



PRINCE WILLIAM COUNTY

Prince William County, Virginia Internal Audit Report: Capital Projects Budgeting

November 15, 2024





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TRANSMITTAL LETTER

November 15, 2024

The Board Audit Committee of
Prince William County, Virginia
1 County Complex Court
Prince William, Virginia 22192

Pursuant to the internal audit plan for calendar year ("CY") 2024 for Prince William County, Virginia ("County" / "PWC"), approved by the Board of County Supervisors ("BOCS"), we hereby present the internal audit of capital projects budgeting. We will be presenting this report to the Board Audit Committee of Prince William County at the next scheduled meeting on December 10, 2024.

Our report is organized into the following sections:

Executive Summary	This provides a high-level overview and summary of the observations noted in our internal audit over the capital projects budgeting process.
Background	This provides an overview of the function, as well as relevant background information.
Objectives and Approach	The internal audit objectives are expanded upon in this section, as well as a review of the various phases of our approach.
Observations Matrix	This section includes a description of the observations noted during our internal audit, recommended actions, and Management response, including the responsible party and estimated completion date.
Appendix	This section includes supplementary data and analysis related to our sampled project analysis.

We would like to thank the staff and all those involved in assisting our firm with this internal audit.

Respectfully Submitted,

RSM US LLP

RSM US LLP



EXECUTIVE SUMMARY

Background

Capital projects budgeting is the process of planning, allocating, and managing financial resources for large-scale, long-term projects, such as infrastructure development, facility upgrades, and public service improvements. This process involves identifying and prioritizing projects, estimating costs, and securing funding over multi-year periods to support project completion within fiscal constraints. Effective capital projects budgeting aligns with organizational goals, addresses community needs, and enables sustainable growth by directing funds strategically toward essential capital improvements.

In the County, capital projects budgeting is facilitated through the Capital Improvement Program (“CIP”), a structured, multi-year plan outlining the projects required to meet the County’s infrastructure needs. Developed annually in alignment with the Code of Virginia § 15.2-2239, the CIP is guided by the Strategic Plan, Comprehensive Plan, and Principles of Sound Financial Management. The CIP serves as a comprehensive framework for financing County projects, consolidating them into a single plan that supports long-term infrastructure and community priorities.

The budgeting process for capital projects is a structured, collaborative effort coordinated by the Office of Management and Budget (“OMB”) with input from various county agencies. Each year, agencies identify and submit capital project proposals based on departmental priorities and anticipated community needs. OMB reviews these submissions, allocates funding, and integrates the approved projects into the annual CIP.

The fiscal year (“FY”) ending June 30, 2025 CIP includes approximately \$1.3 billion in projected expenditures, allocated across five (5) main categories: Community Development, Human Services and General Government, Public Safety, Technology Improvement, and Transportation. Key funding sources consist of debt issuance (42%), Northern Virginia Transportation Authority (“NVTA”) contributions (27%), and state and federal revenue (16%). Additional funding sources include the general fund, capital reserve, fire levy, stormwater management fees, and solid waste fees.

Overall Summary / Highlights

The observations identified during our assessment are detailed in the pages that follow. We have assigned relative risk or value factors to each observation identified. Risk ratings are the evaluation of the severity of the concern and the potential impact on the operations of each item. There are many areas of risk to consider in determining the relative risk rating of an observation, including financial, operational, and/or compliance, as well as public perception or ‘brand’ risk.

Objectives and Scope

The objective of this internal audit was to evaluate the design and effectiveness of internal controls over the capital projects budgeting process. Procedures performed included the following:

- Conducted interviews and walkthroughs with key personnel to obtain a detailed understanding of the County’s operating policies and procedures and roles/responsibilities within our scope.
- Assessed the County’s process for capital project initiation and budget development.
- Examined the methods used to obtain, review, and report budget data, including assumptions utilized for estimating costs.
- Assessed the effectiveness of budget status reporting, including the timeliness, accuracy, and relevance of the information.
- Evaluated the County’s process for resource allocation, staffing, and project prioritization to verify sufficient personnel are available for the management and delivery of capital projects, including the identification of triggers for additional resources.
- Assessed the County’s process for prioritizing, scheduling, and monitoring projects to verify capital projects are initiated timely and in alignment with budgetary expectations.
- For a sample of projects, we conducted an analysis to determine whether the expected outcomes, including financial and schedule objectives were achieved.
- Evaluated the County’s process for measuring the performance of capital projects against initial budget estimates and timelines (i.e., look-back analysis, lessons learned, etc.)

The scope of our analysis included projects that were completed or substantially completed according to FY2019-FY2025 CIP data.

Fieldwork was performed from August through November 2024.

Summary of Observation Ratings

(See page 3 for definitions)

	High	Moderate	Low
Contract Compliance	-	4	-

We would like to thank all County team members who assisted us throughout this internal audit.

EXECUTIVE SUMMARY (CONTINUED)

Observations Summary

Below is a summary listing of the observations that were identified during this internal audit. Detailed observations are included in the observations matrix section of the report. In addition, improvement opportunities have been provided following the detailed observations section.

Summary of Observations	
Observations	Rating
1. Capital Project Prioritization	Moderate
2. Initial Project Estimates	Moderate
3. Capital Project Staffing	Moderate
4. Project Documentation	Moderate
Process Improvement Opportunities	
1. Post-Project Performance Evaluation	
2. BOCS Quarterly Project Reporting	

Provided below are the observation risk rating definitions for the detailed observations.

Observation Risk Rating Definitions	
Rating	Definition
Low	Observation presents a low risk (i.e., impact on financial statements, internal control environment, or business operations) to the organization for the topic reviewed and/or is of low importance to business success/achievement of goals. Action should be taken within 12 months (if related to external financial reporting, must mitigate financial risk within two months unless otherwise agreed upon).
Moderate	Observation presents a moderate risk (i.e., impact on financial statements, internal control environment, or business operations) to the organization for the topic reviewed and/or is of moderate importance to business success/achievement of goals. Action should be taken within nine months (if related to external financial reporting, must mitigate financial risk within two months).
High	Observation presents a high risk (i.e., impact on financial statements, internal control environment, or business operations) to the organization for the topic reviewed and/or is of high importance to business success/achievement of goals. Action should be taken immediately, but in no case should implementation exceed six months (if related to external financial reporting, must mitigate financial risk within two months).



BACKGROUND

Overview

Capital projects budgeting is the process of planning, allocating, and managing financial resources for large-scale, long-term projects, such as infrastructure development, facility upgrades, and public service improvements. This process involves identifying and prioritizing projects, estimating costs, and securing funding over multi-year periods to support project completion within fiscal constraints. Effective capital project budgeting aligns with organizational goals, addresses community needs, and enables sustainable growth by directing funds strategically toward essential capital improvements.

In Prince William County, capital budgeting is facilitated through the Capital Improvement Program (“CIP”), a structured, multi-year plan outlining the projects required to meet the county’s infrastructure needs. Developed annually in alignment with the Code of Virginia, § 15.2-2239, the CIP is guided by the Strategic Plan, Comprehensive Plan, and Principles of Sound Financial Management. The CIP serves as a comprehensive framework for financing County projects, consolidating them into a single plan that supports long-term infrastructure and community priorities.

The budgeting process for capital projects is a structured, collaborative effort coordinated by the Office of Management and Budget (“OMB”) with input from various county agencies. Each year, agencies identify and submit capital project proposals based on departmental priorities and anticipated community needs. The OMB reviews these submissions, allocates funding, and integrates the approved projects into the annual CIP.

Capital Improvement Plan

The County’s FY2025-FY2030 CIP, approved in April 2024, is a six (6) year plan for financing and implementing capital projects aligned with the county’s strategic priorities. The FY2025 CIP includes approximately \$1.3 billion in projected expenditures, allocated across five (5) main categories: Community Development, Human Services and General Government, Public Safety, Technology Improvement, and Transportation.

