location:

The project will be constructed at the Smith Lake Pump Station.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each Fiscal Year of the Utilities Division's Capital Improvement Program. It is part of the Board of Supervisor's proposed "Healthy Growth" priority.

Analysis of Need:

This project is required to repair/replace/rehabilitate an integral part of the water distribution system.

Utilities: Replacement: Smith Lake Pump Station

Alternative:

If the project is not constructed there will be insufficient water transmission capability.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction/Project	0	1,200,000	0	0	0	0	0	0	0	0	0
Total	\$0	\$1,200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	1,200,000	0	0	0	0	0	0	0	0	0
Total	\$0	\$1,200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Water Storage Tank Removal

Project Code	Budget Office will input	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2021
Total Project Cost	\$100,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project includes the removal of the Cranes Corner and Bandy elevated water storage tanks. These two tanks are multi-legged 500,000 gallon tanks. These tanks will require more than \$100,000 to remove. However, the cost of removal is offset by the value of the steel that the contractor will recover for salvage.

Operating Impact Summary:

This project has no operating costs and reduces the cost of overall maintenance for the system.

Location:

The Cranes Corner tank is located just east of Stafford High School, near the football field. The Bandy tank is located on Warrenton Road, across from Old Forge Drive.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan and the Adopted General Water and Sewer Improvement Program.

Utilities: Water Storage Tank Removal

Analysis of Need:

The removal of these tanks will provide more efficiency in the water supply and storage system as they are being replaced with the new Enon Road two million gallon Elevated Water Storage Tank (342-101). These tanks require constant maintenance and more costly maintenance based the tank type.

Alternative:

The tanks will continue to stand and receive no maintenance.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	0	0	100,000	0	0	0	0	0	0	0	0
Total Project Cost	\$0	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	0	100,000	0	0	0	0	0	0	0	0
Total	\$0	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Water Distribution System Rehabilitation: Neighborhood Systems

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$500,000	Student Capacity	
Functional Area	Utilities	Funding per Year	\$500,000
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project includes rehabilitation of various distribution lines throughout neighborhoods in the County.

Operating Impact Summary:

The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

Location:

The locations of these replacement projects are located on distribution lines throughout neighborhoods in the County.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each fiscal year of the Utilities Division's Capital Improvement Program and embodies the Board of Supervisors proposed Healthy Growth priority.

Utilities: Water Distribution System Rehabilitation: Neighborhood Systems

Analysis of Need:

These projects are typically located in older neighborhoods that consist of pipes made from cast iron, galvanized steel, clay, asbestos concrete, or thin-walled PVC. The goal and intent of this replacement work is to eventually replace all of these types of pipes where they exist in any neighborhood. This work is intended to be performed by the Utilities Division Field Crews.

Alternative:

There will be no dedicated replacement program for these pipelines. They will continue to merely be repaired when broken, causing substantial dedication of resources.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	500,000	500,000	500,000	500,000	500,000	550,000	600,000	650,000	700,000	750,000	800,000
Total Project Cost	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$550,000	\$600,000	\$650,000	\$700,000	\$750,000	\$800,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	500,000	500,000	500,000	500,000	500,000	550,000	600,000	650,000	700,000	750,000	800,000
Total	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$550,000	\$600,000	\$650,000	\$700,000	\$750,000	\$800,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Water Distribution System Rehabilitation: Small Water Projects

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$322,000	Student Capacity	
Functional Area	Utilities	Funding per Year (initial)	\$322,200
Total Debt Service			
Full Year Operating Impact			

Project Description:

This includes small rehabilitation projects for various distribution lines throughout the County to solve operational issues such as looping, pipe size increases, conflict resolution, and elimination of deteriorated pipe. These projects are of short distance and isolated.

Operating Impact Summary:

This project does not have any stand-alone operating costs.

Location:

The locations of these replacement projects are located on distribution lines throughout the entire distribution system in the County.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each fiscal year of the Utilities Division's Capital Improvement Program that embodies the Board of Supervisors proposed Healthy Growth priority.

Utilities: Water Distribution System Rehabilitation: Small Water Projects

Analysis of Need:

These projects are typically located on older pipelines that consist of cast iron, galvanized steel, clay, asbestos concrete, or thin-walled PVC. Additionally, these projects exist in areas of infill development and are a result of the creation of dead-end lines or conflicts resulting from the cumulative expansion of the system. The goal and intent of this replacement work is to eventually address all of these types of situations to enable the system to operate more efficiently. The proposed FY20-24 Capital Improvement Program shows periodic increases of funding in addition to the yearly escalation factor as feasible. This work is intended to be performed by the Utilities Division Field Crews.

Alternative:

There will be no dedicated replacement program for these pipelines. They will continue to merely be repaired when broken, causing substantial dedication of resources.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	322,200	150,000	300,000	250,000	250,000	300,000	350,000	400,000	450,000	500,000	550,000
Total Project Cost	\$322,200	\$150,000	\$300,000	\$250,000	\$250,000	\$300,000	\$350,000	\$400,000	\$450,000	\$500,000	\$550,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	322,200	150,000	300,000	250,000	250,000	300,000	350,000	400,000	450,000	500,000	550,000
Total	\$322,200	\$150,000	\$300,000	\$250,000	\$250,000	\$300,000	\$350,000	\$400,000	\$450,000	\$500,000	\$550,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Water Distribution System Rehabilitation: Transmission Lines Replacement

Project Code	Budget Office will input	Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$500,000	Student Capacity	
Functional Area	Utilities	Funding per Year (initial)	\$500,000
Total Debt Service			
Full Year Operating Impact			

Project Description:

This includes rehabilitation and replacement projects for various transmission lines throughout the County to solve operational issues such as looping, pipe size increases, conflict resolution, and elimination of deteriorated pipe. These projects are of short distance and isolated.

Operating Impact Summary:

This project does not have any stand-alone operating costs.

Location:

The locations of these replacement projects are located on transmission lines throughout the entire distribution system in the County.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each fiscal year of the Utilities Division's Capital Improvement Program and embodies the Board of Supervisors proposed Healthy Growth priority.

Utilities: Water Distribution System Rehabilitation: Transmission Lines Replacement

Analysis of Need:

These projects are typically located on sections of transmission lines that have problem areas due to break repairs, head loss due to directional changes, deterioration, exposure to, or other impacts from nature. The goal and intent of this replacement work is to eventually address all of these types of situations which will enable the system to operate more efficiently. The proposed FY20-24 Capital Improvement Program shows periodic increases of funding in addition to the yearly escalation factor as feasible. This work is intended to be performed by the Utilities Division Field Crews.

Alternative:

There will be no dedicated replacement program for these pipelines. They will continue to merely be repaired when broken, causing substantial dedication of resources.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	500,000	500,000	500,000	500,000	500,000	550,000	600,000	650,000	700,000	750,000	800,000
Total Project Cost	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$550,000	\$600,000	\$650,000	\$700,000	\$750,000	\$800,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	500,000	500,000	500,000	500,000	500,000	550,000	600,000	650,000	700,000	750,000	800,000
Total	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$550,000	\$600,000	\$650,000	\$700,000	\$750,000	\$800,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Water Main Installation: Route 1 and Sunnyside Drive

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	
Total Project Cost	\$1,092,000	Student Capacity	
Functional Area	Utilities	Length of Pipeline	2,120
Total Debt Service		Construction Cost per LF.	\$697
Full Year Operating Impact			

Project Description:

This project (310-10) includes design and construction of a 24" water main from I-95 to the 12" water main along Jefferson Davis Highway (RT 1) near Sunnyside Drive (2,120 feet).

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

From I-95 to the 12-inch main along Jefferson Davis Highway near Sunnyside Drive (2,120 feet)

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

The purpose of this project is to increase transmission capacity from Smith Lake WTP to the 12-inch mains along Jefferson Davis Highway to improve flows to customers along the Jefferson Davis Highway corridor.

Utilities: Water Main Installation: Route 1 and Sunnyside Drive

Alternative:

If the project is not constructed there will be insufficient water transmission capability.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	175,000	0	0	0	0	0	0	0
Construction / Project	0	0	0	0	917,000	0	0	0	0	0	0
Total	\$0	\$0	\$0	\$175,000	\$917,000	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	0	0	175,000	917,000	0	0	0	0	0	0
Total	\$0	\$0	\$0	\$175,000	\$917,000	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Water Extension Projects

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$250,000	Student Capacity	
Functional Area	Utilities	Funding per Year	\$250,000
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project includes design and construction of water extension projects throughout the County. These projects are not Master Plan, General Water & Sewer Improvement Program, or 3R. These projects are created for citizens and/or groups of citizens whom apply for connections to the water distribution system and the properties are located more than 300' away from the County's infrastructure.

Operating Impact Summary:

The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

Location:

These projects vary in location and are infrequent.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each fiscal year of the Utilities Division's Capital Improvement Program and embodies the Board of Supervisors proposed Healthy Growth priority.

Utilities: Water Extension Projects

Analysis of Need:

These projects are created from the County's Water and Sewer Extension Policy. Funding is appropriated each year as a placeholder in the event a project application is granted approval for design and construction. Each project differs in size, scope, and does not occur every year. This work is intended to be performed by the Utilities Division Field Crews.

Alternative:

There will be no dedicated funding for water extension projects.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2028
Construction / Project	250,000	250,000	250,000	250,000	250,000	300,000	350,000	400,000	450,000	500,000	550,000
Total Project Cost	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$300,000	\$350,000	\$400,000	\$450,000	\$500,000	\$550,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Availabilities	250,000	250,000	250,000	250,000	250,000	300,000	350,000	400,000	450,000	500,000	550,000
Total	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$300,000	\$350,000	\$400,000	\$450,000	\$500,000	\$550,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Wastewater Expenditures:	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Total Projected Uses (Included PY Funding)
A-115 - Aquia @ Bridge Force Main	150,000	1,050,000	-	-	-	-	-	-	-	-	-	1,200,000	-	1,200,000
A-18 - Replace 24" with 36" Gravity Line, Whitsons Run to Austin Run Pump Station	-	-	-	139,300	1,253,700	-	-	-	-	-	-	1,393,000	-	1,393,000
A-205 - Expand Upper Accokeek Pump Station	-	-	-	-	-	-	-	-	170,000	1,456,000	-	-	1,626,000	1,626,000
A-37 - Construct 8" Gravity Line from Marshall to Heritage Oaks II Pump Station	-	-	-	-	55,500	499,500	-	-	-	-	-	555,000	-	555,000
A-40 - Aquia Drive 8" Gravity Line, Delaware Dr. to Vessel Dr.	60,000	470,000	-	-	-	-	-	-	-	-	-	530,000	-	530,000
A-47 - Aquia Harbour 15" Gravity Line at Voyage Drive	40,000	300,000	-	-	-	-	-	-	-	-	-	340,000	-	340,000
A-51 - Coal Landing 15" Main, Greenridge Drive to US1	40,000	410,000	-	-	-	-	-	-	-	-	-	450,000	-	450,000
AWWTF-002 - Aquia WWTF General Upgrades - Concrete repair, Headworks, Power Distribution	380,000	1,520,000	-	-	-	-	-	-	-	-	-	1,900,000	-	1,900,000
AWWTF-003 - Aquia WWTF Solids Handling - Sludge Storage Expansion	-	-	-	200,000	1,800,000	-	-	-	-	-	-	2,000,000	-	2,000,000
AWWTF-005 - Aquia WWTF General Upgrades - Filtration, UV, Controls, Miscellaneous	-	-	-	-	-	-	390,000	3,510,000	-	-	-	-	3,900,000	3,900,000
Gravity Lines & Interceptor Maintenance	500,000	500,000	500,000	500,000	500,000	550,000	600,000	650,000	700,000	750,000	800,000	3,050,000	3,500,000	6,550,000
Infiltration & Inflow Maintenance	250,000	250,000	250,000	250,000	250,000	300,000	350,000	400,000	450,000	500,000	550,000	1,550,000	2,250,000	3,800,000
LFR-120: Construct a 24-inch force main from Falls Run PS to Claiborne Run Parallel FM	250,000	3,643,000	-	-	-	-	-	-	-	-	-	3,893,000	-	3,893,000
LFR-129 - Replace 8" with 16" Force Main from Potomac Creek Pump Station	-	-	264,000	2,376,000	-	-	-	-	-	-	-	2,640,000	-	2,640,000
LFR-15 - Replace 18", 15" and 12" with 24" Line along Claiborne Run from Morton Road to Kings Hill Road	-	206,300	1,856,700	-	-	-	-	-	-	-	-	2,063,000	-	2,063,000
LFR-204 - Expand future Celebrate Virginia Pump Station	-	-	-	-	-	45,000	405,000	-	-	-	-	45,000	405,000	450,000
LFR-209 - Replace Falls Run Pump Station	-	684,200	6,158,160	-	-	-	-	-	-	-	-	6,842,360	-	6,842,360
LFR-217 - Expand Stafford Place Pump Station	-	-	-	-	-	80,000	-	-	-	-	-	80,000	-	80,000
LFR-228 - Expand Ingleside Pump Station	-	-	-	-	214,000	-	-	-	-	-	-	214,000	-	214,000
LFR-3 - Falls Run Interceptor, Phase 2	400,000	-	-	3,700,000	-	-	-	-	-	-	-	4,100,000	-	4,100,000
LFR-30 - Construct 12" Gravity Line in England Run Pump Station to Days Inn Pump Station	-	-	-	-	-	118,100	1,062,900	-	-	-	-	118,100	1,062,900	1,181,000
LFR-31 - LFR-31 Replace 15" with 21" gravity main along Falls Run from Pennsbury Court to vicinity of Averil Court	-	-	-	217,000	2,246,000	-	-	-	-	-	-	2,463,000	-	2,463,000
LFR-51 - Construct 10" Line to serve future Central PDA Growth	-	-	-	24,500	220,500	-	-	-	-	-	-	245,000	-	245,000
LFR-58 - Replace 8" with 15" Line along Cambridge Street from Force Mail to Michael Street	-	-	135,000	-	-	-	-	-	-	-	-	135,000	-	135,000
LFR-59 - Replace 8" with 10" from Nelms Circle to Auction Drive	-	-	-	-	-	-	137,900	1,241,100	-	-	-	-	1,379,000	1,379,000
LFR-226 Expand Potomac Creek Pump Station	-	-	-	-	125,000	866,000	-	-	-	-	-	991,000	-	991,000
Little Falls Run Wastewater Treatment Facility - Filter Replacement	-	250,000	-	-	-	-	-	-	-	-	-	250,000	-	250,000
LWWTF-002 - Little Falls Run WWTF General Upgrades - Concrete Repair, Headworks, UV	-	260,000	1,740,000	-	-	-	-	-	-	-	-	2,000,000	-	2,000,000
LWWTF-003 - Little Falls Run WWTF Denitrification Upgrade	-	-	350,000	3,150,000	-	-	-	-	-	-	-	3,500,000	-	3,500,000
LWWTF-004 - Little Falls Run WWTF Upgrades (Rappahannock Policy, FWNC / NH3 Allowance)	-	-	-	1,160,000	10,440,000	-	-	-	-	-	-	11,600,000	-	11,600,000
LWWTF-005 - Little Falls Run WWTF General Upgrades - Filtration, Miscellaneous	-	-	-	-	-	270,000	2,430,000	-	-	-	-	270,000	2,430,000	2,700,000
Pump Stations	500,000	500,000	500,000	500,000	500,000	550,000	600,000	650,000	700,000	750,000	800,000	3,050,000	3,500,000	6,550,000
Sewer Extension Projects	252,000	262,000	273,000	284,000	296,000	346,000	396,000	446,000	496,000	546,000	596,000	1,713,000	2,480,000	4,193,000
Total	\$2,822,000	\$10,305,500	\$12,026,860	\$12,500,800	\$17,900,700	\$3,624,600	\$6,371,800	\$6,897,100	\$2,516,000	\$4,002,000	\$2,746,000	\$59,180,460	\$22,532,900	\$81,713,360

