Planning, Design, and Supervision in the MCG Capital Improvements Program

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Office of Legislative Oversight

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OLO Report 2024-5 **EXECUTIVE SUMMARY** **February 27, 2024**

The County's Capital Improvements Program (CIP) describes planned expenditures for capital projects. Individual project descriptions divide project spending into five categories, or "cost elements." The Planning, Design and Supervision (PDS) cost element encompasses a variety of tasks that occur throughout the lifecycle of capital projects and include feasibility studies, gathering public input, preliminary design, final design, permit acquisition and construction management. PDS includes staff time as well as contractor costs. The purpose of this Office of Legislative Oversight (OLO) report is to describe the processes, costs, and timing associated with PDS in Montgomery County Government (MCG) CIP projects, including in facility planning projects. This report provides an overview of the County Government's CIP, with an emphasis on Department of Transportation (DOT) and Department of General Services (DGS) administered projects; presents OLO's analysis of facility planning projects; examines PDS expenditures; and describes innovative practices from other jurisdictions relevant to the planning and design of capital projects.

County Capital Improvements Program and Department Process Overview

The CIP is the comprehensive presentation of capital project expenditure estimates, funding requirements, capital budget requests, and program data for the construction of all public buildings, roads, and other facilities planned by County agencies over a six-year period. The capital budget is the County's annual request for appropriations to fund major improvements to facilities and infrastructure throughout the County, providing spending authority to agencies such as the Housing Opportunities Commission (HOC), Montgomery County Revenue Authority (MCRA), Maryland-National Capital Park and Planning Commission (M-NCPPC), Montgomery County Public Schools (MCPS), Washington Suburban Sanitary Commission (WSSC) and MCG.

Within the six-year budgeted CIP expenditures for MCG from FY19 to FY24, Transportation accounted for the largest amount, at 50%-57% in each of the last six CIPs. General Government was the second largest category, accounting for 11%-25% in each CIP.

MCG CIP Category	FY19 CIP	FY20 CIP	FY21 CIP	FY22 CIP	FY23 CIP	FY24 CIP
Total ($ millions)	**$2,170**	**$2,089**	**$2,056**	**$2,147**	**$2,859**	**$3,134**
Transportation	52%	50%	50%	50%	57%	57%
General Government	23%	25%	15%	14%	12%	11%
Conservation of Natural Resources	8%	6%	7%	6%	6%	5%
Public Safety	7%	7%	8%	8%	9%	8%
Culture and Recreation	6%	7%	9%	9%	5%	6%
Community Development and Housing	2%	2%	7%	7%	7%	8%
Recycling and Resource Management	1%	1%	3%	4%	2%	2%
Health and Human Services	1%	1%	2%	2%	3%	3%

Within the five primary spending categories in each CIP project, the data show that on average, the PDS cost element accounted for 16% of budgeted expenditures. The construction cost element accounted for the largest share of budgeted expenditures at an average of 55%.

Cost Element	FY19 CIP	FY20 CIP	FY21 CIP	FY22 CIP	FY23 CIP	FY24 CIP	Avg.
Total ($ millions)	**$2,170**	**$2,089**	**$2,056**	**$2,147**	**$2,859**	**$3,134**	
Construction	58%	56%	56%	55%	54%	53%	55%
Planning, Design, & Supervision	*14%*	*14%*	*18%*	*18%*	*15%*	*15%*	*16%*
Other	15%	16%	12%	12%	13%	15%	14%
Site Improvements & Utilities	7%	8%	6%	6%	5%	6%	6%
Land	6%	6%	8%	8%	12%	11%	9%

This project focused on the DOT- and DGS-administered projects because they account for the largest portion of CIP expenditures (81%), have uniform processes, and provide the most impact in the MCG CIP. Both DOT and DGS CIP processes are similar, starting with facility planning, continuing with design, and finishing with construction. The primary difference in the process is that DOT meets with the Council Transportation and Environment Committee between facility planning phase one and two where the Committee provides feedback on projects before phase two.