The program includes a range of infrastructure and community service projects, organized by category and managed by specific departments or agencies to address community needs and County priorities. Transportation projects are the largest category in the CIP with a total of \$779.2 million in projected expenditures.

Major initiatives include the Route 28 Bypass, Route 1 (Brady’s Hill to Route 234), Minnieville Road Parkway Interchange, and University Boulevard Extension (Devlin to Wellington). Public Safety projects represent \$282.9 million in the CIP and focus on strengthening infrastructure critical to emergency response and operational readiness. Key investments include the Judicial Center Expansion, which addresses space and capacity needs, and the Public Safety Training Center Expansion.

	Public Safety Invests in facilities, equipment, and infrastructure for fire, police, and emergency services to support community safety.
	Transportation Includes road expansions, public transit, and pedestrian safety projects aimed at improving mobility and reducing congestion.
	Technology Improvement Focuses on updating and expanding technology systems to enhance efficiency and service delivery across county departments.
	Community Development Funds projects for parks, recreational facilities, and environmental initiatives to enhance public spaces and support sustainable growth.
	Human Services & Government Supports expansions and improvements in health, social services, and general government facilities to meet community needs.



BACKGROUND (CONTINUED)

Capital Improvement Plan (Continued)

Community Development projects total \$180.2 million and support the expansion of parks, recreational facilities, and environmental sustainability efforts. The largest projects include the Fuller Heights Park Expansion and improvements to Neabsco District Park, enhancing recreational spaces and conserving natural resources for community benefit. Human Services and General Government projects, with \$101.7 million in funding, address health, social services, and government facility needs. Significant investments include the Juvenile Services Center Expansion and upgrades to the Homeless Navigation Center, which serve critical needs within the community.

Technology Improvements receive \$3.5 million in funding to modernize essential infrastructure across county departments, including public safety communications call handling equipment, public safety communications for schools, and 311 digital governance.

Project Funding

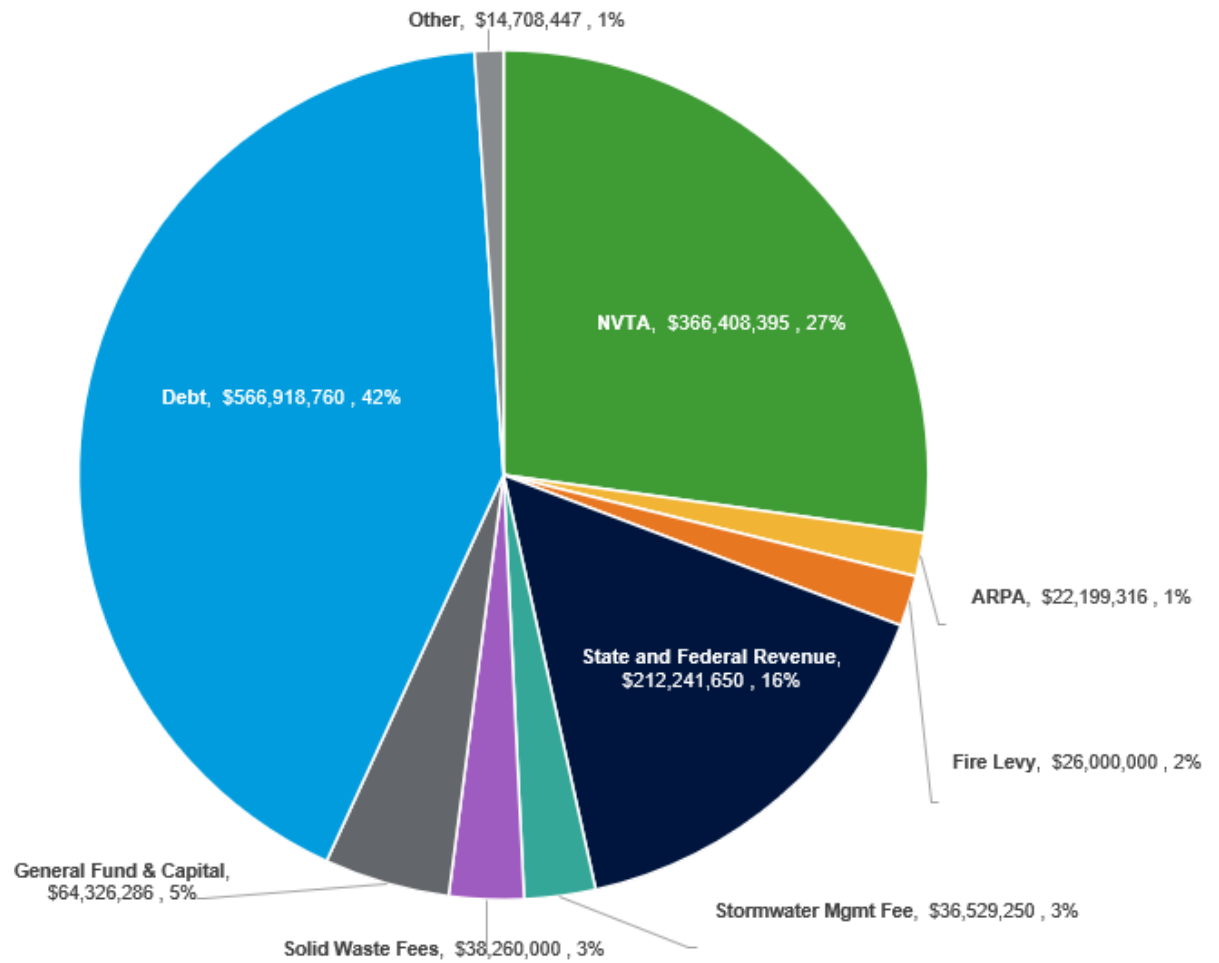
The CIP is financed through a broad and diversified portfolio of funding sources. Debt financing, totaling \$566.9 million and representing 42% of the program, supports long-term infrastructure investments, particularly in transportation and public safety.

Northern Virginia Transportation Authority (“NVTA”) funds, contributing \$366.4 million or 27% of the program, are allocated primarily for transportation projects aimed at improving regional connectivity. State and federal contributions provide \$212.2 million (16%) for transportation, environmental management, and public health projects.

Internal sources, including the General Fund and Capital Reserve, supply \$64.3 million (5%) for essential services, while stormwater management and solid waste fees add 6% of funding to support environmental infrastructure.

Developer contributions (proffers) and recordation taxes contribute \$12.5 million to infrastructure related to new developments. This funding structure allows Prince William County to implement the CIP in line with strategic priorities, directing resources to meet projected community needs over the six (6) year planning horizon.

County Funding Sources (FY2025-FY2030)