Utilities: Force Main Replacement: Aquia Wastewater Pump Station

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Design/Engineering	Est. Opening Date	Late 2027
Total Project Cost	\$1,200,000	Student Capacity	
Functional Area	Utilities	Length of Pipe	7,000
Total Debt Service		Construction Cost per LF.	\$171
Full Year Operating Impact			

Project Description:

This project (A-115) includes the replacement of 14 inch and 12 inch sections of a force main with an 18 inch force main near Starboard Cove Lane (6,976 feet). The purpose of the project is to increase the capacity of the force main. The timing for construction of this project is dependent on the timing of flows in this area.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of periodic maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

This project replaces a force main that conveys flow from near the Aquia Wastewater Pump Station, through Aquia Harbor, to the Aquia Wastewater Treatment Facility. The purpose of the project is to increase the capacity of the force main.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Utilities: Force Main Replacement: Aquia Wastewater Pump Station

Analysis of Need:

The purpose of the project is to increase the capacity of the force main.

Alternative:

The pump station will not be able to convey flows to the wastewater treatment facility.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	150,000	0	0	0	0	0	0	0	0	0	0
Construction / Project	0	1,050,000	0	0	0	0	0	0	0	0	0
Total Project Cost	\$150,000	\$1,050,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2024	FY2024	FY2024	FY2024	FY2024
User Fees	150,000	1,050,000	0	0	0	0	0	0	0	0	0
Total	\$150,000	\$1,050,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Gravity Main Replacement: Austin Run

Project Code	Budget Office will input	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2023
Total Project Cost	\$1,393,000	Student Capacity	
Functional Area	Utilities	Length of Pipe	2,400
Total Debt Service		Construction Cost per LF.	\$580
Full Year Operating Impact			

Project Description:

This project (A-18) includes the replacement of an existing 24 inch gravity main with a 36 inch gravity main.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of periodic maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed along Austin Run from Whitson's Run to the Austin Run Pump Station.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Utilities: Gravity Main Replacement: Austin Run

Analysis of Need:

This project is one of four interceptors (large gravity main) that serves the northern part of the County. This interceptor is currently adequate for buildout conditions for its use for County properties. However, it also serves Quantico Marine Corps Base and is a major source of flow impacting the timing for the replacement this existing interceptor. Delays in the quantity of flow from Quantico Marine Corps Base could delay the construction of this project. Public Works staff continues to work with Base staff regarding the timing of any necessary improvements to this interceptor. The cost estimate and timing is a placeholder in the event the project is necessary.

Alternative:

There would be risk of exceeding pipe capacity and overflow of wastewater at upstream manholes. In addition, if the Base increases its flows through its Camp Barrett Pump Station, it would impact Base operations.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	139,300	0	0	0	0	0	0	0
Construction / Project	0	0	0	0	1,253,700	0	0	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$139,300	\$1,253,700	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Availabilities	0	0	0	69,650	626,850	0	0	0	0	0	0
User Fees	0	0	0	69,650	626,850	0	0	0	0	0	0
Total	\$0	\$0	\$0	\$139,300	\$1,253,700	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Expansion: Upper Accokeek Pump Station

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2027
Total Project Cost	\$1,626,000	Student Capacity	
Functional Area	Utilities	Volume of Upgrade MGD	1.15
Total Debt Service		Construction Cost per MGD	\$960,000
Full Year Operating Impact			

Project Description:

This project (A-205) includes the expansion of the Upper Accokeek Pump Station by 1.15 million gallons a day (mgd).

Operating Impact Summary:

This project has minimal operating costs such as electricity and fuel for the emergency generator. This project will cause an incremental increase to those costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

Location:

This project will occur at the Upper Accokeek Wastewater Pump Station off of Ramoth Church Road.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Utilities: Expansion: Upper Accokeek Pump Station

Analysis of Need:

The purpose of the project is to increase the capacity of the pump station. The timing for construction of this project is dependent on the timing of flows in this area.

Alternative:

The pump station will not be able to convey flows to the wastewater treatment facility.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	0	0	0	0	0	170,000	0	0
Construction / Project	0	0	0	0	0	0	0	0	0	1,456,000	0
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$170,000	\$1,456,000	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Pro Rata	0	0	0	0	0	0	0	0	170,000	1,456,000	0
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$170,000	\$1,456,000	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Gravity Main Construction: Heritage Oaks Pump Station II along Austin Run

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2024
Total Project Cost	\$555,000	Student Capacity	
Functional Area	Utilities	Length of Pipe	2,635
Total Debt Service		Construction Cost per LF.	\$211
Full Year Operating Impact			

Project Description:

This project (A-37) includes the design and construction of an 8 inch gravity main.

Operating Impact Summary:

This project does not have any stand-alone operating costs. However, this project will eliminate an existing pump station and the associated maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed along Austin Run from Heritage Oaks Pump Station II to an existing gravity main near the intersection of Winding Creek Road and Walpole Street.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

The Utilities Division of Public Works accepts pump stations as part of approved development projects on a frequent basis. On certain occasions when land development infills certain areas, it is possible to eliminate the need for existing pump stations.

Utilities: Gravity Main Construction: Heritage Oaks Pump Station II along Austin Run

Alternative:

The pump station will continue to be operational and continue to require regular maintenance and operating costs.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	0	55,500	0	0	0	0	0	0
Construction / Project	0	0	0	0	0	499,500	0	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$55,500	\$499,500	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	0	0	0	55,500	499,500	0	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$55,500	\$499,500	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Gravity Main Replacement: Aquia Drive

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Design/Engineering	Est. Opening Date	Late 2021
Total Project Cost	\$530,000	Student Capacity	
Functional Area	Utilities	Length of Pipe	2,030
Total Debt Service		Construction Cost per LF.	\$261
Full Year Operating Impact			

Project Description:

This project (A-40) includes replacement of existing 8 inch gravity main with a 12 inch gravity main along Aquia Drive from Delaware Drive to Vessel Drive. The purpose of the project is to increase the conveyance capacity of the existing 8 inch gravity main. Prior to replacing the existing gravity main, it is recommended that flow-monitoring and/or sewer modeling be performed to assess the available capacity remaining in the existing gravity main.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of periodic maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed along Aquia Drive from Delaware Drive to Vessel Drive.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Utilities: Gravity Main Replacement: Aquia Drive

Analysis of Need:

The purpose of the project is to increase the conveyance capacity of gravity main. Prior to replacing the existing gravity main, flow-monitoring and/or sewer modeling will be performed to assess the available capacity remaining in the existing gravity main.

Alternative:

There would be risk of exceeding pipe capacity and overflow of wastewater at upstream manholes.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	60,000	0	0	0	0	0	0	0	0	0	0
Construction / Project	0	470,000	0	0	0	0	0	0	0	0	0
Total Project Cost	\$60,000	\$470,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	60,000	470,000	0	0	0	0	0	0	0	0	0
Total	\$60,000	\$470,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Gravity Main Replacement: Aquia Drive

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Design/Engineering	Est. Opening Date	Fall 2019
Total Project Cost	\$340,000	Student Capacity	
Functional Area	Utilities	Length of Pipe	1,200
Total Debt Service		Construction Cost per LF.	\$283
Full Year Operating Impact			

Project Description:

This project (A-47) includes the replacement of an existing 8 inch gravity main with a 15 inch gravity main near Voyage Drive.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of periodic maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed along Aquia Drive in the area of Voyage Drive.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

The purpose of the project is to increase the conveyance capacity of gravity main. Prior to replacing the existing gravity main, flow-monitoring and/or sewer modeling will be performed to assess the available capacity remaining in the existing gravity main.

Utilities: Gravity Main Replacement: Aquia Drive

Alternative:

There would be risk of exceeding pipe capacity and overflow of wastewater at upstream manholes.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	40,000	0	0	0	0	0	0	0	0	0	0
Construction / Project	0	300,000	0	0	0	0	0	0	0	0	0
Total Project Cost	\$40,000	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	40,000	300,000	0	0	0	0	0	0	0	0	0
Total	\$40,000	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Gravity Main Replacement: Coal Landing Road

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Design/Engineering	Est. Opening Date	Fall 2019
Total Project Cost	\$450,000	Student Capacity	
Functional Area	Utilities	Length of Pipe	1,600
Total Debt Service		Construction Cost per LF.	\$282
Full Year Operating Impact			

Project Description:

This project (A-51) includes the replacement of an existing 12 inch gravity main with a 15 inch gravity main.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of periodic maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed along Coal Landing Road from Jefferson Davis Highway to Knightsbridge Way.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

The purpose of the project is to increase the conveyance capacity of the gravity main. Prior to replacing the existing gravity main, flow-monitoring and/or sewer modeling will be performed to assess the available capacity remaining in the existing gravity main.

Utilities: Gravity Main Replacement: Coal Landing Road

Alternative:

There would be risk of exceeding pipe capacity and overflow of wastewater at upstream manholes.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	40,000	0	0	0	0	0	0	0	0	0	0
Construction / Project	0	410,000	0	0	0	0	0	0	0	0	0
Total Project Cost	\$40,000	\$410,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	40,000	410,000	0	0	0	0	0	0	0	0	0
Total	\$40,000	\$410,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: General Upgrades: Aquia Wastewater Treatment Facility

Project Code		Square Footage/Acreage	
Project Type	3-R	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2021
Total Project Cost	\$1,900,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

These upgrades (AWWTF-002) include on-going concrete repair to process units, power distribution main tie-in configuration, and potential headworks upgrade.

Operating Impact Summary:

This project will not increase operational costs. These replacements will be in-kind and likely create a more efficient operation.

Location:

The project will be constructed at the Aquia Wastewater Treatment Facility.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each Fiscal Year of the Utilities Division's Capital Improvement Program as a part of the Board's proposed Healthy Growth priority.

Utilities: General Upgrades: Aquia Wastewater Treatment Facility

Analysis of Need:

In addition to planning for more treatment capacity and excellent water quality, the Utilities Division is also committed to meeting its customer's expectations for a high level of reliability. With aging assets, the Aquia Wastewater Treatment Facility is now approaching 30 years of reliable operations. Most mechanical and electrical components have useful lifetimes of 15 to 30 years. The Utilities Division expects the need for reinvestment into critical equipment at Aquia Wastewater Treatment Facility to increase in the future. A detailed condition assessment is being performed to define and schedule renovations. Until that assessment is completed, this project assumes the need of upgrades or replacements of several systems.

Alternative:

If any part of the required repair/replacement/rehabilitation is not performed, the water treatment may fail to meet demand.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	380,000	1,520,000	0	0	0	0	0	0	0	0	0
Total Project Cost	\$380,000	\$1,520,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	380,000	1,520,000	0	0	0	0	0	0	0	0	0
Total	\$380,000	\$1,520,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Expansion: Aquia Wastewater Treatment Facility

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	2023
Total Project Cost	\$2,000,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project (AWWTF-003) includes the design and construction of additional sludge dewatering capacity to the existing biological digesters.

Operating Impact Summary:

This project will not increase operational costs. These replacements will be in-kind and likely create a more efficient operation.

Location:

The project will be constructed at the Aquia Wastewater Treatment Facility.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Utilities: Expansion: Aquia Wastewater Treatment Facility

Analysis of Need:

The Utilities Division has identified the need for higher sludge dewatering capacity to optimize its current solids processing operation. The current sludge storage (aerobic digestion) capacity is less than the rated plant capacity sludge production levels, and additional sludge storage would improve sludge stabilization prior to dewatering and disposal, and facilitate the use of a higher capacity centrifuge. Supplemental sludge storage tankage, with aeration/ mixing/pumping, is proposed. These general upgrades are compatible and consistent with other anticipated near-term upgrades and modifications for firm capacity, efficient operations, system reliability, and biosolids management permit compliance.

Alternative:

If the required capacity increase is not performed, the water treatment plant may fail to meet demand. There are two processes which dewater the wastewater. When the flow exceeds the dewatering capability of the centrifuges or when the solids need to be pre-removed, the wastewater is allowed to process longer in the digesters. This is a critical part of the treatment process.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	0	0	0	200,000	1,800,000	0	0	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$200,000	\$1,800,000	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Availabilities	0	0	0	200,000	1,800,000	0	0	0	0	0	0
Total	\$0	\$0	\$0	\$200,000	\$1,800,000	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: General Upgrades: Aquia Wastewater Treatment Facility

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	
Total Project Cost		Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

These upgrades (AWWTF-05) include mechanical and control upgrades to effluent filtration, plant Supervisory Control and Data Acquisition (SCADA), and overall process control system updates, and other miscellaneous treatment upgrades.