DOT CIP Process

DGS CIP Process

Facility Planning

Facility planning projects are ongoing *projects* in the CIP that fund facility planning *studies* selected by the County Executive with input from the County Council. Each facility planning project in the CIP funds a specific category of studies (e.g., roads, stormwater management, mass transit) and each study may result in a standalone CIP project. Reviewing the 100 DOT and DGS facility planning studies in the past 10 years, 28 ended without becoming a standalone project, 42 studies are currently in progress, 12 were previous DOT candidate projects (not started), and 30 ended up as standalone projects. The total lifecycle from facility planning to completion ranged from 4-21 years.

When analyzing facility planning studies that led to standalone projects, seven DOT and DGS projects were initially approved by the Council with only PDS costs – without a placeholder for construction costs.

Studies in the FY15-FY24 PDFs	DOT	DGS	Total
Total studies included in the FY15-FY24 PDFs	**64**	**36**	**100**
Studies that ended without becoming standalone projects	10	18	**28**
Current studies/candidate studies for facility planning	23	7	**30**
Previous candidate studies (not started)	12	NA	**12**
Studies that became standalone projects	19	11	**30**
Delayed at least 1 year	7	5	**12**
Have had cost increases	10	8	**18**
Initial standalone project had PDS costs only	5	2	**7**
Years from facility planning to actual/planned completion	7-21 yrs	4-16 yrs	**4-21 yrs**

Four of these projects' cost estimates have increased significantly since the projects were created. Department staff report that the practice of funding PDS costs alone will eventually require additional funding for construction and hinders the County's ability to effectively plan for the future.

Planning, Design, and Supervision Costs

To get a better understanding of the PDS costs for MCG projects, OLO analyzed expenditures from all DOT- and DGS-administered projects from FY16 through 23. Overall, DOT tends to spend slightly more on PDS among its projects compared to DGS; DOT dedicated more funding to design expenditures for architectural and engineering services for transportation projects. DOT relied more on contractual services for PDS, while DGS uses MCG staff slightly more than contractors.

	DOT-Administered Projects	DGS-Administered Projects
Percentage of Planning, Design, and Supervision (PDS) among cost elements	21%	17%
Within PDS, the largest component among Planning, Design, and Construction Management (Supervision)	Design, at $23.0M or 68% of all PDS components per year.	Design, at $5.3M or 49% of all PDS components per year.
Contract Services vs. Department Staff within PDS	Contract services accounted for 62% of all PDS costs, followed by DOT staff (31%) and all other remaining operating expenses (7%).	DGS staff accounted for 49% of all PDS costs, followed by contract services (47%), and all other remaining operating expenses (4%).

Both DOT and DGS charge their personnel costs across projects, which can be complicated because while the staff remains constant, the projects' funding and planned expenditures shift from year to year. This causes DOT and DGS to look for fund staff on projects with funding capacity, even if staff are not directly related to projects.

An alternative would be to create an existing standalone CIP project specifically for department staffing. This would make it easier to manage staff costs without having to move staff costs among individual projects – but individual projects' costs would look smaller without department staff costs included.

Innovative Capital Budgeting Practices

OLO reviewed how other jurisdictions use different capital budget strategies to address constituent and government needs. These different strategies apply different rubrics to help prioritize projects, seek to expand involvement with Black, Indigenous, and People of Color (BIPOC) community members, categorize projects based on considerations beyond funding, and utilize digital means.

Practice	Examples
Including equity with capital budget prioritization and analysis	Applying equity and performance lenses to four project categories: environmental, social, economic, and project implementation. Calculating per capita investments by Community Statistical Area and comparing investments by race.
Furthering equitable and inclusive planning and involvement	Engaging in participatory budgeting to allow community members to brainstorm ideas, develop proposals, and vote for projects to receive funding. Reaching out to communities unrepresented in previous capital budget outreach before departments submit projects.
Creating a fiscally unrestricted capital plan	Long-term capital needs are identified first regardless of funding. From those needs, projects are funded in the shorter-term capital improvement plan and subsequently removed from the capital plan.
Utilizing digital tools	Residents submit ideas through an online portal and those submissions are tracked and utilized by a jurisdiction. Using ArcGIS to provide the public an interactive map showing the results of CIP distribution analysis.

Recommended Discussion Items

These discussion items are aimed at improving the Capital Improvements Program's process, transparency, and inclusiveness.