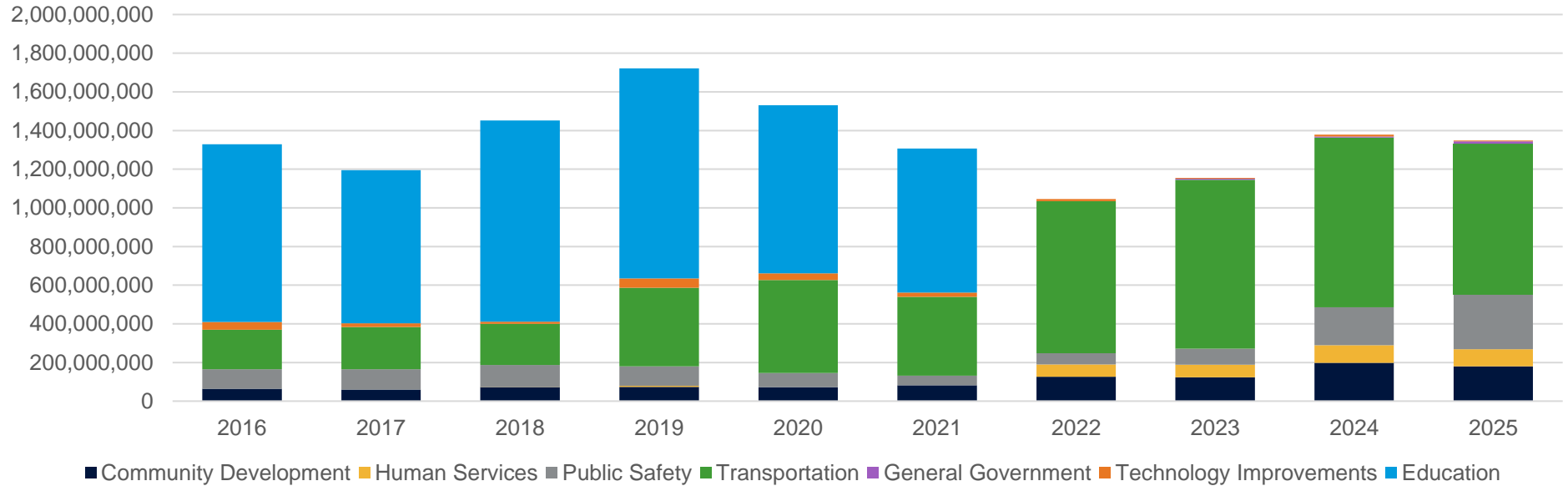


Note: Data was obtained from the

BACKGROUND (CONTINUED)

The chart below displays total projected expenditures by budget category within the CIP over a ten-year period (FY2016-FY2025), based on data from the County's approved CIP documents for these fiscal years.

CIP Projected Expenditures (FY2016-FY2025)



FY	Community Development	Human Services	Public Safety	Transportation	General Government	Technology Improvement	Education ¹	Total
2016	\$ 63,492,951	-	\$ 101,730,045	\$ 204,792,188	-	\$ 39,426,419	\$ 919,462,000	\$ 1,328,903,603
2017	\$ 59,508,503	-	\$ 106,093,301	\$ 217,993,277	-	\$ 18,423,143	\$ 792,923,880	\$ 1,194,942,104
2018	\$ 72,156,389	\$ 400,000	\$ 115,163,971	\$ 211,836,589	-	\$ 11,088,541	\$ 1,040,601,500	\$ 1,451,246,990
2019	\$ 73,367,033	\$ 6,100,000	\$ 100,696,110	\$ 406,827,331	-	\$ 47,704,886	\$ 1,086,418,400	\$ 1,721,113,760
2020	\$ 72,707,684	-	\$ 73,074,691	\$ 481,501,136	-	\$ 33,312,690	\$ 869,792,000	\$ 1,530,388,201
2021	\$ 82,101,525	-	\$ 49,250,348	\$ 407,769,480	-	\$ 23,077,411	\$ 744,208,357	\$ 1,306,407,121
2022	\$ 125,676,499	\$ 64,589,315	\$ 58,168,016	\$ 785,501,460	-	\$ 12,196,000	-	\$ 1,046,131,290
2023	\$ 123,609,344	\$ 64,589,315	\$ 83,500,000	\$ 872,997,235	\$ 6,000,000	\$ 3,600,000	-	\$ 1,154,295,894
2024	\$ 197,547,045	\$ 91,493,062	\$ 197,156,000	\$ 877,806,419	\$ 5,539,368	\$ 9,174,000	-	\$ 1,378,715,894
2025	\$ 180,225,550	\$ 88,808,941	\$ 282,896,208	\$ 779,222,037	\$ 12,939,368	\$ 3,500,000	-	\$ 1,347,592,104

¹ Prince William County Public Schools' CIP is excluded from the County's CIP summary, beginning in FY2022.



BACKGROUND (CONTINUED)

Project Initiation and CIP Development

The County's project initiation and CIP development process incorporate both a structured annual review and off-cycle additions to address immediate needs. Capital projects can enter the CIP through the regular development process, or through off-cycle requests throughout the fiscal year.

Annual CIP Development Process

Each fall, the County's annual CIP development process begins as agencies submit proposals for new capital projects to the OMB, which are due in October. These submissions, often facilitated through a "Capital Project Request Form," include estimated project costs, timeline, scope, and alignment with the County's strategic goals.

OMB conducts an initial review of submissions to assess each project's budgetary needs and evaluates their alignment with financial constraints and program priorities. Between December and January, projects are reviewed and discussed with Executive Management to confirm feasibility, prioritization, and alignment with the County's long-term objectives.

The proposed CIP is presented to the Board of County Supervisors ("BOCS") in February for initial consideration. In the spring, the Planning Commission and the BOCS engage in work sessions and public hearings as part of the annual budget process, with final adoption and approval occurring in April.

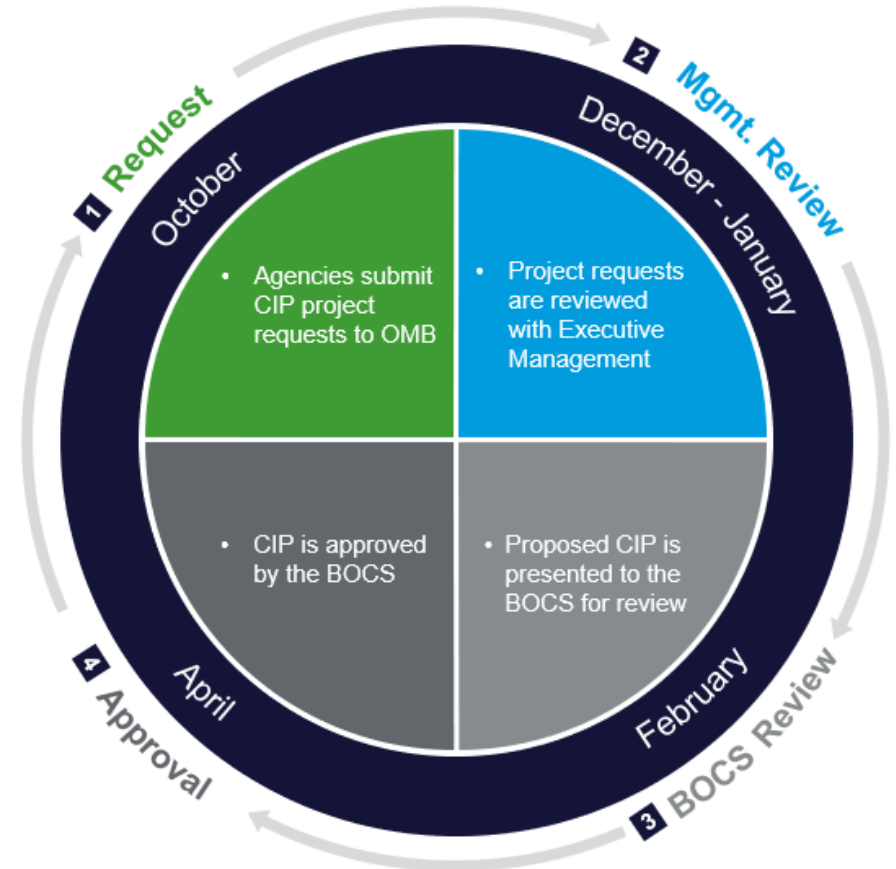
Off-Cycle Requests

In addition to the annual CIP development cycle, the County also considers off-cycle project requests. These requests, originating outside the regular budgeting process, allow for responses to emerging needs or unanticipated opportunities, such as state or federal grant funding. These requests are typically initiated in response to urgent community concerns, unforeseen infrastructure requirements, or shifts in priority and are often introduced directly by the BOCS or executive management.

While off-cycle requests enable responses to immediate needs, they can also create challenges within the established budget framework, potentially requiring resource reallocation, adjustments to project timelines, or other modifications to accommodate the new initiatives.