Operating Impact Summary:

There are no direct operational costs as these upgrades are in-kind replacement and will likely increase operational efficiency.

Location:

The project will be constructed at the Aquia Wastewater Treatment Facility.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each Fiscal Year of the Utilities Division's Capital Improvement Program as a part of the Board's proposed Healthy Growth priority.

Utilities: General Upgrades: Aquia Wastewater Treatment Facility

Analysis of Need:

In addition to planning for more treatment capacity and excellent water quality, the Utilities Division is also committed to meeting its customer's expectations for a high level of reliability. With aging assets, the Aquia Wastewater Treatment Facility is now approaching 30 years of reliable operations. Most mechanical and electrical components have useful lifetimes of 15 to 30 years. The Utilities Division expects the need for reinvestment into critical equipment at Aquia Wastewater Treatment Facility to increase in the future. A detailed condition assessment is being performed to define and schedule renovations. Until that assessment is completed, this project assumes the need of upgrade or replacement of several systems.

Alternative:

If any part of the required repair/replacement/rehabilitation is not performed, the water treatment may fail to meet demand.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	0	0	0	0	0	0	390,000	3,510,000	0	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$390,000	\$3,510,000	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Availabilities	0	0	0	0	0	0	195,000	1,755,000	0	0	0
User Fees	0	0	0	0	0	0	195,000	1,755,000	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$390,000	\$3,510,000	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Gravity Lines and Interceptor Maintenance

Project Code	Budget Office will input	Square Footage/Acreage	
Project Type	Utilities 3R	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$500,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This work consists of the replacement of significant lengths of large and small wastewater gravity interceptors throughout the County. The Master Plan identifies which gravity interceptors that require capacity upgrades or replacement, but not replacement due to age or condition.

Operating Impact Summary:

This project does not have any stand-alone operating costs. However, these sections of preemptive replacements avoid future expensive emergency repairs.

Location:

These projects are located on older interceptors throughout the wastewater collection system.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each fiscal year of the Utilities Division's Capital Improvement Program as a part of the Board of Supervisors proposed Healthy Growth priority.

Utilities: Gravity Lines and Interceptor Maintenance

Analysis of Need:

These projects are located on older interceptors throughout the wastewater collection system that consists of pipes made from asbestos concrete, thin-walled PVC, or have some other existing problem. The goal and intent of this replacement work is to eventually replace all of these types of pipes where they exist in the interceptors. This work is intended to be performed by the Utilities Division Field Crews.

Alternative:

There would likely need to be expensive emergency repairs to these known areas.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	500,000	500,000	500,000	500,000	500,000	550,000	600,000	650,000	700,000	750,000	800,000
Total Project Cost	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$550,000	\$600,000	\$650,000	\$700,000	\$750,000	\$800,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	500,000	500,000	500,000	500,000	500,000	550,000	600,000	650,000	700,000	750,000	800,000
Total	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$550,000	\$600,000	\$650,000	\$700,000	\$750,000	\$800,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Infiltration and Inflow Maintenance

Project Code		Square Footage/Acreage	
Project Type	3-R	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$250,000+	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project includes the continual inspection, assessment, and correction of infiltration and inflow into the sewer collection system.

Operating Impact Summary:

This project is designed to correct as much infiltration and inflow as possible in order to reduce operational costs.

Location:

This project will be performed at various locations throughout the sewer collection system.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed with periodic increases for each fiscal year. It is part of the Utilities Division's Capital Improvement Program and embodies the Board of Supervisors proposed Healthy Growth priority.

Analysis of Need:

Over time, pipes and manholes crack, pipe joints fail and ground water begins to seep into non-pressurized pipelines. This causes an undue treatment burden on the wastewater treatment process.

Utilities: Infiltration and Inflow Maintenance

Alternative:

Infiltration and inflow will continue to burden our wastewater treatment process.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	250,000	250,000	250,000	250,000	250,000	300,000	350,000	400,000	450,000	500,000	550,000
Total Project Cost	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$300,000	\$350,000	\$400,000	\$450,000	\$500,000	\$550,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	250,000	250,000	250,000	250,000	250,000	300,000	350,000	400,000	450,000	500,000	550,000
Total	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$300,000	\$350,000	\$400,000	\$450,000	\$500,000	\$550,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Force Main Replacement: Falls Run Pump Station

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2026
Total Project Cost	\$3,893,000	Student Capacity	
Functional Area	Utilities	Length of Pipe	12,500
Total Debt Service		Construction Cost per LF.	\$312
Full Year Operating Impact			

Project Description:

This project (LFR-120) includes the design and construction for replacement of an existing 16 inch force main with a 24 inch force main. The replacement will be in a new alignment.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be replacing an existing 16 inch force that currently transmit flows from the Falls Run Pump Station in Falmouth to the Claiborne Run Interceptor near the intersection of Butler Road and Chatham Heights Road. The new 24 inch force main will transmit flows from the Falls Run Pump Station through Falmouth, along River Road, under Kings Highway, along Naomi Drive to a tie-in point with the new Parallel Claiborne Run 24 inch Force Main project.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Utilities: Force Main Replacement: Falls Run Pump Station

Analysis of Need:

The purpose of the project is to increase the conveyance capacity of Falls Run Pump Station. The current operation of the Falls Run Pump Station and the Claiborne Run Pump Station is one of “piggybacking.” The Falls Run Pump Station pumps to an interceptor that flows into the Claiborne Run Pump Station. The previous Master Plan (2007) indicated that both pump stations need an increase to their capacity during the 2015 to 2018 time frame. After careful analysis, the most logical way to address several operational issues between these two pump stations is to convey their flows directly to the Little Falls Run Wastewater Treatment Facility. This new operational scenario would take advantage of the parallel line being added to the Claiborne Run Force Main and dedicate it to the Falls Run Force Main with the addition of the new force main as described in the “Location” section above. This reconfiguration saved between \$6M and possibly as much as \$10M.

Change or Reasons for Revisions:

There is no change to this project from the FY19 Capital Improvement Program (CIP); however, it is important to describe the proposed reconfiguration for the record as part of the FY20 CIP.

Alternative:

There will be substantial and unnecessary costs associated with upgrading both the Falls Run Pump Station and the Claiborne Run Pump Station or significant wastewater overflows would occur. This project is one of two projects that eliminate this need and allows the pump stations to operate well within their current capacity and save substantial costs for construction.

Utilities: Force Main Replacement: Falls Run Pump Station

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	250,000	0	0	0	0	0	0	0	0	0	0
Construction/Project	0	3,643,000	0	0	0	0	0	0	0	0	0
Total Project Cost	\$250,000	\$3,643,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Pro Rata	125,000	1,821,500	0	0	0	0	0	0	0	0	0
User Fees	125,000	1,821,500	0	0	0	0	0	0	0	0	0
Total	\$250,000	\$3,643,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Force Main Replacement: Potomac Creek Pump Station

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2023
Total Project Cost	\$2,640,000	Student Capacity	
Functional Area	Utilities	Length of Pipe	9,100
Total Debt Service		Construction Cost per LF.	\$290
Full Year Operating Impact			

Project Description:

This project (LFR-129) includes the design and construction for replacement of the existing 8 inch force main with a 16 inch force main from Potomac Creek Pump Station.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

This project will be constructed from the Potomac Creek Pump Station southeasterly to near the intersection of Jefferson Davis Highway and Enon Road.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

The purpose of the project is to increase the capacity of the force main and pump station. The timing for construction of this project is dependent on the timing of flows in this area.

Utilities: Force Main Replacement: Potomac Creek Pump Station

Alternative:

The pump station and force main will not be able to convey flows to the wastewater treatment facility.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	264,000	0	0	0	0	0	0	0	0
Construction/Project	0	0	0	2,376,000	0	0	0	0	0	0	0
Total Project Cost	\$0	\$0	\$264,000	\$2,376,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Pro Rata	0	0	132,000	1,188,000	0	0	0	0	0	0	0
User Fees	0	0	132,000	1,188,000	0	0	0	0	0	0	0
Total	\$0	\$0	\$264,000	\$2,376,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Gravity Main Replacement: Claiborne Run

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2022
Total Project Cost	\$2,063,000	Student Capacity	
Functional Area	Utilities	Length of Pipe	6,200
Total Debt Service		Construction Cost per LF.	\$332
Full Year Operating Impact			

Project Description:

This project (LFR-15) includes replacement of existing 12 inch, 15 inch, and 18 inch gravity mains with a 24 inch gravity main.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of periodic maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed along Claiborne Run, near Morton Road to Kings Hill Road.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

The purpose of the project is to increase the conveyance capacity of gravity main. Prior to replacing the existing gravity main, flow-monitoring and/or sewer modeling will be performed to assess the available capacity remaining in the existing gravity main.

Utilities: Gravity Main Replacement: Claiborne Run

Alternative:

There would be risk of exceeding pipe capacity and overflow of wastewater at upstream manholes.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	206,300	0	0	0	0	0	0	0	0	0
Construction / Project	0	0	1,856,700	0	0	0	0	0	0	0	0
Total Project Cost	\$0	\$206,300	\$1,856,700	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Bond Proceeds	0	0	1,856,700	0	0	0	0	0	0	0	0
Pro Rata	0	103,150	0	0	0	0	0	0	0	0	0
User Fees	0	103,150	0	0	0	0	0	0	0	0	0
Total Project Cost	\$0	\$206,300	\$1,856,700	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$155,000	\$155,000	\$155,000	\$155,000	\$155,000	\$155,000	\$155,000	\$155,000

Utilities: Expansion: Celebrate Virginia Pump Station

Project Code	Budget Office will input	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2025
Total Project Cost	\$450,000	Student Capacity	
Functional Area	Utilities	Volume of Upgrade MGD	1.53
Total Debt Service		Construction Cost per MGD	\$295,000
Full Year Operating Impact			

Project Description:

This project (LFR-204) includes the design and construction of the expansion of the Celebrate Virginia Pump Station by 1.53 million gallons a day (mgd).

Operating Impact Summary:

This project has minimal operating costs such as electricity and fuel for the emergency generator. This project will cause an incremental increase to those costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

Location:

This project will occur at the Celebrate Virginia Pump Station just to the east of Del Web along England Run.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

The purpose of the project is to increase the capacity of the pump station. The timing for construction of this project is dependent on the timing of flows in this area.

Utilities: Expansion: Celebrate Virginia Pump Station

Alternative:

The pump station will not be able to convey flows to the wastewater treatment facility.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	0	0	45,000	405,000	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$45,000	\$405,000	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Pro Rata	0	0	0	0	0	45,000	405,000	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$45,000	\$405,000	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Expansion: Falls Run Pump Station

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2022
Total Project Cost	\$6,842,400	Student Capacity	
Functional Area	Utilities	Volume of Upgrade MGD	17.6
Total Debt Service		Construction Cost per MGD	\$390,000
Full Year Operating Impact			

Project Description:

This project (LFR-209) includes the design and construction of the expansion of the Falls Run Pump Station by 17.6 million gallons a day (MGD).

Operating Impact Summary:

This project will have significantly more operating costs such as electricity, chemical treatment, and fuel for the emergency generator as the project almost doubles its current capacity. This increase will be realized over time. These operating costs are considered and evaluated during each budget cycle.

Location:

This project will occur at the Falls Run Pump Station on Washington Street in Falmouth. The project will begin with a Preliminary Engineering Report that will assess the needs and any constraints. There will be a significant analysis to determine if the station would be better located at another part of Fall Run. Relocation could benefit the station from an operational standpoint as well as benefiting the local residents of Falmouth Bottom.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Utilities: Expansion: Falls Run Pump Station

Analysis of Need:

The purpose of the project is to increase the capacity of the pump station. The timing for construction of this project is dependent on the timing of flows in this area. Projects of this nature are continuously modelled as this is a significant investment and a critical station. This project is currently shown in the near term and may be adjusted in a later Capital Improvement Program (CIP).

Change or Reasons for Revisions:

This project shows a change to the estimated cost from last year's CIP. The estimated cost for this project was increased from \$5,388,000 to \$6,842,400 due to complexities in estimating the required capacity increase associated with the replacement.

Alternative:

The pump station will not be able to convey flows to the wastewater treatment facility.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction/Project	0	684,200	6,158,160	0	0	0	0	0	0	0	0
Total	\$0	\$684,200	\$6,158,160	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Bond Proceeds	0	0	6,158,160	0	0	0	0	0	0	0	0
Pro Rata	0	342,100	0	0	0	0	0	0	0	0	0
User Fees	0	342,100	0	0	0	0	0	0	0	0	0
Total	\$0	\$684,200	\$6,158,160	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Expansion: Falls Run Pump Station

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$515,000	\$515,000	\$515,000	\$515,000	\$515,000	\$515,000	\$515,000	\$515,000

Utilities: Expansion: Stratford Place Pump Station

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2025
Total Project Cost	\$80,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project (LFR-217) includes the design and construction of the expansion of the Stratford Place Pump Station by 0.165 million gallons a day (MGD). This is an electrical upgrade with Dominion Power and does not include any equipment upgrades.

Operating Impact Summary:

This project has minimal operating costs such as electricity and fuel for the emergency generator. This project will cause an incremental increase to those costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

Location:

This project will occur at the Stratford Place Pump Station on Little Whim Road near Landsberry Park Drive.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Utilities: Expansion: Stratford Place Pump Station

Analysis of Need:

The purpose of the project is to increase the capacity of the pump station. The timing for construction of this project is dependent on the timing of flows in this area.

Change or Reasons for Revisions:

The previous Capital Improvement Program (CIP) indicated the project would be performed over a two year period. Additionally, with the completion of the 2018 Master Plan, the estimated construction costs for this project increased from \$45,000 to \$80,000. Also, the FY 2020 CIP includes all the costs for this project in a single year.