1. Consider altering how personnel costs are charged across DOT- and DGS-administered projects.
2. Discuss whether DGS should establish a preliminary review of capital projects with the Council, similar to DOT.
3. Discuss whether to require that budgeted project expenditures in the CIP include estimates or placeholders for future construction costs, rather than funding some projects with PDS costs only and adding funding for construction at a later date.
4. Discuss with Executive Branch staff whether innovative process changes could increase equity, transparency, and resident input in capital projects.

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OLO Report 2024-5

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Introduction

Capital projects fund major improvements to facilities and infrastructure in Montgomery County. The Capital Improvements Program (CIP) is the comprehensive presentation of capital project expenditure estimates, funding requirements, capital budget requests, and program data for the construction of all public buildings, roads, and other facilities planned by County agencies over a six-year period. For each capital project, the CIP has a Project Description Form (PDF) that includes an expenditure schedule broken down by the following cost elements:

- Planning, Design and Supervision;
- Land;
- Site Improvements and Utilities;
- Construction; and
- Other

The Planning, Design and Supervision (PDS) cost element encompasses a variety of tasks that occur throughout the lifecycle of capital projects including feasibility studies, gathering public input, preliminary design, final design, permit acquisition and construction management. It includes staff time as well as contractor costs. The purpose of this report is to describe the processes, costs, and timing associated with PDS in County Government CIP projects including in facility planning projects.

As the data in the report will show, expenditures on transportation projects and general government projects make up the two largest categories of expenditures in the County Government's capital budget. Accordingly, much of the data and information in the report focuses on two departments that administer the bulk of these projects – the Department of Transportation's (DOT) and Department of General Services (DGS).

The report is organized as follows:

- **Chapter 1** provides an overview of the County Government's CIP, including summary data on budgeted expenditures as well as overviews of DOT and DGS' processes for planning, design and construction of capital projects;
- **Chapter 2** presents OLO's analysis of facility planning projects, with a focus on the studies included in DOT- and DGS-administered facility planning projects;
- **Chapter 3** examines PDS actual expenditures, their associated tasks, County staff, vendors, and contract services for DOT- and DGS-administered County projects;

- **Chapter 4** describes innovative practices from other jurisdictions relevant to the planning and design of capital projects; and
- **Chapter 5** presents OLO's findings and recommendations.

Methodology. Office of Legislative Oversight staff members Blaise DeFazio and Natalia Carrizosa conducted this study, with assistance from Leslie Rubin and Karen Pecoraro. To prepare this report, OLO gathered information through document reviews, data analysis, and interviews with County staff and staff from Howard County (MD), Prince George's County (MD), and the City of Baltimore. OLO received a great level of cooperation from everyone involved in this study. OLO appreciates the information shared and the insights provided by all who participated. In particular, OLO thanks:

County (* - department director)
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Katherine Bryant Higgins, Management & Budget
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Mohammed Rahman, Baltimore DPW
Nicola Martin, Prince George's County
Sharon Walsh, Howard County

Chapter 1. County Capital Improvements Program and Department Process Overview

The **capital budget** is the County's annual request for appropriations to fund major improvements to facilities and infrastructure throughout the County, providing spending authority to agencies such as the Housing Opportunities Commission (HOC), Montgomery County Revenue Authority (MCRA), Maryland-National Capital Park and Planning Commission (M-NCPPC), Montgomery County Public Schools (MCPS), Washington Suburban Sanitary Commission (WSSC) and Montgomery County Government (MCG).

The **Capital Improvements Program** (CIP) is the comprehensive presentation of capital project expenditure estimates, funding requirements, capital budget requests, and program data for the construction of all public buildings, roads, and other facilities planned by County agencies over a six-year period. The Council must approve a comprehensive CIP in even-numbered calendar years, and typically approves an amended CIP in odd-numbered calendar years. This report focuses specifically on the County Government's CIP and does not include analyses of other agencies' CIPs.

This chapter describes the Montgomery County Government's CIP, providing an overview of the CIP process and budgeted CIP expenditures. It also focuses on departments' capital budget and CIP processes – with an emphasis on transportation and facilities projects – from project beginning to project completion. This chapter is organized as follows:

A. County Capital Improvements Program Overview;
B. Department of Transportation Capital Project Process;
C. Department of General Services Capital Project Process; and
D. Other County Departments' Capital Project Processes.