Recurring Budget Adjustments

Recurring budget adjustments approved by the BOCS outside the annual budget process are incorporated into the subsequent fiscal year CIP to reflect updated financial conditions and project requirements. These adjustments may arise from the introduction of off-cycle projects, changes in the scope of existing CIP projects, or additional funding allocations. Further modifications may be needed to account for new programs or services approved by the BOCS during the fiscal year, which must be integrated into the County's ongoing fiscal plan. This process updates the CIP and budget each year to align with evolving project needs and financial resources.



BACKGROUND (CONTINUED)

Project Cost Estimation

Initial cost estimates are developed by individual departments or agencies as part of the CIP's annual planning cycle. These preliminary estimates typically begin with a rough order of magnitude ("ROM") estimate, providing high-level budget guidance for proposed projects. An ROM estimate provides an initial, high-level cost projection to guide budgeting for proposed projects. These preliminary estimates, inherently approximate, establish an initial budgetary framework and are refined in later stages as more detailed information becomes available.

The estimation process varies across departments to address differences in project type, scale, and regulatory requirements. Some agencies rely on third-party consultants for cost estimation, while others utilize in-house engineers, depending on the complexity and expertise required for specific projects. Examples of departmental cost estimation methods include, but are not limited to:

- **Transportation:** Employs multiple estimation stages, such as planning-level, grant-level, and detailed engineering estimates. For larger projects, the department uses the Virginia Department of Transportation ("VDOT") Local Assistance Program, where certified engineers calculate costs based on linear footage, planning specifications, and escalation factors. Final estimates include construction, engineering, inspection, VDOT, and permit costs.
- **Parks and Recreation:** Utilizes both internal expertise and external resources, relying on historical data, cost databases, and contractor bid information to estimate design, construction, and project-specific costs. The department also uses an evolving project management tool to support project managers in planning, estimating, and tracking progress through project closeout.
- **Facilities Construction Management ("FCM"):** FCM's estimation approach begins with a rough order of magnitude ("ROM") and typically includes an inflation adjustment and contingency to account for potential uncertainties. Consultants often provide cost estimates throughout the various stages of design.
- **Environmental Management:** Combines engineer-level estimates, contractor bids, and per-unit rates. For projects such as stream restorations, standardized costs (e.g., per linear foot) are supplemented with historical analysis from similar projects.
- **Solid Waste:** Contracts with a specialized landfill design consulting firm for cost estimates covering project planning, design, and bid preparation. Estimates include contingency and apply an inflation rate to long-term projections, with estimates extending through 2040.

Budget Monitoring & Reporting

The County utilizes the existing enterprise resource planning tool Mobius, as a centralized system to manage and oversee capital project budgets. Users can access real-time budgetary data and monitor expenditures at the project-level. User departments and the OMB use Mobius to track progress, compare committed funds, review and approve actual expenditures, and monitor remaining budget balances against budget allocations. Mobius also supports detailed project-level tracking by displaying encumbrances, payments, and budget adjustments.

Monthly CIP meetings are held with department heads, the OMB, and the Finance Department to review CIP project updates with relevant agencies. Summary dashboards, such as the Chief Executive Officer ("CXO") dashboard, provide the Deputy County Executive and other stakeholders with a high-level overview of the CIP's financial status. In addition, quarterly CIP updates are presented to the BOCS, summarizing project status, scope, and timeline. Annual updates are incorporated into the CIP, reflecting project statuses, funding adjustments, and revised timelines for the upcoming fiscal cycle.

PROJECT ANALYSIS

Overview

RSM selected a sample of fifteen (15) completed or substantially completed capital projects and conducted an analysis to determine whether the expected outcomes, including financial and schedule objectives, were achieved. As part of our analysis, we performed the following procedures:

- Obtained original project budgets from the County’s Capital Improvement Plans (FY2012-FY2025).
- Obtained current budget, commitment, and expenditure data from the County’s financial system, Mobius.
- Compared original project budgets to current budget data to identify potential cost increases.
- Obtained and reviewed relevant design phase documentation, including designer invoices, contracts, purchase orders, etc.
- Obtained and reviewed relevant construction phase documentation, including construction agreements, contractor payment applications, etc.
- Obtained and reviewed schedule-related documents, including Notices to Proceed, Certificates of Substantial Completion, and Certificates of Occupancy.
- Compared original project schedules according to the information provided in the CIP to contractual construction schedules.

Key takeaways related to financial and schedule performance are included in the following pages. Detailed analysis for each sampled project is included in the **Appendix**.

Financial Summary

The table below compares the original approved budget, as outlined in the CIP, to the current budget in Mobius, the County’s financial management system, as of October 22, 2024. The "Original Projected Expenditures" column represents the initial project amounts approved in the CIP.

Sample No.	Category/Agency	Project Name	Original Projected Expenditures	Current Budget	Variance	% Change
1	Community Development – Parks & Recreation	Harbor Drive Park	\$ 700,000	\$ 1,512,265	\$ 812,265	116%
2	Community Development – Parks & Recreation	Long Park Auxiliary Building	\$ 650,000	\$ 1,098,143	\$ 448,143	69%
3	Community Development – Parks & Recreation	Catharpin Park	\$ 4,912,000	\$ 5,955,455	\$ 1,043,455	21%
4	Community Development – Parks & Recreation	Rollins Ford Park	\$ 7,276,000	\$ 10,186,062	\$2,910,062	40%
5	Community Development – Parks & Recreation	Occoquan Greenway, Segment 3 Bridge	Note ¹	Note ¹	Note ¹	Note ¹
6	Public Safety – Fire & Rescue	Nokesville Fire & Rescue Station	\$ 9,450,000	\$ 10,863,848	\$ 1,413,848	15%
7	Public Safety – Fire & Rescue	Coles Fire & Rescue Station	\$ 11,046,000	\$ 11,198,761	\$ 152,761	1%
8	Public Safety – Fire & Rescue	Fire & Rescue Station 22 (Groveton)	\$ 15,080,375	\$ 16,970,713	\$ 1,890,338	13%
9	Public Safety – Judicial Administration	Adult Detention Center Expansion Phase 2	\$ 45,723,000	\$ 50,684,636	\$ 4,961,636	11%
10	Public Safety – Police	Animal Shelter	\$ 15,125,000	\$ 16,744,525	\$ 1,619,525	11%
11	Public Safety – Police	Adult Detention Center Main Jail Repairs	\$ 7,500,000	\$ 7,500,000	-	0%
12	Transportation	Balls Ford Road Interchange	\$ 142,864,000	\$ 109,089,857	\$ (33,774,143)	(24%)
13	Transportation	Brentsville Road Interchange	\$ 54,968,000	\$ 54,967,752	\$ 248	0%
14	Transportation	Potomac/Neabsco Mills Commuter Garage	\$ 37,425,000	\$ 54,672,001	\$ 17,247,001	46%
15	Transportation	Route 1 (Featherstone to Marys Way)	\$ 73,708,000	\$ 111,940,033	\$ 38,232,033	52%
Total			\$ 426,427,375	\$ 469,378,747	\$ 36,957,172	Avg. 26%

¹ The Occoquan Greenway is budgeted as a single project, with individual segments constructed as funding and easements become available. An initial budget for Segment 3 was not included in the CIP when the project was first introduced. According to data from Mobius, the current budget for the Occoquan Greenway is \$5,994,696.

PROJECT ANALYSIS (CONTINUED)

Schedule Summary

The table below compares the planned construction completion dates, as initially outlined in the CIP when the project was first introduced, to the actual completion dates according to project documentation.