Alternative:

The pump station will not be able to convey flows to the wastewater treatment facility.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction/Project	0	0	0	0	0	80,000	0	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$80,000	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Pro Rata	0	0	0	0	0	80,000	0	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$80,000	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Expansion: Ingleside Pump Station

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2024
Total Project Cost	\$214,000	Student Capacity	
Functional Area	Utilities	Volume of Upgrade MGD	0.311 MGD
Total Debt Service		Construction Cost per MGD	\$688,100
Full Year Operating Impact			

Project Description:

This project (LFR-228) includes the design and construction of the expansion of the Ingleside Pump Station by 0.311 million gallons a day (MGD).

Operating Impact Summary:

This project has minimal operating costs such as electricity and fuel for the emergency generator. This project will cause an incremental increase to those costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

Location:

This project will occur at the Ingleside Drive Pump Station on Ingleside Drive near Belmont.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

The purpose of the project is to increase the capacity of the pump station. The timing for construction of this project is dependent on the timing of flows in this area.

Utilities: Expansion: Ingleside Pump Station

Change or Reasons for Revisions:

The previous Capital Improvement Program (CIP) indicated the project would be performed over a two year period. Also, the FY 2020 CIP includes all the costs for this project is a single year.

Alternative:

The pump station will not be able to convey flows to the wastewater treatment facility.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	0	21,400	0	0	0	0	0	0
Construction/Project	0	0	0	0	192,600	0	0	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$214,000	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Pro Rata	0	0	0	0	214,000	0	0	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$214,000	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Gravity Main Replacement: Falls Run

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2022
Total Project Cost	\$4,100,000	Student Capacity	
Functional Area	Utilities	Length of Pipe	12,400
Total Debt Service		Construction Cost per LF.	\$330
Full Year Operating Impact			

Project Description:

This project (LFR-3) includes replacement of existing 12" with 15" gravity main with a 24" gravity main.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of periodic maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed along Falls Run from the England Run neighborhood, near Stanstead Road to Pennsbury Court.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

The purpose of the project is to increase the conveyance capacity of gravity main. Prior to replacing the existing gravity main, flow-monitoring and/or sewer modeling will be performed to assess the available capacity remaining in the existing gravity main.

Utilities: Gravity Main Replacement: Falls Run

Alternative:

There would be risk of exceeding pipe capacity and overflow of wastewater at upstream manholes.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	400,000	0	0	0	0	0	0	0	0	0	0
Construction / Project	0	0	0	3,700,000	0	0	0	0	0	0	0
Total Project Cost	\$400,000	\$0	\$0	\$3,700,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Availabilities	400,000	0	0	3,700,000	0	0	0	0	0	0	0
Total	\$400,000	\$0	\$0	\$3,700,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Gravity Main: England Run

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2025
Total Project Cost	\$1,181,000	Student Capacity	
Functional Area	Utilities	Length of Pipe	4,500
Total Debt Service		Construction Cost per LF.	\$263
Full Year Operating Impact			

Project Description:

This project (LFR-30) includes the design and construction of a 12 inch gravity main.

Operating Impact Summary:

This project does not have any stand-alone operating costs. However, this project will eliminate an existing pump station and the associated maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed along a tributary of England Run from the England Run Pump Station to the Days Inn Pump Station.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

The Utilities Division of Public Works accepts pump stations as part of approved development projects on a frequent basis. On certain occasions, when land development infills certain areas, it is possible to eliminate the need for existing pump stations.

Utilities: Gravity Main: England Run

Alternative:

The pump station would continue to be operational and continue to require regular maintenance and operating costs.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	0	0	118,100	0	0	0	0	0
Construction/Project	0	0	0	0	0	0	1,062,900	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$118,100	\$1,062,900	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	0	0	0	0	118,100	1,062,900	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$118,100	\$1,062,900	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Gravity Main Replacement: Falls Run

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	2024
Total Project Cost	\$2,462,000	Student Capacity	
Functional Area	Utilities	Length of Pipe	5,987
Total Debt Service		Construction Cost per LF.	\$411
Full Year Operating Impact			

Project Description:

This project (LFR-31) includes the replacement of an existing 15 inch gravity main with a 21 inch gravity main.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of periodic maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed along Falls Run from Pennsbury Court to the vicinity of Averil Court.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

The purpose of the project is to increase the conveyance capacity of the gravity main. Prior to replacing the existing gravity main, flow-monitoring and/or sewer modeling will be performed to assess the available capacity remaining in the existing gravity main.

Utilities: Gravity Main Replacement: Falls Run

Alternative:

There would be risk of exceeding pipe capacity and overflow of wastewater at upstream manholes.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	217,000	0	0	0	0	0	0	0
Construction/Project	0	0	0	0	2,246,000	0	0	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$217,000	\$2,246,000	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	0	0	217,000	2,246,000	0	0	0	0	0	0
Total	\$0	\$0	\$0	\$217,000	\$2,246,000	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Gravity Main: Future Central Priority Development Area Growth

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2024
Total Project Cost	\$245,000	Student Capacity	
Functional Area	Utilities	Length of Pipe	1,000
Total Debt Service		Construction Cost per LF.	\$245
Full Year Operating Impact			

Project Description:

This project (LFR-51) includes the design and construction of a 10 inch gravity main.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle

Location:

The project will be constructed along a practical path from an area north of Enon Road and west of I-95, to across the collector road for the Centerport Interchange to the Centerport Area.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

The purpose of this gravity line is to serve a targeted growth area in the Centerport area. This proposed project is schematic and the project may vary substantially. The estimated cost and timing are placeholders in the event development begins to occur in this area.

Utilities: Gravity Main: Future Central Priority Development Area Growth

Alternative:

There would be no plan to serve this area with sewer.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	24,500	0	0	0	0	0	0	0
Construction/Project	0	0	0	0	220,500	0	0	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$24,500	\$220,500	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Pro Rata	0	0	0	24,500	220,500	0	0	0	0	0	0
Total	\$0	\$0	\$0	\$24,500	\$220,500	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Gravity Main Replacement: Cambridge Street

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2021
Total Project Cost	\$135,000	Student Capacity	
Functional Area	Utilities	Length of Pipe	480
Total Debt Service		Construction Cost per LF.	\$282
Full Year Operating Impact			

Project Description:

This project (LFR-58) includes the replacement of the an existing 8 inch main with a 15 inch gravity main along Cambridge Street.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be replacing a section of an existing gravity main along Cambridge Street between Michael Street and Enon Road.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

The purpose of the project is to increase the conveyance capacity of gravity main. Prior to replacing the existing gravity main, flow-monitoring and/or sewer modeling will be performed to assess the available capacity remaining in the existing gravity main.

Utilities: Gravity Main Replacement: Cambridge Street

Change or Reasons for Revisions:

This project has changed from the previous CIP. The entire cost of the project was moved into FY 2021.

Alternative:

There would be risk of exceeding pipe capacity and overflow of wastewater at upstream manholes.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction/Project	0	0	135,000	0	0	0	0	0	0	0	0
Total Project Cost	\$0	\$0	\$135,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Pro Rata	0	0	67,500	0	0	0	0	0	0	0	0
Availabilities	0	0	67,500	0	0	0	0	0	0	0	0
Total	\$0	\$0	\$135,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Gravity Main Replacement: Nelms Circle to Auction Drive

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2026
Total Project Cost	\$1,379,000	Student Capacity	
Functional Area	Utilities	Length of Pipe	5,650
Total Debt Service		Construction Cost per LF.	\$245
Full Year Operating Impact			

Project Description:

This project (LFR-59) includes the replacement of an existing 8 inch gravity main with a 10 inch gravity main.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be from Nelm's Circle, through Carter's Crossing Shopping Center to Auction Drive.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

The purpose of the project is to increase the conveyance capacity of gravity main. Prior to replacing the existing gravity main, flow-monitoring and/or sewer modeling will be performed to assess the available capacity remaining in the existing gravity main.

Utilities: Gravity Main Replacement: Nelms Circle to Auction Drive**Alternative:**

There would be risk of exceeding pipe capacity and overflow of wastewater at upstream manholes.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	0	0	0	137,900	0	0	0	0
Construction/Project	0	0	0	0	0	0	0	1,241,100	0	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$137,900	\$1,241,100	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Pro Rata	0	0	0	0	0	0	68,950	620,550	0	0	0
User Fees	0	0	0	0	0	0	68,950	620,550	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$137,900	\$1,241,100	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Expansion: Potomac Creek Pump Station

Project Code	Budget Office will input	Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2024
Total Project Cost	\$991,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project (LFR-226) includes the expansion of the Potomac Creek Pump Station by 2.04 million gallons a day (MGD).

Operating Impact Summary:

This project has minimal operating costs such as electricity and fuel for the emergency generator. This project will cause an incremental increase to those costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

Location:

This project is located at the Potomac Creek Pump Station.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted 2018 Water and Sewer Master Plan.

Analysis of Need:

The purpose of the project is to increase the capacity of the pump station. The timing for construction of this project is dependent on the timing of flows in this area.

Utilities: Expansion: Potomac Creek Pump Station

Change or Reasons for Revisions:

The previous Capital Improvement Program (CIP) indicated the project would be performed over a two year period. Also, the FY 2020 CIP includes all the costs for this project in a single year.

Alternative:

The pump station will not be able to convey flows to the wastewater treatment facility.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Planning/Design	0	0	0	0	125,000	0	0	0	0	0	0
Construction/Project	0	0	0	0	0	866,000	0	0	0	0	0
Total Project Cost	\$0	\$0	\$0	\$0	\$125,000	\$80,000	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	0	0	0	125,000	866,000	0	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$125,000	\$866,000	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: General Upgrades: Little Falls Run Wastewater Treatment Facility

Project Code		Square Footage/Acreage	
Project Type	Utilities, Water	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Mid 2020
Total Project Cost	\$250,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project includes replacement of sections of structural concrete and filter media material.

Operating Impact Summary:

This project does not have any stand-alone operating costs. The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance. These operating costs are considered and evaluated during each budget cycle.

Location:

The project will be constructed at the Little Falls Run Wastewater Treatment Facility.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each Fiscal Year of the Utilities Division's Capital Improvement Program as a part of the Board of Supervisor's proposed "Healthy Growth" priority.

Analysis of Need:

The existing filter structure and media material are showing signs of diminished performance. The purpose of this project is to address any performance issues prior to a full replacement project being designed and implemented as a result of the Facilities Assessment being performed in FY2019.

Utilities: General Upgrades: Little Falls Run Wastewater Treatment Facility

Alternative:

If the project is not constructed there will be insufficient water transmission capability.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	0	250,000	0	0	0	0	0	0	0	0	0
Total Project Cost	\$0	\$250,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	250,000	0	0	0	0	0	0	0	0	0
Total	\$0	\$250,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: General Upgrades: Little Falls Run Wastewater Treatment Facility

Project Code		Square Footage/Acreage	
Project Type	Utilities 3R	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2022
Total Project Cost	\$1,900,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

These upgrades (LWWTF-002) include on-going concrete repair to process units, potential headworks upgrade, and UV disinfection updates.

Operating Impact Summary:

This project will not increase operational costs. These replacements will be in-kind and likely create a more efficient operation.

Location:

The project will be constructed at the Little Falls Run Wastewater Treatment Facility.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each Fiscal Year of the Utilities Division's Capital Improvement Program as a part of the Board of Supervisor's proposed "Healthy Growth" priority.

Utilities: General Upgrades: Little Falls Run Wastewater Treatment Facility

Analysis of Need:

In addition to planning for more treatment capacity and excellent water quality, the Utilities Division is also committed to meeting its customer's expectations for a high level of reliability. With aging assets, the Little Falls Run Wastewater Treatment Facility is now approaching 30 years of reliable operations. Most mechanical and electrical components have useful lifetimes of 15 to 30 years. The Utilities Division expects the need for reinvestment into critical equipment at Little Falls Run Wastewater Treatment Facility to increase in the future. A detailed condition assessment is being performed to define and schedule renovations. Until that assessment is completed, this project assumes the need of upgrade or replacement of several systems.

Alternative:

If any part of the required repair/replacement/rehabilitation is not performed, the water treatment may fail to meet demand.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction/Project	0	260,000	1,740,000	0	0	0	0	0	0	0	0
Total	\$0	\$260,000	\$1,740,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	260,000	1,740,000	0	0	0	0	0	0	0	0
Total	\$0	\$260,000	\$1,740,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Denitrification Upgrade: Little Falls Run Wastewater Treatment Facility

Project Code		Square Footage/Acreage	
Project Type	3-R	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2021
Total Project Cost	\$1,900,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project (LWWTF-003) specifically addresses the likely requirement that the Virginia Department of Environmental Quality (VaDEQ) will modify the post-denitrification (Post-DN) requirements of all discharges into the Rappahannock River over the next two to three years.

Operating Impact Summary:

This project may encounter minimal additional operational costs with the likely addition of small equipment and processes.

Location:

The project will be constructed at the Little Falls Run Wastewater Treatment Facility.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each Fiscal Year of the Utilities Division's Capital Improvement Program as a part of the Board of Supervisor's proposed "Healthy Growth" priority.

Utilities: Denitrification Upgrade: Little Falls Run Wastewater Treatment Facility

Analysis of Need:

The Little Falls Run Wastewater Treatment Facility's Virginia Pollutant Discharge Elimination System (VPDES) Permit expires in September 2020; the DEQ is proposing a Rappahannock River Water Quality Policy due to low downstream dissolved oxygen levels, so the reapplication process may identify other upgrades or modifications. The Fresh Water Nutrient Criteria / Ammonia rule will likely be adopted by VA and DEQ by mid-2019, the Rappahannock Policy is expected by the time of other VPDES Permit renewals in the same reach of the river (Spotsylvania County, City of Fredericksburg; 2017-8). These regulatory changes suggest biological treatment system and/or chemical feed upgrades

Alternative:

If any part of the required upgrades is not performed, the water treatment may fail to meet requirements.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction/Project	0	0	350,000	3,150,000	0	0	0	0	0	0	0
Total	\$0	\$0	\$350,000	\$3,150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	0	350,000	3,150,000	0	0	0	0	0	0	0
Total	\$0	\$0	\$350,000	\$3,150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Upgrades: Little Falls Run Wastewater Treatment Facility

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2025
Total Project Cost	\$11,600,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This Capital Improvement Program (CIP) project (LWWTF-004) specifically addresses nitrogen removal and phosphorus polishing. This CIP line item is an Allowance, which would be defined and detailed as the water quality criteria is adopted, Department of Environmental Quality (DEQ) policies and procedures are reviewed, and the new rule is applied to the Virginia Pollutant Discharge Elimination System (VPDES) Permit renewals in 2018 and 2019.

Operating Impact Summary:

This project will not increase operational costs. These replacements will be in-kind and likely create a more efficient operation.

Location:

The project will be constructed at the Little Falls Run Wastewater Treatment Facility.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each Fiscal Year of the Utilities Division's Capital Improvement Program as a part of the Board of Supervisor's proposed "Healthy Growth" priority.

Utilities: Upgrades: Little Falls Run Wastewater Treatment Facility

Analysis of Need:

The Little Falls Run Wastewater Treatment Facility VPDES Permit expires in September 2020; DEQ is proposing a Rappahannock River Water Quality Policy due to low downstream dissolved oxygen levels, so the reapplication process may identify other upgrades or modifications. The Fresh Water Nutrient Criteria / Ammonia rule will likely be adopted by Virginia and DEQ by mid-2018, the Rappahannock Policy is expected by the time of other VPDES Permit renewals in the same reach of the river (Spotsylvania County, City of Fredericksburg; 2017-8). The change in ammonia toxicity water quality criteria will likely result in a lower NH₃-N limit (by season) that requires additional nitrification capacity and/or process control to meet monthly average and weekly limits. Additionally, it is likely that Little Falls Run will need to meet lower TN levels than the current 6 mg/L TN goal, on the order of 3-4 mg/L TN annual average concentration. These regulatory changes suggest extensive biological treatment system and/or chemical feed upgrades. There is no property acquisition cost included in this budgetary allowance.

Alternative:

If the Utilities Division fails to meet regulatory requirements, the necessary operational permits will not be acquired.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction/Project	0	0	0	1,160,000	10,440,000	0	0	0	0	0	0
Total	\$0	\$0	\$0	\$1,160,000	\$10,440,000	\$0	\$0	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Bond Proceeds	0	0	0	0	10,440,000	0	0	0	0	0	0
User Fees	0	0	0	1,160,000	0	\$0	\$0	\$0	\$0	\$0	0
Total	\$0	\$0	\$0	\$1,160,000	\$10,440,000						\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$874,000	\$874,000	\$874,000	\$874,000	\$874,000	\$874,000

Utilities: General Upgrades: Little Falls Run Wastewater Treatment Facility

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Late 2026
Total Project Cost	\$2,700,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

These upgrades (LWWTF-005) include mechanical and control upgrades to effluent filtration, plant Supervisory Control and Data Acquisition (SCADA) and overall process control system updates, and other miscellaneous treatment upgrades. These general upgrades are compatible and consistent with other anticipated near-term upgrades and modifications for firm capacity, efficient operations, system reliability, and effluent compliance.

Operating Impact Summary:

There are no direct operational costs as these upgrades are in-kind replacement and will likely increase operational efficiency.

Location:

This project will take place at the Little Falls Run Wastewater Treatment Facility.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each Fiscal Year of the Utilities Division's Capital Improvement Program as a part of the Board of Supervisor's proposed "Healthy Growth" priority.

Utilities: General Upgrades: Little Falls Run Wastewater Treatment Facility

Analysis of Need:

In addition to planning for more treatment capacity and excellent water quality, the Utilities Division is also committed to meeting its customer's expectations for a high level of reliability. With aging assets, Little Falls Run Wastewater Treatment Facility is now approaching 30 years of reliable operations. Most mechanical and electrical components have useful lifetimes of 15 to 30 years. The Utilities Division expects the need for reinvestment into critical equipment at Smith Lake WTF to increase in the future. A detailed condition assessment is being performed to define and schedule renovations. Until that assessment is completed, this project assumes the need of upgrade or replacement of several systems.

Alternative:

If the Utilities Division fails to meet regulatory requirements, the necessary operational permits will not be acquired.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction/Project	0	0	0	0	0	270,000	2,430,000	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$270,000	\$2,430,000	\$0	\$0	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	0	0	0	0	270,000	2,430,000	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$270,000	\$2,430,000	\$0	\$0	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Pump Station Rehabilitation and Replacement

Project Code		Square Footage/Acreage	
Project Type	Utilities 3R	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$500,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This work consists of the replacement of entire small wastewater pump stations or portions of larger wastewater pump stations throughout the collection system. The Master Plan identifies which pump stations require capacity upgrades or replacement, but not rehabilitation or replacement due to age or condition.

Operating Impact Summary:

These projects have minimal operating costs such as electricity and fuel for the emergency generator in the event the station is enlarged. If the project does not increase the power or generator size, the current operating costs remain. These operating costs are considered and evaluated during each budget cycle.

Location:

These projects are located at pump stations throughout the wastewater collection system.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each fiscal year of the Utilities Division's Capital Improvement Program and embodies the Board of Supervisors proposed Healthy Growth priority.

Utilities: Pump Station Rehabilitation and Replacement

Analysis of Need:

These projects are located at pump stations throughout the wastewater collection system. They exhibit a serious need for total replacement or equipment rehabilitation. This work is not part of the overall operational budget for maintenance. The goal and intent of this replacement work is to eventually keep the wastewater pump stations fully functional and efficient. This work is intended to be performed by the Utilities Division Field Crews.

Alternative:

There would likely need to be expensive emergency repairs to these known areas.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	500,000	500,000	500,000	500,000	500,000	550,000	600,000	650,000	700,000	750,000	800,000
Total Project Cost	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$550,000	\$600,000	\$650,000	\$700,000	\$750,000	\$800,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	500,000	500,000	500,000	500,000	500,000	550,000	600,000	650,000	700,000	750,000	800,000
Total	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$550,000	\$600,000	\$650,000	\$700,000	\$750,000	\$800,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Sewer Extension Projects

Project Code		Square Footage/Acreage	
Project Type	Utilities, Sewer	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$250,000	Student Capacity	
Functional Area	Utilities	Funding per Year	\$250,000
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project includes design and construction of sewer extension projects throughout the County. These projects are not Master Plan, General Water & Sewer Improvement Program, and are not 3R. These projects are created after citizens and/or groups of citizens apply for connections to the sewer collection system for properties that are more than 300' away from the County's infrastructure.

Operating Impact Summary:

The cumulative addition of water and sewer infrastructure will require additional operating costs consisting of maintenance and hard costs. These operating costs are considered and evaluated during each budget cycle.

Location:

These projects vary in location and are infrequent.

Relationship to Approved County Policy or Plan:

This project is part of the Adopted General Water and Sewer Improvement Program and is proposed for each fiscal year of the Utilities Division's Capital Improvement Program which embodies the Board of Supervisors proposed Healthy Growth priority.

Utilities: Sewer Extension Projects

Analysis of Need:

These projects are created from the County's Water and Sewer Extension Policy. Funding is appropriated each year as a placeholder in the event a project application is granted approval for design and construction. Each project differs in size and scope and does not occur every year. This work is intended to be performed by the Utilities Division Field Crews.

Alternative:

There will be no dedicated funding for sewer extension projects.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	252,000	262,000	273,000	284,000	296,000	346,000	396,000	446,000	496,000	546,000	596,000
Total Project Cost	\$252,000	\$262,000	\$273,000	\$284,000	\$296,000	\$346,000	\$396,000	\$446,000	\$496,000	\$546,000	\$596,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	252,000	262,000	273,000	284,000	296,000	346,000	396,000	446,000	496,000	546,000	596,000
Total	\$252,000	\$262,000	\$273,000	\$284,000	\$296,000	\$346,000	\$396,000	\$446,000	\$496,000	\$546,000	\$596,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Other Expenditures:	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	5 Year Balanced CIP	5 Year Planning Period	Total Projected Uses (Included PY Funding)
Public Works - Utilities Division Complex	0	0	0	0	0	0	0	0	423,000	0	0	0	423,000	423,000
Vehicle and Equipment Replacement	1,554,000	972,200	443,000	426,000	662,000	383,000	458,000	400,000	400,000	400,000	400,000	4,440,200	6,498,200	10,938,400
Contingency Allowance	1,143,000	1,377,000	585,700	452,200	315,800	2,632,300	362,500	155,200	185,300	185,300	185,000	6,506,000	7,579,300	14,085,300
Total	\$2,697,000	\$2,349,200	\$1,028,700	\$878,200	\$977,800	\$3,015,300	\$820,500	\$555,200	\$1,008,300	\$585,300	\$585,000	\$10,946,200	\$14,500,500	\$25,446,700

Utilities: Division Complex

Project Code	Budget Office will input	Square Footage/Acreage	20 acres/18,000 sf
Project Type	Utilities, Other	Construction Cost per Sq. Ft	\$360 incl. site
Project Status	Planning	Est. Opening Date	2031
Total Project Cost	\$6,500,000	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This project includes the design and construction for a Utilities Division Administration and Maintenance Facility (Complex) to enable the Utilities Division to operation its Customer Service Center, Capital Construction, and Field Operations & Maintenance functions.

Operating Impact Summary:

There will be operational costs associated with this new facility. It will be the intent of the design that all additional operating costs will be less than the current operations costs at current facilities.

Location:

This project would be located on land owned by the County near the Regional Jail for use by Fire & Rescue, Parks and Recreation and the Department of Public Works (Utilities Division).

Relationship to Approved County Policy or Plan:

This project will support the Board of Supervisor's "Healthy Growth" priority.

Utilities: Division Complex

Analysis of Need:

Currently the Customer Service Center is located in the Government Center. For the long term, this may be the best location for this feature. However, it has been envisioned being at a Utilities Division Complex. The Capital Construction offices currently operate from leased space and the Utilities Division Field Operations and Maintenance sections currently operate in space near the Aquia Wastewater Treatment Facility (AWWTF). The space used at the AWWTF has been outgrown and there is no longer expansion area. This operations area has been filled with a variety of multipurpose buildings over the years and has become inefficient. This proposed project would create office and land space for these operations with additional area for future growth. Additionally, in the next decade or so, the AWWTF will need this current field operations area for expansion of its wastewater treatment capacity.

Alternative:

The Utilities Division Field Operations & Maintenance and Capital Construction functions will remain in their current locations.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction/Project	0	0	0	0	0	0	0	0	423,000	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$423,000	\$0	\$0

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	0	0	0	0	0	0	0	0	423,000	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$423,000	\$0	\$0

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Replacement: Vehicles and Equipment

Project Code		Square Footage/Acreage	
Project Type	Utilities, Other	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$972,200	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

These proposed expenditures include the replacement of vehicles and major pieces of equipment due to high mileage, excess repair and maintenance cost, or condition issues.

Operating Impact Summary:

As many of the existing vehicles age and require increasing operational costs, this program is designed to minimize any additional operating costs from new vehicles through greater efficiency. The addition of vehicles will require an increase in operational costs based on individual vehicle operational costs.

Location:

This expenditure applies to the fleet of vehicles and major equipment for the Department Public Works, Utilities Division.

Relationship to Approved County Policy or Plan:

It is part of the Board of Supervisor's proposed "Healthy Growth" priority.

Utilities: Replacement: Vehicles and Equipment

Analysis of Need:

The vehicles currently operated by the Utilities Division experience significant use and often require replacement prior to vehicles used under normal circumstances. The Utilities Division has a task force to evaluate the use and operational costs of each vehicle, each year. The intent of the task force is to replace only the vehicles and equipment that need replacement and that all vehicles and equipment are used correctly and efficiently.

Alternative:

With no vehicle replacement program, all vehicles and equipment would be used and repaired as necessary. These repair costs would far exceed the value of the vehicle or equipment. The ability of staff to perform assigned duties would diminish.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction/Project	1,554,000	972,200	443,000	426,000	662,000	383,000	458,000	400,000	400,000	400,000	400,000
Total	\$1,554,000	\$972,200	\$443,000	\$426,000	\$662,000	\$383,000	\$458,000	\$400,000	\$400,000	\$400,000	\$400,000

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	1,554,000	972,200	443,000	426,000	662,000	383,000	458,000	400,000	400,000	400,000	400,000
Total	\$1,554,000	\$972,200	\$443,000	\$426,000	\$662,000	\$383,000	\$458,000	\$400,000	\$400,000	\$400,000	\$400,000

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Utilities: Contingency Allowance

Project Code		Square Footage/Acreage	
Project Type	Utilities, Other	Construction Cost per Sq. Ft	
Project Status	Planning	Est. Opening Date	Yearly
Total Project Cost	\$1,507,760	Student Capacity	
Functional Area	Utilities		
Total Debt Service			
Full Year Operating Impact			

Project Description:

This expenditure is a contingency item for the budget year for all capital projects. For the initial budget year the amount is 8% of proposed expenditures.

Operating Impact Summary:

There are no operating costs for this potential expenditure.

Location:

N/A

Relationship to Approved County Policy or Plan:

N/A

Analysis of Need:

As with any contingency, this expenditure is planned in the event that capital spending exceeds the projected revenue need. The Capital Construction section will work diligently to operate within the planned budget and appropriations. However, in the event additional funds are required to meet the projects' intent, these funds are available in the Fund Balance.

Utilities: Contingency Allowance

Change or Reasons for Revisions:

This expenditure changes each year based on the proposed expenditures.

Alternative:

If capital spending exceeds its annual budget and appropriation there would be no contingency. This could necessitate the need to borrow or to delay future projects to meeting funding requirements.