Sample No.	Category/Agency	Project Name	First Year on CIP	Planned Completion per CIP ¹	Actual Completion
1	Community Development – Parks & Recreation	Harbor Drive Park	FY19	Note ²	8/29/2022 ³
2	Community Development – Parks & Recreation	Long Park Auxiliary Building	FY19	Aug. 2019 (FY20)	9/30/2021 ³
3	Community Development – Parks & Recreation	Catharpin Park	FY19	Sept. 2020 (FY21)	3/30/2023 ⁴
4	Community Development – Parks & Recreation	Rollins Ford Park	FY19	Aug. 2020 (FY21)	Note ⁷
5	Community Development – Parks & Recreation	Occoquan Greenway, Segment 3 Bridge	FY21	Note ²	8/11/2023 ³
6	Public Safety – Fire & Rescue	Nokesville Fire & Rescue Station	FY12	FY2015	10/29/2019 ⁴
7	Public Safety – Fire & Rescue	Coles Fire & Rescue Station	FY12	FY2014	2/27/2020 ⁴
8	Public Safety – Fire & Rescue	Fire & Rescue Station 22 (Groveton)	FY17	Jan. 2020 (FY20)	1/8/2021 ⁴
9	Public Safety – Judicial Administration	Adult Detention Center Expansion Phase 2	FY15	Sept. 2019 (FY20)	10/9/2020 ⁴
10	Public Safety – Police	Animal Shelter	FY18	FY20	6/1/2023 ⁴
11	Public Safety – Police	Adult Detention Center Main Jail Repairs	FY20	Spring FY21	2/28/2022 ⁵
12	Transportation	Balls Ford Road Interchange	FY19	Jul. 2024 (FY25)	12/19/2023 ³
13	Transportation	Brentsville Road Interchange	FY20	Fall 2024 (FY25)	8/14/2024 ³
14	Transportation	Potomac/Neabsco Mills Commuter Garage	FY20	Fall 2023 (FY24)	10/11/2024 ⁴
15	Transportation	Route 1 (Featherstone to Marys Way)	FY15	FY17	Note ⁶

¹ Data was obtained from the project detail sheets included within the CIP and represents either the projected timeframe for construction completion or “occupancy”.

² A construction completion milestone was not specified within the CIP.

³ Project completion is based on the Certificate of Final Completion or final inspection date.

⁴ Project completion is based on the Certificate of Occupancy date.

⁵ Project completion is based on the Certificate of Substantial Completion.

⁶ Project is substantially complete but has not reached final completion.

⁷ Documentation related to project completion was not provided as of the date of this report. Refer to Observation #4 (“Project Documentation”) for additional information.

PROJECT ANALYSIS (CONTINUED)

Key Takeaways

Each capital project presents unique challenges and is often subject to unforeseen conditions impacting costs and timelines. Factors such as evolving regulatory requirements, unexpected site conditions, coordination with third parties, and adjustments in project scope can all introduce complexities to project execution. Additionally, external influences, like changes in market costs for materials and labor or delays, and community and stakeholder input, can further affect the project's scope, budget, and schedule. Effective planning is critical for managing these variables; however, even with robust oversight, many projects experience cost escalations and timeline extensions due to the inherent unpredictability of large-scale construction and infrastructure initiatives. Through our review of fifteen (15) sampled projects and discussions with stakeholders, we identified the following key takeaways:

- **Changes During Design:** The design phase is the initial stage of project development where architects and engineers create detailed plans and specifications that define the project's scope, layout, and technical requirements. Our analysis revealed that modifications made during this phase to the architect/engineer's contract impacted project budgets, resulting in increased design fees across multiple projects. Specifically, six (6) of the fifteen (15) sampled projects experienced design fee increases of 20% or more, with four (4) of those six (6) projects seeing increases of 45% or more. These cost escalations were largely due to revisions and additions to the original project design, often driven by changes in project scope.
- **Changes During Construction:** Construction change orders, which are formal modifications to the original construction contract, impacted the total cost of construction. While change orders are common, a typical benchmark change order rate generally ranges from 5% to 15% of the original contract value, depending on project complexity, type, and location. For six (6) sampled projects, construction costs increased by 12% or more due to change orders, with four (4) of those six (6) projects seeing increases of 16% or higher. On average across our fifteen (15) samples, construction costs increased by 9% due to change orders, totaling \$35.2 million for all projects. Change orders were often driven by factors such as unexpected site conditions, design changes made after construction began, and cost escalation.
- **Transportation Projects:** Transportation projects, funded primarily through state and federal sources, presented unique challenges due to their complex nature and compliance requirements. Our review of four (4) sampled transportation projects, with an initial combined construction contract value of \$188.3 million, revealed a total revised contract value of \$213.8 million, an increase of \$25.5 million (approximately 14%) attributed largely to change orders for right-of-way ("ROW") and utility coordination issues. This highlights the importance of early planning and coordination, particularly for ROW acquisition and utility relocations, as well as extended timelines for federally funded projects due to compliance requirements and oversight.
- **Project Timelines:** Our analysis revealed that estimated project completion dates often extended beyond the timelines initially presented in the CIP. On average, CIP projects exceeded their original estimated completion goals by approximately 2.5 years. Three (3) projects exceeded their initial estimates by four (4) or more years. Further, for the eleven (11) sampled projects with detailed construction schedule data available, actual completion dates surpassed the original contractual construction durations by an average of 227 days. These delays were often due to design changes, unforeseen conditions, cost escalation due to market conditions, and the cumulative impact of change orders, which affected project timelines and resource planning across the County's capital portfolio.

The observations, process improvement opportunities, and recommendations detailed in the pages that follow provide a framework for addressing the key issues noted above. For example, developing a countywide prioritization framework and standardized project estimation guidelines (Observations #1 and #2) are designed to reduce inconsistencies in project selection and budget planning, which can help mitigate budget overruns and reallocation needs. Additionally, Process Improvement Opportunity #1 encourages the County to implement a structured post-project evaluation process to systematically analyze project outcomes and capture lessons learned. This continuous feedback process would enhance understanding of recurring issues, such as design-phase changes and construction change orders, but also provide actionable insights to inform future project planning and minimize common cost and schedule variances.

OBJECTIVES AND APPROACH

Objectives

The objective of this internal audit was to evaluate the design and effectiveness of internal controls over the capital projects budgeting process. Our internal audit included the evaluation of the budget development, monitoring, reporting, and modification processes for capital project. The scope of our analysis included projects that were completed or substantially completed according to FY2019-FY2025 CIP data.

Approach

Our audit approach consisted of the following phases:

Understanding and Documentation of the Process

This phase consisted primarily of inquiry and walkthroughs to obtain an understanding of the current operating policies and procedures, monitoring functions, and control structures as they relate to the processes within our scope. The following were performed as part of this phase:

- Obtained and reviewed any documented policies and procedures related to the function, as well as relevant state and County regulations, reporting, and any other relevant information.
- Conducted interviews and walkthroughs with key personnel to obtain a detailed understanding of the County's operating policies and procedures, and roles/responsibilities related to the processes within our scope.
- Developed a work plan to evaluate the operating effectiveness of processes and controls based on the information obtained through our interviews, walkthroughs, and preliminary review of documentation.

Evaluation of the Process and Controls Design and Testing of Operating Effectiveness

The purpose of this phase was to evaluate the design of key processes and controls and test compliance and internal controls for operating effectiveness based on our understanding of the processes obtained during the first phase. We utilized sampling and other auditing techniques to meet our audit objectives outlined above. Our testing procedures included, but were not limited to:

- Assessed the County's process for capital project initiation and budget development;
- Reviewed budget modifications and amendments for appropriateness and proper authorization;
- Assessed segregation of duties within the budgeting process, including budget preparation, approval, accounting, and reporting, and vendor selection;
- Examined the methods used to obtain, review, and report budget data, including assumptions utilized for estimating costs;
- Assessed the effectiveness of budget status reporting, including the timeliness, accuracy, and relevance of the information provided to stakeholders;
- Evaluated the County's process for resource allocation, staffing, and project prioritization to verify sufficient personnel are available for the management and delivery of capital projects, including the identification of triggers for additional resources;
- Assessed the County's process for prioritizing, scheduling, and monitoring projects to verify that capital projects are initiated timely and in alignment with budgetary expectations;
- For a sample of projects, we conducted an analysis to determine whether the expected outcomes, including financial and schedule objectives, were achieved. Procedures include, but were not limited to:
 - Analyzed the duration between the initial approval and commencement of capital projects listed in the CIP to identify potential delays and root causes, as applicable.
 - Analyzed the financial performance of capital projects by comparing budgeted costs to actual expenditures to identify potential variances and assess the effectiveness of cost management practices.
- Evaluated the County's process for measuring the performance of capital projects against initial budget estimates and timelines (i.e., look-back analysis, lessons learned, etc.)