Project Summary:

Project Expenditures	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction / Project	1,143,000	1,377,000	585,700	452,200	315,800	2,632,300	362,500	155,200	185,300	185,300	185,300
Total Project Cost	\$1,143,000	\$1,377,000	\$585,700	\$452,200	\$315,800	\$2,632,300	\$362,500	\$155,200	\$185,300	\$185,300	\$185,300

Project Revenues	Prior Year	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
User Fees	1,143,000	1,377,000	585,700	452,200	315,800	2,632,300	362,500	155,200	185,300	185,300	185,300
Total	\$1,143,000	\$1,377,000	\$585,700	\$452,200	\$315,800	\$2,632,300	\$362,500	\$155,200	\$185,300	\$185,300	\$185,300

Operating Impacts	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Debt Management Policy Statement:

The Government Finance Officers Association's Committee on Governmental Debt and Fiscal Policy issued a statement regarding Recommended Practice on Debt Policy Management in 1995, and revised it in 2003. The following comments were made in the introduction to the statement:

"Debt management policies are written guidelines and restrictions that affect the amount and type of debt issued by a state or local government, the issuance process, and the management of a debt portfolio. A debt management policy improves the quality of decisions, provides justification for the structure of debt issuance, identifies policy goals, and demonstrates a commitment to long-term financial planning, including a multi-year capital plan. Adherence to a debt management policy signals to rating agencies and the capital markets that a government is well managed and should meet its obligations in a timely manner. Debt levels and their related annual costs are important long-term obligations that must be managed within available resources. An effective debt management policy provides guidelines for a government to manage its debt program in line with those resources."

Accordingly, Stafford County examined its debt program and the Board of Supervisors adopted debt policy limits to ensure that no undue burden is placed on the County and its citizens. The County's debt policies are included in the Board's Principles of High Performance Financial Management. The Policy was updated June 4, 2019, by Resolution R19-182. The debt limitations are as follows:

- General obligation debt shall not exceed 2.75% of the assessed valuation of taxable real property.
- General fund debt service expenditures (County and Schools) shall not exceed 10% of the general government and schools operating budgets.
- The County intends to maintain a 10-year pay-out ratio at or above 60%. To the extent possible, future debt for County facilities will be issued with level principal payments.
- When the County finances capital improvements or other projects through bonds or capital leases, it will repay the debt within a period not to exceed the expected useful life of the projects.
- Debt ratios do not include debt to be repaid from identified revenue sources outside the General Fund. In the case of special service districts, the Board of Supervisors intends to set tax rates to cover any debt to be funded with the revenue.
- Capital lease debt service shall not exceed 1% of the general government budget. Capital lease debt may only be used if all the following four criteria are met:
 1. Capital lease purchase is eligible under state law for such financing;
 2. Useful life of the purchase equals or exceeds the term of the debt;
 3. Total purchase exceeds \$100,000; and
 4. Sufficient funds are available to service the capital lease debt.

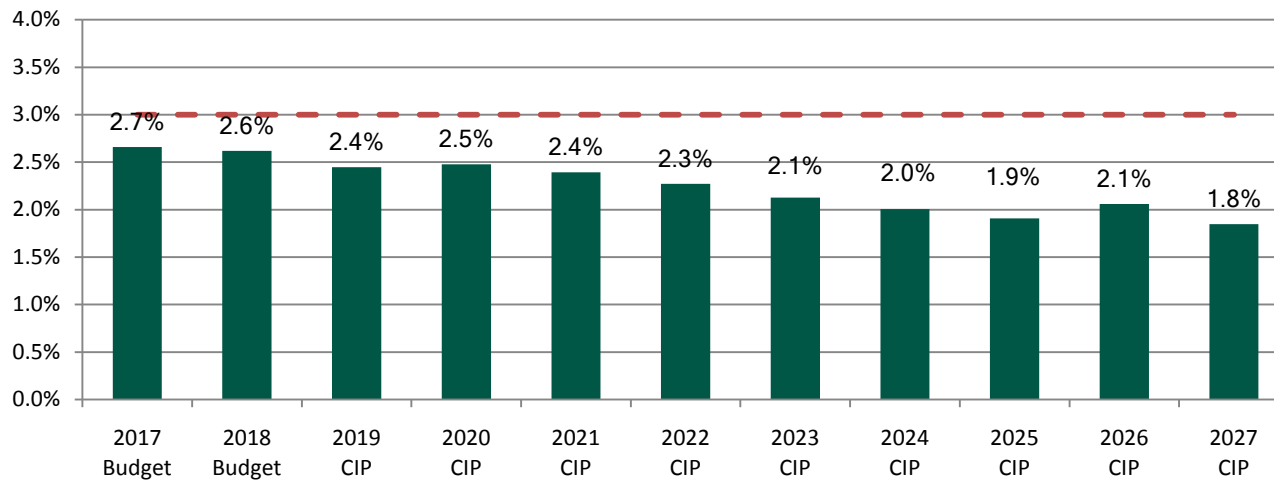
The adopted CIP fully complies with the financial policies.

Financial Analysis:

The following graphs indicate that the FY2020-2029 Adopted CIP is in compliance with the Board's fiscal policy guidelines.

Debt as a Percentage of Assessed Value:

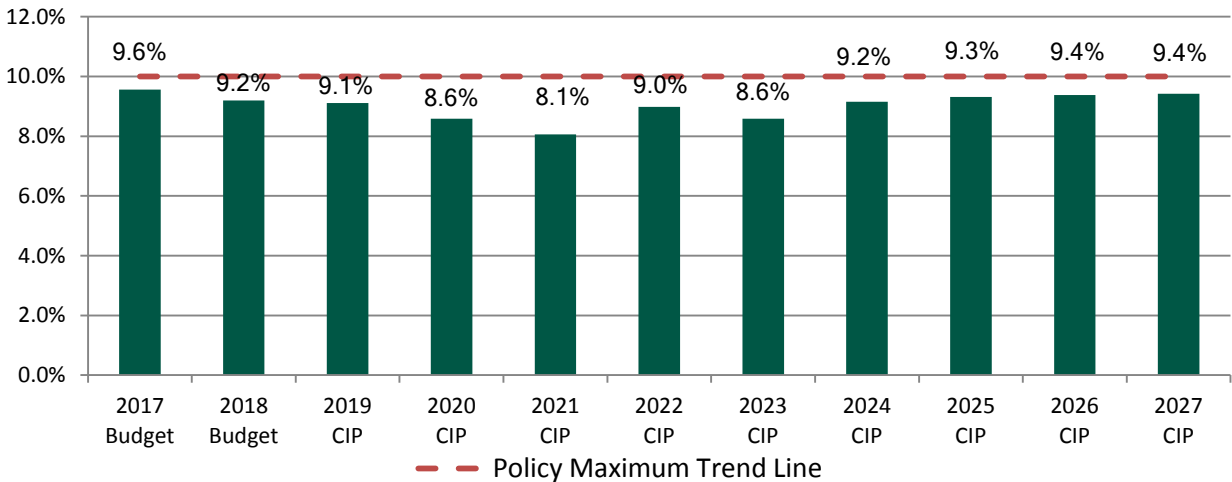
The County's financial policy "Principles of High Performance Financial Management" state that general obligation debt shall not exceed 3.0% of the assessed valuation of taxable real property. Below is a graph illustrating the County's compliance with the policy.



Financial Analysis:

Debt Service as a Percentage of General Government Budget:

The County’s Financial Policy states general fund debt service expenditures (County and Schools) shall not exceed 11% of the general government and schools operating budgets and shall not exceed 10%. Below is a graph presenting the County’s compliance with the policy.



Payout Ratio:

The payout ratio is an assessment of the speed at which the County repays its debt. At the beginning of FY2020 the total County debt is estimated at \$410 million. At the end of FY2029 (ten fiscal years beyond FY2020) the County will have repaid \$279 million or 65.3% of that outstanding debt.

10 Year Payout Ratio (Must be 60% or greater)	
Fiscal Year	Payout Ratio
FY2020	65.30%
FY2021	68.40%
FY2022	70.40%
FY2023	71.70%
FY2024	73.50%

Bond Rating:

The County's bond ratings are shown below:

	Moody's	Standard & Poor's	Fitch
General Obligation	Aaa	AAA	AAA

In November, 2018 Stafford County joined 47 counties and 33 cities across the nation in acquiring its third AAA bond rating — the highest credit rating available. Moody's Investors Service announced the bond rating upgrade this week, citing Stafford's current healthy financial position as well as its emphasis on strategically planning for the future. Stafford previously received AAA bond ratings from Fitch Ratings in October 2016 and Standard & Poor's in July 2015.

"Gaining three AAA bond ratings is the result of a lot of hard work by both current and former members of the Board of Supervisors as well as a host of County staff," said Board of Supervisors Meg Bohmke, Falmouth District.

Moody's Investors Service reviewed Stafford's credit strengths and challenges, debts and obligations. Key indicators include the County's diverse, growing economy along with its proximity to the expanding, stabilizing presence of Quantico and the more than 25,000 direct jobs it provides. Moody's praised Stafford County on being "positioned favorably to maintain its strong financial position with sound reserve levels, strong financial management and ample financial flexibility."

"This report from Moody's confirms the culmination of many years of work and preparation by current and former Board of Supervisors as well as exceptional staff including the leadership and effort from our Chief Financial Officer, Maria Perrotte. This achievement does not happen overnight; financial planning has become a year-round process for us," said Stafford County Administrator Tom Foley. "In the end, gaining three AAA bond ratings is tangible proof that we are good stewards of taxpayer funds."

An AAA bond rating indicates a high level of confidence that a locality can meet its obligations today and in the future. More importantly, this rating allows localities to borrow money for essential public facilities at a lower interest rate, saving taxpayers money.

The Board will continue its work to retain the County's bond rating.

DEPARTMENTAL GOALS/OBJECTIVES:

- Further enhancing the County's General Obligation Bond rating to promote financial integrity
- Maintain cash capital at 3% of the operating budget
- Ensure fiscal integrity by achieving and maintaining our goal of a 10% debt service to general fund expenditures ratio by 2015
- Maintain and/or update our well-diversified management planning tools and policies in such areas as financials, land use, economic development.
- Maintain our revenue stabilization, capital projects and opportunity fund reserves

The above goals support the Principles of High Performance Financial Management and the Board of Supervisors Priorities for the community.

SERVICE LEVELS:

	FY2018 Actual	FY2019 Budget	FY2020 Plan
Outcomes			
Debt Service	\$46,031,214	\$46,888,500	45,995,678
Debt Service per Capita	\$313	\$313	\$307
Standard & Poor's	AAA	AAA	AAA
Moody's	Aa1	Aaa	Aaa
Fitch	AAA	AAA	AAA

DEPARTMENTAL ACCOMPLISHMENTS:

- November 2018 Moody's upgraded the County's bond rating to Aaa.
- May 2017 Fitch upgraded the County's bond rating from AA+ to AAA.
- July 2015 Standard & Poor's upgraded the County's bond rating to AAA.
- The goal to budget 3% of the operating budget for Repairs, Replacements and Rehabilitations was accomplished in the FY18 adopted budget.

Analysis of Outstanding Debt

General Obligation Bonds

School Bond - VPSA			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2020	283,938,653	18,981,214	264,957,439
2021	264,957,439	18,685,408	246,272,031
2022	246,272,031	18,830,176	227,441,855
2023	227,441,855	18,635,183	208,806,672
2024	208,806,672	19,276,672	189,530,000

Literary Fund Loans			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2020	432,292	216,149	216,143
2021	216,143	216,143	0

Bonds for County Projects			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2020	39,715,000	2,805,000	36,910,000
2021	36,910,001	2,805,000	34,105,001
2022	34,105,001	2,800,000	31,305,001
2023	31,305,001	2,325,000	28,980,001
2024	28,980,001	2,325,000	26,655,001

Total General Obligation Bonds			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2020	324,085,945	22,002,363	302,083,582
2021	302,083,583	21,706,551	280,377,032
2022	280,377,032	21,630,176	258,746,856
2023	258,746,856	20,960,183	237,786,673
2024	237,786,673	21,601,672	216,185,001

Revenue Bonds

Lease Revenue Bonds			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2020	8,530,507	1,991,408	6,539,099
2021	6,539,099	2,043,638	4,495,461
2022	4,495,461	895,309	3,600,151
2023	3,600,151	918,923	2,681,229
2024	2,681,229	943,190	1,738,039

General Government - Financing Lease - Crow's Nest			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2020	4,892,694	495,247	4,397,447
2021	4,397,447	506,703	3,890,744
2022	3,890,745	518,424	3,372,321
2023	3,372,320	530,416	2,841,904
2024	2,841,904	542,686	2,299,218

Financing Lease - VRA

General Government			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2020	71,560,000	4,620,000	66,940,000
2021	66,940,000	4,705,000	62,235,000
2022	62,235,000	4,810,000	57,425,000
2023	57,425,000	4,920,000	52,505,000
2024	52,505,000	3,400,000	49,105,000

Other Debt

Other- Landfill			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2020	1,240,000	225,000	1,015,000
2021	1,015,000	235,000	780,000
2022	780,000	245,000	535,000
2023	535,000	260,000	275,000
2024	275,000	275,000	0

Analysis of Outstanding Debt

Utilities Fund

Revenue Bonds			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2020	93,352,959	3,743,087	89,609,872
2021	89,609,872	3,861,760	85,748,112
2022	85,748,112	3,985,877	81,762,235
2023	81,762,235	4,115,454	77,646,781
2024	77,646,781	4,255,496	73,391,285

Total Utilities Debt			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2020	93,352,959	3,743,087	89,609,872
2021	89,609,872	3,861,760	85,748,112
2022	85,748,112	3,985,877	81,762,235
2023	81,762,235	4,115,454	77,646,781
2024	77,646,781	4,255,496	73,391,285

All Funds

Total All Funds Debt			
Fiscal Year	Balance July 1	Principal Payments	Balance June 30
2020	503,662,105	28,457,105	403,645,000
2021	470,585,001	28,353,652	375,291,349
2022	437,526,350	27,274,786	348,016,563
2023	405,441,562	26,784,976	321,231,587
2024	373,736,587	27,618,044	293,613,543

General Fund Bond Debt

Virginia Resource Authority, Crows Nest Series 2008				
Fiscal Year	Principal	Interest	Total	Balance
2008				\$9,500,001
2009	352,741	269,707	622,448	9,147,260
2010	363,402	271,713	635,115	8,783,858
2011	374,386	260,729	635,115	8,409,472
2012	385,702	249,413	635,115	8,023,770
2013	397,360	237,755	635,115	7,626,410
2014	420,460	184,487	604,947	7,205,950
2015	441,736	163,211	604,947	6,764,214
2016	451,954	152,993	604,947	6,312,260
2017	462,409	142,538	604,947	5,849,851
2018	473,106	131,841	604,947	5,376,745
2019	484,050	120,897	604,947	4,892,695
2020	495,247	109,700	604,947	4,397,448
2021	506,703	98,244	604,947	3,890,745
2022	518,424	86,523	604,947	3,372,321
2023	530,416	74,530	604,946	2,841,905
2024	542,686	62,261	604,947	2,299,219
2025	555,240	49,707	604,947	1,743,979
2026	568,084	36,863	604,947	1,175,895
2027	581,225	23,722	604,947	594,670
2028	594,670	10,277	604,947	0
	\$9,500,001	\$2,737,111	\$12,237,112	

General Government General Obligation Bonds, Parks, Recreation and Transportation Series 2013				
Fiscal Year	Principal	Interest	Total	Balance
2014				\$18,785,000
2015	935,000	436,923	1,371,923	17,850,000
2016	935,000	840,825	1,775,825	16,915,000
2017	940,000	808,100	1,748,100	15,975,000
2018	940,000	765,900	1,705,900	15,035,000
2019	940,000	718,900	1,658,900	14,095,000
2020	940,000	671,900	1,611,900	13,155,000
2021	940,000	624,900	1,564,900	12,215,000
2022	940,000	577,900	1,517,900	11,275,000
2023	940,000	530,900	1,470,900	10,335,000
2024	940,000	483,900	1,423,900	9,395,000
2025	940,000	436,900	1,376,900	8,455,000
2026	940,000	389,900	1,329,900	7,515,000
2027	940,000	342,900	1,282,900	6,575,000
2028	940,000	295,900	1,235,900	5,635,000
2029	940,000	248,900	1,188,900	4,695,000
2030	940,000	206,600	1,146,600	3,755,000
2031	940,000	169,000	1,109,000	2,815,000
2032	940,000	131,400	1,071,400	1,875,000
2033	940,000	93,800	1,033,800	935,000
2034	935,000	56,200	991,200	0
	\$18,785,000	\$8,831,648	\$27,616,648	

General Fund Bond Debt

General Government General Obligation Bonds, Refunding Series 2012				
Fiscal Year	Principal	Interest	Total	Balance
2012				\$4,810,000
2013	0	191,595	191,595	4,810,000
2014	700,000	205,325	905,325	4,110,000
2015	695,000	177,578	872,578	3,415,000
2016	505,000	148,878	653,878	2,910,000
2017	500,000	125,375	625,375	2,410,000
2018	490,000	102,256	592,256	1,920,000
2019	485,000	79,447	564,447	1,435,000
2020	480,000	56,894	536,894	955,000
2021	480,000	32,294	512,294	475,000
2022	475,000	9,997	484,997	0
	\$4,810,000	\$1,129,639	\$5,939,639	

Transportation Service District General Obligation Bonds, Garrisonville District Series 2013				
Fiscal Year	Principal	Interest	Total	Balance
2014		\$123,076	\$123,076	\$5,290,000
2015	260,000	236,900	496,900	5,030,000
2016	260,000	227,800	487,800	4,770,000
2017	265,000	215,975	480,975	4,505,000
2018	265,000	202,725	467,725	4,240,000
2019	265,000	189,475	454,475	3,975,000
2020	265,000	176,225	441,225	3,710,000
2021	265,000	162,975	427,975	3,445,000
2022	265,000	149,725	414,725	3,180,000
2023	265,000	136,475	401,475	2,915,000
2024	265,000	123,225	388,225	2,650,000
2025	265,000	109,975	374,975	2,385,000
2026	265,000	96,725	361,725	2,120,000
2027	265,000	83,475	348,475	1,855,000
2028	265,000	70,225	335,225	1,590,000
2029	265,000	58,300	323,300	1,325,000
2030	265,000	47,700	312,700	1,060,000
2031	265,000	37,100	302,100	795,000
2032	265,000	26,500	291,500	530,000
2033	265,000	15,900	280,900	265,000
2034	265,000	5,300	270,300	0
	\$5,290,000	\$2,495,776	\$7,785,776	

General Fund Bond Debt

General Government General Obligation Bonds - Series 2015, Parks, Recreation				
Fiscal Year	Principal	Interest	Total	Balance
2016	\$0	\$113,557	\$113,557	\$5,947,629
2017	299,832	235,977	535,809	5,647,797
2018	299,832	226,982	526,814	5,347,965
2019	299,832	214,989	514,821	5,048,133
2020	296,949	200,069	497,018	4,751,184
2021	296,949	185,222	482,171	4,454,235
2022	296,949	170,374	467,323	4,157,286
2023	296,949	155,527	452,476	3,860,337
2024	296,949	140,680	437,629	3,563,388
2025	296,949	125,832	422,781	3,266,439
2026	296,949	110,985	407,934	2,969,490
2027	296,949	96,137	393,086	2,672,541
2028	296,949	81,290	378,239	2,375,592
2029	296,949	69,412	366,361	2,078,643
2030	296,949	60,503	357,452	1,781,694
2031	296,949	51,595	348,544	1,484,745
2032	296,949	42,686	339,635	1,187,796
2033	296,949	33,592	330,541	890,847
2034	296,949	24,313	321,262	593,898
2035	296,949	14,847	311,796	296,949
2036	296,949	5,011	301,960	0
	\$5,947,629	\$2,359,582	\$8,307,211	

General Government General Obligation Bonds - Series 2017, Parks, Recreation				
Fiscal Year	Principal	Interest	Total	Balance
2017				\$2,653,200
2018	0	67,439	67,439	2,653,200
2019	133,100	107,531	240,631	2,520,100
2020	133,100	100,876	233,976	2,387,000
2021	133,100	94,221	227,321	2,253,900
2022	133,100	87,566	220,666	2,120,800
2023	133,100	80,911	214,011	1,987,700
2024	133,100	74,256	207,356	1,854,600
2025	133,100	67,604	200,704	1,721,500
2026	133,100	60,946	194,046	1,588,400
2027	133,100	54,291	187,391	1,455,300
2028	133,100	47,636	180,736	1,322,200
2029	133,100	41,646	174,746	1,189,100
2030	133,100	36,322	169,422	1,056,000
2031	132,000	31,020	163,020	924,000
2032	132,000	26,400	158,400	792,000
2033	132,000	22,440	154,440	660,000
2034	132,000	18,480	150,480	528,000
2035	132,000	14,520	146,520	396,000
2036	132,000	10,478	142,478	264,000
2037	132,000	6,353	138,353	132,000
2038	132,000	2,145	134,145	0
	\$2,653,200	\$1,053,081	\$3,706,281	

General Fund Bond Debt

General Government General Obligation Bonds - Series 2015, Transportation				
Fiscal Year	Principal	Interest	Total	Balance
2016		\$83,386	\$83,386	\$4,367,371
2017	220,168	173,279	393,447	4,147,203
2018	220,168	166,674	386,842	3,927,035
2019	220,168	157,867	378,035	3,706,867
2020	218,051	146,912	364,963	3,488,816
2021	218,051	136,009	354,060	3,270,765
2022	218,051	125,107	343,158	3,052,714
2023	218,051	114,204	332,255	2,834,663
2024	218,051	103,302	321,353	2,616,612
2025	218,051	92,399	310,450	2,398,561
2026	218,051	81,497	299,548	2,180,510
2027	218,051	70,594	288,645	1,962,459
2028	218,051	59,691	277,742	1,744,408
2029	218,051	50,969	269,020	1,526,357
2030	218,051	44,428	262,479	1,308,306
2031	218,051	37,886	255,937	1,090,255
2032	218,051	31,345	249,396	872,204
2033	218,051	24,667	242,718	654,153
2034	218,051	17,853	235,904	436,102
2035	218,051	10,903	228,954	218,051
2036	218,051	3,680	221,731	0
	\$4,367,371	\$1,732,652	\$6,100,023	

General Government General Obligation Bonds Series 2017, Transportation				
Fiscal Year	Principal	Interest	Total	Balance
2017				\$9,406,800
2018	0	239,101	239,101	9,406,800
2019	471,900	381,245	853,145	8,934,900
2020	471,900	357,650	829,550	8,463,000
2021	471,900	334,055	805,955	7,991,100
2022	471,900	310,460	782,360	7,519,200
2023	471,900	286,865	758,765	7,047,300
2024	471,900	263,270	735,170	6,575,400
2025	471,900	239,675	711,575	6,103,500
2026	471,900	216,080	687,980	5,631,600
2027	471,900	192,485	664,385	5,159,700
2028	471,900	168,890	640,790	4,687,800
2029	471,900	147,654	619,554	4,215,900
2030	471,900	128,778	600,678	3,744,000
2031	468,000	109,980	577,980	3,276,000
2032	468,000	93,600	561,600	2,808,000
2033	468,000	79,560	547,560	2,340,000
2034	468,000	65,520	533,520	1,872,000
2035	468,000	51,480	519,480	1,404,000
2036	468,000	37,148	505,148	936,000
2037	468,000	22,523	490,523	468,000
2038	468,000	7,605	475,605	0
	\$9,406,800	\$3,733,618	\$13,140,418	

General Fund Bond Debt

Virginia Resource Authority 2017, Animal Shelter				
Fiscal Year	Principal	Interest	Total	Balance
2017				\$5,430,000
2018	190,000	199,187	389,187	5,240,000
2019	180,000	206,769	386,769	5,060,000
2020	190,000	200,563	390,563	4,870,000
2021	195,000	192,722	387,722	4,675,000
2022	205,000	182,472	387,472	4,470,000
2023	215,000	171,709	386,709	4,255,000
2024	230,000	160,306	390,306	4,025,000
2025	240,000	148,263	388,263	3,785,000
2026	250,000	135,706	385,706	3,535,000
2027	265,000	122,509	387,509	3,270,000
2028	275,000	110,572	385,572	2,995,000
2029	285,000	100,972	385,972	2,710,000
2030	295,000	91,909	386,909	2,415,000
2031	310,000	80,306	390,306	2,105,000
2032	320,000	66,063	386,063	1,785,000
2033	335,000	53,578	388,578	1,450,000
2034	345,000	42,738	387,738	1,105,000
2035	355,000	31,294	386,294	750,000
2036	370,000	19,213	389,213	380,000
2037	380,000	6,484	386,484	0
	\$5,430,000	\$2,323,334	\$7,753,334	

Virginia Resource Authority 2017C, 2008 Refunding				
Fiscal Year	Principal	Interest	Total	Balance
2017				\$4,085,000
2018		68,178		4,085,000
2019	2,485,000	112,753	2,597,753	1,600,000
2020	0	77,650	77,650	1,600,000
2021	0	77,650	77,650	1,600,000
2022	0	77,650	77,650	1,600,000
2023	0	77,650	77,650	1,600,000
2024	0	77,650	77,650	1,600,000
2025	0	77,650	77,650	1,600,000
2026	0	77,650	77,650	1,600,000
2027	0	77,650	77,650	1,600,000
2028	0	77,650	77,650	1,600,000
2029	0	77,650	77,650	1,600,000
2030	0	77,650	77,650	1,600,000
2031	0	77,650	77,650	1,600,000
2032	805,000	58,122	863,122	795,000
2033	795,000	19,297	814,297	0
	\$4,085,000	\$1,190,150	\$5,206,972	

General Fund Bond Debt

Virginia Resource Authority 2017C, Station 14				
Fiscal Year	Principal	Interest	Total	Balance
2018				\$5,890,000
2019	290,000	118,820	408,820	5,600,000
2020	295,000	253,575	548,575	5,305,000
2021	295,000	243,184	538,184	5,010,000
2022	295,000	231,391	526,391	4,715,000
2023	295,000	218,322	513,322	4,420,000
2024	295,000	204,228	499,228	4,125,000
2025	295,000	190,134	485,134	3,830,000
2026	295,000	175,016	470,016	3,535,000
2027	295,000	159,897	454,897	3,240,000
2028	295,000	144,778	439,778	2,945,000
2029	295,000	129,659	424,659	2,650,000
2030	295,000	114,966	409,966	2,355,000
2031	295,000	100,697	395,697	2,060,000
2032	295,000	86,428	381,428	1,765,000
2033	295,000	72,159	367,159	1,470,000
2034	295,000	57,891	352,891	1,175,000
2035	295,000	45,097	340,097	880,000
2036	295,000	33,778	328,778	585,000
2037	295,000	23,509	318,509	290,000
2038	290,000	14,163	304,163	0
	\$5,890,000	\$2,622,404	\$8,507,692	

Virginia Resource Authority 2014B, Refunding of Series 2006 and 2008, Embrey Mill Park Improvements and Indoor Recreation Center				
Fiscal Year	Principal	Interest	Total	Balance
2015	\$0	\$2,034,800	\$2,034,800	\$64,335,000
2016	1,300,000	2,826,863	4,126,863	63,035,000
2017	1,340,000	2,788,831	4,128,831	61,695,000
2018	1,395,000	2,729,547	4,124,547	60,300,000
2019	1,460,000	2,660,663	4,120,663	58,840,000
2020	4,095,000	2,526,641	6,621,641	54,745,000
2021	4,175,000	2,327,122	6,502,122	50,570,000
2022	4,265,000	2,117,097	6,382,097	46,305,000
2023	4,365,000	1,895,953	6,260,953	41,940,000
2024	2,830,000	1,711,581	4,541,581	39,110,000
2025	2,920,000	1,568,763	4,488,763	36,190,000
2026	3,020,000	1,422,975	4,442,975	33,170,000
2027	3,115,000	1,276,966	4,391,966	30,055,000
2028	3,215,000	1,133,659	4,348,659	26,840,000
2029	3,315,000	985,878	4,300,878	23,525,000
2030	3,420,000	833,494	4,253,494	20,105,000
2031	3,515,000	691,959	4,206,959	16,590,000
2032	2,685,000	578,791	3,263,791	13,905,000
2033	2,790,000	477,813	3,267,813	11,115,000
2034	2,885,000	372,109	3,257,109	8,230,000
2035	2,995,000	262,572	3,257,572	5,235,000
2037	2,675,000	52,828	2,727,828	0
	\$64,335,000	\$33,433,122	\$97,768,122	