Reporting

At the conclusion of this internal audit, we summarized our findings into this report. We have reviewed the results with the appropriate Management personnel and have incorporated Management responses into this report.

OBSERVATIONS MATRIX

Observation	1. Capital Project Prioritization
<p>Moderate</p>	<p>Prioritizing capital projects is essential for effective resource allocation and alignment with organizational strategic goals. A formalized, structured prioritization process enables organizations to evaluate and compare projects systematically, supporting informed decisions about which projects to advance based on factors such as alignment with strategic priorities, community impact, and available funding.</p> <p>We noted the following conditions:</p> <ul style="list-style-type: none"> The County does not currently have a formal, countywide methodology for evaluating, prioritizing, and selecting capital projects. While projects are reviewed for alignment with the Strategic Plan and Comprehensive Plan, and discussed with management and approved by the BOCS, there is currently no documented, standardized framework to facilitate consistent evaluation across all agencies. As a result, prioritization often occurs through agency-specific criteria and discussions with executive management, which may lead to varying approaches across departments. This could result in projects with high strategic value or community impact being overlooked in favor of other initiatives. Projects are frequently initiated and approved off-cycle, outside of the annual CIP development process. While off-cycle requests are common and may be necessary due to urgent needs or funding opportunities, these projects may not consistently undergo the same review process as those initiated through the CIP, which are requested through the Office of Management & Budget. <p>The absence of a structured, standardized process with objective criteria for evaluating, prioritizing, and selecting capital projects may lead to inconsistencies in decision-making. Without standardization, transparency in project selection could be reduced, potentially affecting the efficiency and equity of project delivery.</p>
<p>Recommendation</p>	<p>The following is recommended:</p> <p>The County should consider developing a countywide prioritization framework for capital projects. This framework should incorporate key criteria to objectively assess and rank projects according to strategic importance, urgency, and community impact. Examples of criteria to consider include:</p> <ul style="list-style-type: none"> Project Urgency: Prioritize projects addressing immediate risks, such as public safety, health, or regulatory compliance. Alignment with Strategic/Comprehensive Plan: Evaluate each project's alignment with countywide strategic goals, including infrastructure improvements, economic growth, and environmental sustainability. Financial Stewardship: Assess projects for cost-effectiveness, potential operational cost savings, and opportunities for external funding or partnerships. Service Impact: Rank projects by anticipated impact on public services and community benefits. Asset Preservation: Include criteria for projects focused on preserving or extending the life of existing assets, particularly those with high public usage or historical significance. <p>A standardized capital project request form should be utilized for each new project submission, including off-cycle requests, to be reviewed by the Office of Management and Budget. This form would provide an audit trail for original estimates, timelines, alignment with strategic objectives, and anticipated service level impacts, offering a reliable reference for tracking project progress and evaluating performance against initial expectations. Implementing these criteria would support the County in allocating resources objectively, optimizing project outcomes, and directing limited resources toward high-priority projects that deliver the greatest value to the community.</p>

OBSERVATIONS MATRIX (CONTINUED)

Observation	1. Capital Project Prioritization (Continued)
Management Action Plan	<p>Response: The Office of Management & Budget (“OMB”) concurs with this finding regarding the development of a prioritization framework for evaluating new capital projects.</p> <p>Responsible Party: OMB is the responsible party with collaboration from key stakeholders including, but not limited to, Facilities & Fleet Management, Parks & Recreation, Information Technology, Public Works, and Transportation.</p> <p>Estimated Completion Date: Summer 2025 for implementation of the FY2027-2032 Capital Improvement Program development process.</p>

OBSERVATIONS MATRIX (CONTINUED)

Observation	2. Initial Project Estimates
<p>Moderate</p>	<p>Budgeting for individual capital projects involves developing cost estimates over an extended period, often without knowing the actual costs upfront. As a result, the capital budgeting process relies on assumptions to estimate key cost categories, including projected design, construction, and third-party expenses. Contingency, which provides a buffer for unforeseen costs, is an integral part of these initial estimates to help account for unexpected changes in project scope, inflation, and other variables.</p> <p>Currently, the County does not have a standardized approach for developing project estimates, including consistent methods for calculating and applying contingency. As highlighted in the Project Analysis section of this report, current budgets for our fifteen (15) sampled projects exceeded initial budgets by an average of 26%, indicating potential gaps in estimation practices. Additionally, our analysis identified scope changes during both the design and construction phases as contributors to budget increases. While scope changes are often necessary to address unforeseen conditions or evolving project requirements, minimizing scope changes after a project enters the CIP is essential to maintaining accurate project estimates and reducing the likelihood of budget overruns.</p> <p>Without a standardized approach to developing project estimates, including consistent application of contingency, there is an increased risk of underestimating project costs, leading to budget overruns, amendments, and potential reallocations of funds. These issues can disrupt project schedules and reduce operational efficiency. By implementing standardized estimation practices, the County can improve cost predictability, allocate resources more effectively, and promote greater transparency in financial planning.</p>
<p>Recommendation</p>	<p>The following is recommended:</p> <p>The County should develop a standardized methodology for project estimate development across all departments. This methodology should include clear guidelines for incorporating contingency into initial project budgets, creating a consistent framework for capital project planning. As part of the standardized methodology, the following should be considered:</p> <ul style="list-style-type: none"> <p>Standardization of Project Estimates: The County may consider implementing a uniform process for estimating key cost categories, such as design, construction, and third-party expenses. Where possible, utilize historical data, cost benchmarking, and periodic updates to reflect current market conditions. In conjunction with the recommendation provided in Observation #1, each new project request should include a comprehensive project cost estimate itemized by expected cost categories (e.g., design, construction, internal labor, consulting fees, land purchases, etc.). A standardized estimate template would improve consistency across departments while allowing flexibility to address specific agency requirements (e.g., customized forms for transportation projects funded by state or federal sources).</p> <p>Contingency Guidelines: Develop and implement minimum contingency thresholds based on project type, size, and risk profile (e.g., 5-10% for routine projects and 10-20% for complex or high-risk projects). Establishing these thresholds early in the budget development process will help contingency allocations adequately address potential cost escalations, such as inflation or unforeseen scope adjustments, while also improving transparency and consistency in financial planning.</p> <p>Implementing these practices may improve the accuracy of initial project budgets, minimize the need for mid-project budget adjustments, and strengthen the financial management of the County's CIP portfolio. Additionally, a standardized approach to cost estimation would facilitate post-project evaluations by providing a clear baseline for comparing actual versus estimated costs across categories such as design, construction, and third-party expenses. This comparison can offer valuable insights into budget performance, inform future project planning, and drive continuous improvement in cost management practices.</p>

OBSERVATIONS MATRIX (CONTINUED)