General Fund Bond Debt

Virginia Resource Authority 2016C, Hidden Lake				
Fiscal Year	Principal	Interest	Total	Balance
				460,000
2020	40,000	22,175	62,175	420,000
2021	40,000	20,350	60,350	380,000
2022	45,000	18,322	63,322	335,000
2023	45,000	16,016	61,016	290,000
2024	45,000	13,709	58,709	245,000
2025	45,000	11,403	56,403	200,000
2026	45,000	9,097	54,097	155,000
2027	50,000	6,663	56,663	105,000
2028	50,000	4,100	54,100	55,000
2029	55,000	1,409	56,409	0
	\$460,000	\$123,243	\$583,243	

Virginia Resource Authority 2015D, LandFill				
Fiscal Year	Principal	Interest	Total	Balance
				1,855,000
2016		39,830		1,855,000
2017	195,000	84,922	234,830	1,660,000
2018	205,000	76,622	289,922	1,455,000
2019	215,000	65,859	291,622	1,240,000
2020	225,000	54,584	290,859	1,015,000
2021	235,000	44,397	289,584	780,000
2022	245,000	33,697	289,397	535,000
2023	260,000	20,756	293,697	275,000
2024	275,000	7,047	295,756	0
	\$1,855,000	\$427,714	\$2,275,667	

General Fund Lease Debt

Communications System				
Fiscal Year	Principal	Interest	Total	Balance
2011	\$0	\$0	\$0	\$8,707,998
2012	845,765	269,390	1,115,155	7,862,233
2013	880,846	234,309	1,115,155	6,981,387
2014	908,562	206,593	1,115,155	6,072,825
2015	937,149	178,006	1,115,155	5,135,676
2016	966,636	148,519	1,115,155	4,169,040
2017	997,051	118,104	1,115,155	3,171,990
2018	1,028,423	86,732	1,115,155	2,143,567
2019	692,504	58,641	751,145	1,451,062
2020	714,294	36,851	751,145	736,769
2021	736,769	14,376	751,145	0
	\$8,707,998	\$1,351,522	\$10,059,520	

Fire Rescue Self-Contained Breathing Apparatus (SCBA), Fire Rescue Heavy Rescue, Public Safety Computer Aided Dispatch				
Fiscal Year	Principal	Interest	Total	Balance
2014				\$5,980,906
2015	776,915	129,278	906,193	5,203,991
2016	792,808	113,386	906,193	4,411,183
2017	809,044	97,149	906,193	3,602,139
2018	825,634	80,560	906,193	2,776,506
2019	842,583	63,610	906,193	1,933,923
2020	366,915	48,281	415,196	1,567,008
2021	376,591	38,605	415,196	1,190,416
2022	386,523	28,674	415,196	803,894
2023	396,716	18,480	415,196	407,178
2024	407,178	8,018	415,196	0
	\$5,980,906	\$626,042	\$6,606,948	

Radio System FCC Mandated Upgrade to TDMA				
Fiscal Year	Principal	Interest	Total	Balance
2016	\$0	\$0	\$0	\$2,100,000
2017	405,709	33,511	439,220	1,694,291
2018	412,732	26,488	439,220	1,281,560
2019	419,876	19,344	439,220	861,684
2020	427,145	12,075	439,220	434,539
2021	434,539	4,681	439,220	0
	\$2,100,000	\$96,100	\$5,575,775	

Fire Rescue Heavy Rescue				
Fiscal Year	Principal	Interest	Total	Balance
2016				\$3,028,339
2017	276,506	58,209	334,715	2,751,833
2018	282,049	52,665	334,715	2,469,784
2019	287,704	47,011	334,715	2,182,080
2020	293,472	41,242	334,715	1,888,607
2021	299,356	35,359	334,715	1,589,251
2022	305,358	29,357	334,715	1,283,893
2023	311,480	23,235	334,715	972,413
2024	317,725	16,990	334,715	654,688
2025	324,095	10,620	334,715	330,593
2026	330,593	4,122	334,715	0
	\$3,028,339	\$318,810	\$3,347,149	

General Fund Lease Debt

2 Fire Trucks				
Fiscal Year	Principal	Interest	Total	Balance
				\$2,194,073
2019	\$92,314	\$39,010	131,325	2,101,759
2020	189,582	73,067	262,649	1,912,177
2021	196,383	66,266	262,649	1,715,793
2022	203,429	59,220	262,649	1,512,364
2023	210,727	51,922	262,649	1,301,638
2024	218,287	44,362	262,649	1,083,351
2025	226,118	36,531	262,649	857,232
2026	234,230	28,419	262,649	623,002
2027	242,633	20,016	262,649	380,369
2028	251,338	11,311	262,649	129,031
2029	129,031	2,294	131,325	0
	\$2,194,073	\$432,419	\$2,626,492	

Utilities Fund Bond Debt

Virginia Resource Authority - Little Falls Run				
Fiscal Year	Principal	Interest	Total	Balance
				\$9,326,573
2012	179,131	640,886	820,017	9,147,442
2013	365,351	321,513	686,864	8,782,091
2014	378,429	308,435	686,864	8,403,662
2015	393,034	260,813	653,847	8,010,628
2016	405,681	215,150	620,831	7,604,947
2017	416,791	204,039	620,830	7,188,156
2018	428,204	192,626	620,830	6,759,952
2019	439,931	180,899	620,830	6,320,021
2020	451,978	168,852	620,830	5,868,043
2021	464,356	156,474	620,830	5,403,687
2022	477,072	143,758	620,830	4,926,615
2023	490,137	130,694	620,831	4,436,478
2024	503,559	117,271	620,830	3,932,919
2025	517,349	103,482	620,831	3,415,570
2026	531,516	89,314	620,830	2,884,054
2027	546,072	74,758	620,830	2,337,982
2028	561,027	59,804	620,831	1,776,955
2029	576,390	44,440	620,830	1,200,565
2030	592,174	28,655	620,829	608,391
2031	608,391	12,439	620,830	0
	\$9,326,573	\$3,454,302	\$12,780,875	

Virginia Resources Authority - 2014 Various water distribution projects and infrastructure improvements.				
Fiscal Year	Principal	Interest	Total	Balance
2015		\$597,721		\$16,010,000
2016	525,000	624,678	2,314,858	15,485,000
2017	545,000	605,234	1,150,234	14,940,000
2018	570,000	580,237	1,150,237	14,370,000
2019	600,000	552,006	1,152,006	13,770,000
2020	625,000	529,041	1,154,041	13,145,000
2021	645,000	507,247	1,152,247	12,500,000
2022	670,000	482,450	1,152,450	11,830,000
2023	700,000	454,069	1,154,069	11,130,000
2024	730,000	422,125	1,152,125	10,400,000
2025	765,000	388,616	1,153,616	9,635,000
2026	800,000	350,863	1,150,863	8,835,000
2027	840,000	311,288	1,151,288	7,995,000
2028	880,000	271,063	1,151,063	7,115,000
2029	915,000	236,816	1,151,816	6,200,000
2030	945,000	207,578	1,152,578	5,255,000
2031	975,000	176,184	1,151,184	4,280,000
2032	1,010,000	141,800	1,151,800	3,270,000
2033	1,050,000	104,116	1,154,116	2,220,000
2034	1,090,000	63,656	1,153,656	1,130,000
2035	1,130,000	21,475	1,151,475	0
	\$16,010,000	\$7,628,263	\$24,205,722	

Utilities Fund Bond Debt

Virginia Resources Authority - Aquia				
Fiscal Year	Principal	Interest	Total	Balance
				\$23,386,038
2012	536,481	475,248	1,011,729	22,849,557
2013	1,064,593	353,935	1,418,528	21,784,964
2014	1,074,248	344,280	1,418,528	20,710,716
2015	1,091,505	327,023	1,418,528	19,619,211
2016	1,124,655	247,521	1,372,176	18,494,556
2017	1,152,860	172,967	1,325,827	17,341,696
2018	1,163,838	161,989	1,325,827	16,177,858
2019	1,174,920	150,906	1,325,826	15,002,938
2020	1,186,109	139,717	1,325,826	13,816,829
2021	1,197,404	128,423	1,325,827	12,619,425
2023	1,220,317	105,509	1,325,826	10,190,303
2024	1,231,937	93,889	1,325,826	8,958,366
2025	1,243,668	82,158	1,325,826	7,714,698
2026	1,255,511	70,315	1,325,826	6,459,187
2027	1,267,467	58,359	1,325,826	5,191,720
2028	1,279,537	46,290	1,325,827	3,912,183
2029	1,291,721	34,105	1,325,826	2,620,462
2030	1,304,022	21,804	1,325,826	1,316,440
2031	1,316,440	9,388	1,325,828	0
	\$23,386,038	\$3,140,846	\$26,526,884	

Virginia Resources Authority - 2015				
Fiscal Year	Principal	Interest	Total	Balance
				\$8,620,000
2016		168,467		8,620,000
2017	270,000	367,856	637,856	8,350,000
2018	280,000	356,463	636,463	8,070,000
2019	295,000	341,728	636,728	7,775,000
2020	310,000	326,225	636,225	7,465,000
2021	325,000	312,153	637,153	7,140,000
2022	340,000	297,313	637,313	6,800,000
2023	355,000	279,503	634,503	6,445,000
2024	375,000	260,797	635,797	6,070,000
2025	395,000	241,066	636,066	5,675,000
2027	435,000	202,678	637,678	4,825,000
2028	455,000	182,672	637,672	4,370,000
2029	475,000	161,791	636,791	3,895,000
2030	495,000	143,384	638,384	3,400,000
2031	510,000	127,681	637,681	2,890,000
2032	530,000	107,831	637,831	2,360,000
2033	555,000	83,416	638,416	1,805,000
2034	580,000	59,613	639,613	1,225,000
2035	600,000	36,563	636,563	625,000
2036	625,000	12,391	637,391	0
	\$8,620,000	\$4,291,299	\$12,742,831	

Utilities Fund Bond Debt

Virginia Resources Authority - 2012 Rocky Pen Run Dam and Reservoir, Rocky Pen Run Water Treatment Facility, Various water distribution projects and infrastructure improvements.				
Fiscal Year	Principal	Interest	Total	Balance
				\$15,000,000
2013	0	2,314,858	0	15,000,000
2014	810,000	2,606,713	3,416,713	14,190,000
2015	845,000	2,573,679	3,418,679	13,345,000
2016	885,000	2,531,847	3,416,847	12,460,000
2017	930,000	1,506,616	2,436,616	11,530,000
2018	975,000	479,078	1,454,078	10,555,000
2019	1,020,000	432,531	1,452,531	9,535,000
2020	1,070,000	383,550	1,453,550	8,465,000
2021	1,125,000	327,303	1,452,303	7,340,000
2022	1,180,000	273,487	1,453,487	6,160,000
2023	1,235,000	218,703	1,453,703	4,925,000
2024	0	188,906	188,906	4,925,000
2025	0	188,906	188,906	4,925,000
2026	0	188,906	188,906	4,925,000
2027	455,000	181,797	636,797	4,470,000
2028	475,000	167,266	642,266	3,995,000
2029	495,000	152,109	647,109	3,500,000
2030	0	144,375	144,375	3,500,000
2031	0	144,375	144,375	3,500,000
2032	0	144,375	144,375	3,500,000
2033	0	144,375	144,375	3,500,000
2034	640,000	131,175	771,175	2,860,000
2035	0	117,975	117,975	2,860,000
2036	0	117,975	117,975	2,860,000
2037	0	117,975	117,975	2,860,000
2038	0	117,975	117,975	2,860,000
2039	0	117,975	117,975	2,860,000
2040	0	117,975	117,975	2,860,000
2041	905,000	99,309	1,004,309	1,955,000
2042	950,000	61,050	1,011,050	1,005,000
2043	1,005,000	20,728	1,025,728	0
	\$15,000,000	\$16,313,867	\$28,999,009	

Virginia Resources Authority - 2016				
Fiscal Year	Principal	Interest	Total	Balance
				\$41,140,000
2017		826,134		41,140,000
2018	95,000	1,801,466	2,314,858	41,045,000
2019	95,000	1,798,322	1,893,322	40,950,000
2020	100,000	1,793,775	1,893,775	40,850,000
2021	105,000	1,789,022	1,894,022	40,745,000
2022	110,000	1,783,863	1,893,863	40,635,000
2023	115,000	1,778,097	1,893,097	40,520,000
2024	1,415,000	1,738,891	3,153,891	39,105,000
2025	1,495,000	1,664,322	3,159,322	37,610,000
2026	1,570,000	1,585,781	3,155,781	36,040,000
2027	1,195,000	1,514,928	2,709,928	34,845,000
2028	1,255,000	1,452,147	2,707,147	33,590,000
2029	1,310,000	1,386,419	2,696,419	32,280,000
2030	1,895,000	1,305,941	3,200,941	30,385,000
2031	1,995,000	1,207,909	3,202,909	28,390,000
2032	2,100,000	1,103,225	3,203,225	26,290,000
2033	2,195,000	1,004,391	3,199,391	24,095,000
2034	1,650,000	925,088	2,575,088	22,445,000
2035	2,385,000	841,866	3,226,866	20,060,000
2036	2,490,000	741,319	3,231,319	17,570,000
2037	2,590,000	636,544	3,226,544	14,980,000
2038	2,695,000	530,859	3,225,859	12,285,000
2039	2,800,000	431,344	3,231,344	9,485,000
2040	2,900,000	327,863	3,227,863	6,585,000
2041	2,115,000	228,009	2,343,009	4,470,000
2042	2,195,000	139,116	2,334,116	2,275,000
2043	2,275,000	46,922	2,321,922	0
	\$41,140,000	\$30,383,559	\$71,115,817	