Observation	2. Initial Project Estimates (Continued)
<p>Management Action Plan</p>	<p>Response: OMB concurs with this finding regarding standardized project estimates/templates and their inclusion in capital project request forms to assist subject matter experts (Facilities & Fleet Management, Parks and Recreation, Public Works, and Transportation) with estimating capital project costs. Project management software which includes project estimate capabilities was funded in the Fiscal Year 2025 budget. However, incorporating detailed capital project line items on the capital project request form such as architectural/engineering, land/right-of-way acquisition, planning/permitting costs, site development costs, construction costs on a per square foot basis, fiber optics, cloud storage connections, furniture/fixtures, etc. will assist agencies in developing initial project estimates. It will also assist with auditing capital project costs increases to determine if rising costs are attributed to changes in project scope or increased costs occurring in a specific project phase. OMB recommends that all design and construction contracts should be awarded with a minimum 10% contingency built into the project budget.</p> <p>OMB does not require any further resources to implement this finding.</p> <p>OMB further recommends minimum capital project contingency thresholds be considered for Board approval as a formal policy in the “Capital Improvement Program and Capital Assets” chapter of the County’s adopted Principles of Sound Financial Management.</p> <p>Responsible Party: OMB will facilitate collaboration with agencies responsible for project estimates including Facilities & Fleet Management, Parks & Recreation, Public Works, and Transportation.</p> <p>Estimated Completion Date: Summer 2025 which will be implemented for the FY2027-2032 Capital Improvement Program development process.</p>

OBSERVATIONS MATRIX (CONTINUED)

Observation	3. Capital Project Staffing
<p>Moderate</p>	<p>Executing capital projects requires a coordinated effort between internal staff, including project managers, engineers, accountants, and procurement personnel, and third-party contractors and consultants. Maintaining adequate staffing levels that adapt to project workload is essential for completing projects on time and within budget.</p> <p>The County does not have a standard methodology for assessing staffing needs or establishing triggers for additional resources to support capital projects. Although stakeholders indicated that they could request additional resources as needs arise, there is no formal process for evaluating workload or systematically identifying when additional staffing is required.</p> <p>Without a structured approach to evaluating staffing requirements, the County may face challenges in efficiently allocating resources, potentially resulting in project delays, budget overruns, and reduced oversight. Inconsistent practices in determining resource needs increase the risk of insufficient staffing levels, which can impact project timelines and the quality of project outcomes.</p>
<p>Recommendation</p>	<p>The following is recommended:</p> <ul style="list-style-type: none"> We understand that the County is currently developing a standardized process for evaluating staffing needs for capital projects, which includes a tiering system based on project costs, project size, and recommended staffing levels. We support this approach and encourage its continued development. In addition to these factors, we recommend that the County also consider the number of projects assigned to each project manager, engineer, and administrative staff member, along with a review of ongoing and completed projects to identify opportunities for reallocating existing staff to new projects. Incorporating workload per staff member into the methodology will further enhance resource planning, help maintain balanced workloads and support the timely and efficient delivery of capital projects.
<p>Management Action Plan</p>	<p>Response: OMB agrees County staff needs to develop a standardized process for identifying staffing needs as new capital projects arise, particularly any major projects that arise off-cycle of the annual budget/CIP process. It should be noted the recent budgets have been invested in staffing resources necessary to deliver capital projects. These investments are summarized as follows:</p> <p>FY2023 – A total of five (5) full-time positions (5.0 FTE) were added in the budget to deliver capital projects: Parks & Recreation was budgeted a Principal Engineer; Transportation received a Land Acquisition Analyst and two (2) Principal Engineers; and Facilities & Fleet Management was allotted a Senior CIP Project Manager.</p> <p>FY2024 – Facilities & Fleet Management was allocated two (2.0 FTE) – a Principal Engineer and a Senior Engineer dedicated for the new Fire & Rescue Station Renovation and Replacement Program.</p> <p>FY2025 – A total of \$1.6 million was invested in a total of 9.0 FTEs as well as project management software specifically to deliver capital projects to the community. The funded positions were: a Transportation Utilities Coordinator (1.0 FTE); Facilities & Fleet Management Principal Engineers (2.0 FTE); Parks & Recreation Principal Planner and Construction Inspector (2.0 FTE); Procurement Analysts (3.0 FTE); and a Principal Fiscal Analyst in the Office of Management & Budget (1.0 FTE).</p> <p>OMB agrees that a review of completed projects and resulting opportunities to shift staff resources to new capital projects should be conducted before requesting new positions in the annual budget.</p>

OBSERVATIONS MATRIX (CONTINUED)

Observation	3. Capital Project Staffing (Continued)
Management Action Plan	<p>Responsible Party: OMB has collaborated with key stakeholders (Facilities & Fleet Management, Parks & Recreation, Transportation, and Public Works)</p> <p>Estimated Completion Date: County staff has developed general staffing standards based on the size and complexity of various capital projects which was presented to the Board of County Supervisors on October 15, 2024.</p>

OBSERVATIONS MATRIX (CONTINUED)

Observation	4. Project Documentation
<p>Moderate</p>	<p>As part of our analysis, we requested key documentation for each sampled project, including but not limited to, contract documents, procurement records, notices to proceed, consultant and contractor invoices, and closeout documentation (e.g., certificates of occupancy and certificates of substantial completion). Our analysis revealed that key project documentation for the sampled projects was not readily available upon request, indicating potential gaps in centralized record-keeping practices.</p> <p>Through discussions with stakeholders, we noted that project documentation is often retained by individual stakeholders (e.g., project managers and engineers), or that knowledge of documentation resides with a single individual, leading to decentralized document control practices.</p> <p>Centralized and accessible project documentation is critical for maintaining accurate records, project accountability, and enabling efficient project monitoring and review. The current decentralized approach to document storage increases the risk of incomplete or inaccessible project records, which can lead to difficulties in verifying project compliance, delays in obtaining critical project documentation, and potential loss of important records. Additionally, lack of standardized file management may reduce the County’s ability to monitor project progress accurately and comply with audit and regulatory requirements.</p>
<p>Recommendation</p>	<p>We recommend the following:</p> <p>We understand that the County is currently implementing a construction management software, Aurigo Masterworks (“Masterworks”), as recommended in our January 26, 2022, <i>Construction Project Management</i> Internal Audit report (Observation #1). To maximize the effectiveness of this system, we recommend the County develop standard operating procedures for document control at both the program and project levels, utilizing Masterworks as the central repository for capital projects.</p> <p>The County may consider the following guidelines to promote uniformity and accessibility:</p> <ul style="list-style-type: none"> • Document Classification and Coding: A standardized system for organizing files by project phase, type, and unique project identifiers to facilitate efficient retrieval. • File Naming Conventions: Consistent naming conventions that incorporate details like project ID, document type, date, and version, supporting easy searchability and version control. • Access and Security Controls: Role-based permissions within Masterworks to maintain document security and control access to sensitive information. • Version Control and Revision Tracking: Procedures for managing document revisions, including labeling updated files and archiving prior versions for clear records of changes. • Document Retention and Archiving Policies: Guidelines specifying retention periods and archiving requirements for different document types, aligned with county and regulatory standards. <p>Documenting and establishing standard operating procedures for document control would promote consistent document management practices across all projects, improving document accessibility, and support effective oversight of the County’s capital projects.</p>

OBSERVATIONS MATRIX (CONTINUED)

Observation	4. Project Documentation (Continued)
Management Action Plan	<p>Response: In response to the audit findings highlighting a lack of standardized processes and documentation, as well as the absence of a centralized location for storing information, the organization has initiated the implementation of Masterworks. This comprehensive project is designed to establish a centralized document repository and enhance process standardization across multiple departments, including Facilities and Fleet Management, Public Works, Transportation, and Parks and Recreation.</p> <p>Key actions include:</p> <ul style="list-style-type: none">• Customizations and configurations to support a unified document repository have been approved.• Standard Operating Procedures for Capital Improvement Projects are being developed in collaboration with the Office of Management & Budget to align with Masterworks' implementation. <p>The Masterworks implementation is actively underway and is projected to be completed by Spring 2025. This solution will address the gaps identified in the audit findings, ensuring consistency, efficiency, and accessibility in documentation and processes across the organization.</p> <p>Responsible Party: Facilities and Fleet Management, Office of Management & Budget, Information Technology</p> <p>Estimated Completion Date: Spring 2025</p>

PROCESS IMPROVEMENT OPPORTUNITIES

1. Post-Project Performance Evaluation

Through discussions with stakeholders, we noted that the County does not have a formal process for post-project performance evaluation to assess outcomes against initial budget and schedule objectives. While informal reviews may occur at the end of certain projects, these assessments are neither consistently documented nor standardized across departments, limiting the County's ability to systematically evaluate project outcomes and identify areas for improvement based on actual performance data.

Without a mechanism for capturing and analyzing lessons learned, the County may be unable to make data-driven adjustments in planning and resource allocation for subsequent projects, potentially impacting the quality and timeliness of capital project delivery.

We recommend that the County establish a formalized process for post-project performance measurement, incorporating look-back analyses and documentation of lessons learned. This process should require departments to evaluate completed projects against original budget estimates and timelines, identify variances, and capture insights that could inform future project planning. The County should consider establishing a threshold for conducting lessons learned reviews, focusing on larger or more complex projects while exempting smaller projects where such analysis may not be as impactful.

PROCESS IMPROVEMENT OPPORTUNITIES (CONTINUED)

2. Quarterly Project Reporting to the BOCS

As part of our analysis, we reviewed the County's "Quarterly Project Reports" to the BOCS to assess the effectiveness of budget status reporting, including the timeliness, accuracy, and relevance of information provided to stakeholders. While quarterly project updates included relevant project details, we noted opportunities to improve the reporting by including specific metrics, such as budget, encumbrance, actual cost, and commitment data, and schedule performance indicators.

Without detailed budget and schedule performance metrics, the BOCS has limited visibility into project performance relative to established financial and timeline goals. This lack of transparency may hinder informed decision-making, as stakeholders cannot readily assess whether projects require additional oversight or resources.

We recommend that the County develop a standardized reporting template for quarterly CIP updates to the BOCS to facilitate consistent and comprehensive project information across all capital projects. This template should include project-specific metrics to give the BOCS greater transparency into project progress, budget adherence, and schedule performance. Suggested elements for the standardized template include:

- **Project Summary:** A concise description of the project's scope, objectives, and current phase.
- **Budget Updates and Cost Estimates:** Standardized comparison of budgeted versus actual expenditures, along with anticipated budget adjustments or overages.
- **Timeline:** Summary of the project's timeline, including key milestone dates and any changes from the original schedule.
- **Scope Changes:** Document any modifications or additions to the project scope since the last report.
- **Risk Management:** Overview of identified project risks, potential impacts, and active mitigation strategies.
- **Next Steps:** Outline upcoming project phases and any required Board actions.

APPENDIX

The following table provides a comparison between original and revised design contract amounts for selected projects. This summary, based on purchase order (PO) and invoice data, highlights changes in design costs throughout the project lifecycle.

Design Services – Contract Summary						
Sample No.	Category/Agency	Project Name	Original Contract	Revised Contract	Change (\$)	% Change
1	Community Development – Parks & Recreation	Harbor Drive Park	\$ 141,900	\$ 141,900	-	0%
2	Community Development – Parks & Recreation	Long Park Auxiliary Building	\$ 172,259	\$ 184,079	\$ 11,820	7%
3	Community Development – Parks & Recreation	Catharpin Park	\$ 125,654	\$ 151,024	\$ 25,370	20%
4	Community Development – Parks & Recreation	Rollins Ford Park	Note ¹	Note ¹	Note ¹	Note ¹
5	Community Development – Parks & Recreation	Occoquan Greenway, Segment 3 Bridge	\$ 94,858	\$ 139,821	\$ 44,963	47%
6	Public Safety – Fire & Rescue	Nokesville Fire & Rescue Station	\$ 791,385	\$ 1,160,117	\$ 368,732	47%
7	Public Safety – Fire & Rescue	Coles Fire & Rescue Station	\$ 750,829	\$ 929,606	\$ 178,777	24%
8	Public Safety – Fire & Rescue	Fire & Rescue Station 22 (Groveton)	\$ 1,065,385	\$ 1,197,208	\$ 131,823	12%
9	Public Safety – Judicial Administration	Adult Detention Center Expansion Phase 2	\$ 3,041,175	\$ 4,471,444	\$ 1,430,269	47%
10	Public Safety – Police	Animal Shelter	\$ 1,546,866	\$ 1,751,340	\$ 204,474	13%
11	Public Safety – Police	Adult Detention Center Main Jail Repairs	Note ²	Note ²	Note ²	Note ²
12	Transportation	Balls Ford Road Interchange	\$ 2,202,102	\$ 2,400,000	\$ 197,898	9%
13	Transportation	Brentsville Road Interchange	Note ²	Note ²	Note ²	Note ²
14	Transportation	Potomac/Neabsco Mills Commuter Garage	\$ 944,378	\$ 1,082,316	\$ 137,938	15%
15	Transportation	Route 1 (Featherstone to Marys Way)	\$ 1,931,039	\$ 5,178,092	\$ 3,247,053	168%
Total			\$ 12,807,830	\$ 18,786,947	\$ 5,979,117	Avg. 34%

¹ A final designer invoice was not provided as of the date of this report. Refer to **Observation #4** (“Project Documentation”) for additional information.

² A third-party design firm was not engaged for this project, as it was executed using a “design-build” contract delivery method. Under this approach, the design-builder is responsible for both the design and construction phases of the project. Detailed contract information is provided in the table on the following page.

APPENDIX (CONTINUED)

The following table presents a comparison of original and revised construction contract amounts, including the impact of change orders. This summary, derived from purchase order (PO) and invoice data, highlights changes in construction costs due to scope changes and unforeseen project requirements.

Construction Services – Contract Summary						
Sample No.	Category/Agency	Project Name	Original Contract	Revised Contract	Change (\$)	% Change
1	Community Development – Parks & Recreation	Harbor Drive Park	\$ 1,228,662	\$ 1,322,490	\$ 93,828	8%
2	Community Development – Parks & Recreation	Long Park Auxiliary Building	\$ 776,888	\$ 873,981	\$ 97,093	12%
3	Community Development – Parks & Recreation	Catharpin Park	\$ 725,500	\$ 818,736	\$ 93,236	13%
4	Community Development – Parks & Recreation	Rollins Ford Park	\$ 8,455,000	\$ 9,039,776	\$ 584,776	7%
5	Community Development – Parks & Recreation	Occoquan Greenway, Segment 3 Bridge	\$ 486,998	\$ 490,405	\$ 3,407	1%
6	Public Safety – Fire & Rescue	Nokesville Fire & Rescue Station	\$ 6,814,100	\$ 7,016,052	\$ 201,952	3%
7	Public Safety – Fire & Rescue	Coles Fire & Rescue Station	\$ 1,446,177	\$ 1,548,585	\$ 102,408	7%
8	Public Safety – Fire & Rescue	Fire & Rescue Station 22 (Groveton)	\$ 10,249,000	\$ 10,177,905	\$ (71,095)	(1%)
9	Public Safety – Judicial Administration	Adult Detention Center Expansion Phase 2	\$ 39,080,000	\$ 45,941,916	\$ 6,861,916	18%
10	Public Safety – Police	Animal Shelter	\$ 11,136,925	\$ 12,878,219	\$ 1,741,294	16%
11	Public Safety – Police	Adult Detention Center Main Jail Repairs	\$ 3,795,240	\$ 3,862,505	\$ 67,265	2%
12	Transportation	Balls Ford Road Interchange	\$ 69,131,000	\$ 83,987,669	\$ 14,856,669	21%
13	Transportation	Brentsville Road Interchange	\$ 40,954,459	\$ 48,458,636	\$ 7,504,177	18%
14	Transportation	Potomac/Neabsco Mills Commuter Garage	\$ 45,556,369	\$ 47,222,228	\$ 1,665,859	4%
15	Transportation	Route 1 (Featherstone to Marys Way)	\$ 32,663,373	\$ 34,096,295	\$ 1,432,922	4%
Total			\$ 272,499,691	\$ 307,735,398	\$ 35,235,707	Avg. 9%



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