A. County Capital Improvements Program Overview

This section provides an overview of the County Government's process for developing the CIP and presents trend data on budgeted CIP expenditures for Montgomery County Government in the CIPs approved between FY15 and FY24.

1. CIP Process

The Capital Improvements Program (CIP) is a six-year plan that presents cost estimates, funding sources, and program data for the construction of public infrastructure and facilities. Details for specific projects in the CIP are included on Project Description Forms (PDFs), which includes a description of the project, justification, data on planned expenditures and funding, and appropriations.

Most projects in the CIP outline the details for the building of a specific capital project or the maintenance of existing capital infrastructure (known as Level of Effort or LOE projects).
A small group of projects in the CIP provide funding to evaluate the feasibility of potential standalone projects. Eleven facility planning *projects*[1] administered by the County Government, each focused on a specific category of infrastructure (e.g., stormwater management, parking, roads, etc.), fund facility planning *studies* that evaluate the cost and feasibility of individual infrastructure projects with the goal of determining whether a project should become a standalone project. Chapter 2 focuses specifically on facility planning.

Following the completion of facility planning, a department may submit a proposed project to the Office of Management and Budget (OMB) for possible inclusion as a standalone project in the CIP. OMB evaluates competing CIP project proposals using three general criteria:

- **Need**: An assessment of the need for a capital project based on community demands, demographic trends, and land use plans;
- **Readiness**: An assessment of the adequacy of the preliminary planning and cost estimates of a proposed capital project; and
- **Affordability**: An assessment of the government's ability to fund a project given available resources and competing needs.

In addition, since the FY23 CIP cycle, departments must work with the Office of Racial Equity and Social Justice (ORESJ) and OMB to implement the Capital Budget Equity Tool (CBET). For each CIP, ORESJ works with OMB to select CIP projects for which departments must implement the CBET, based on which projects are most likely to have racial equity and social justice impacts. The CBET includes the following seven questions to which departments must respond for each selected CIP project:

1. What need does this project fulfill and what benefit (or outcome) does this project seek to create in the community?
2. What informed the project request—how did you learn about this need?
3. What do data, community feedback, and broader research (historical and/or current) tell you about who is most impacted/burdened by what this project seeks to address?
4. What unintended consequences does this project have the potential to create (at any point in the lifespan of the project) for communities of color and other marginalized groups?

[1] Chapter 2 describes the eleven facility planning projects administered by the County Government. In addition, DOT administers the Bridge Design project which funds the County's portion (20%) of design costs for bridges. The Bridge Design differs from facility planning projects in that it includes all design costs and that the design is managed by the state, not the County.

5. How does this project respond to data, community feedback, and broader research (historical and/or current) about racial disparities and inequities related to what this project seeks to address?
6. What racial disparities or inequities will this specific project help to reduce or widen because of its implementation/completion?
7. How will you mitigate unintended consequences, for communities of color and other marginalized groups, resulting from the development, construction, or implementation of the project?

The ORESJ is responsible for scoring responses to the questions using a structured rubric to identify projects with the most potential to reduce racial disparities and inequities in Montgomery County. ORESJ also uses the scores to identify areas where the County should mitigate unintended consequences likely to disproportionately burden Black, Indigenous, and people of color (BIPOC) and low-income communities. ORESJ provides summary scores and their recommendations to departments and the County Executive.

ORESJ staff report they have not yet been able to implement the CBET for facility planning projects, in particular, due to a lack of sufficient information about the studies of specific improvements the departments complete during facility planning. Unfortunately, this prevents ORESJ from assessing racial equity during a key stage of project development when departments develop project scopes and gather public input. ORESJ has focused its use of the CBET on other types of projects in the CIP.

Following the OMB and ORESJ analyses, the County Executive reviews the proposed capital projects. On or before January 15 of even-numbered calendar years, the County Executive transmits to the County Council a recommended capital budget and comprehensive CIP for the upcoming six fiscal years. The Council then holds public hearings on the recommended CIP. At public worksessions, the Council considers the need, readiness, and affordability of proposed capital projects. On or before June 1 of even-numbered calendar years, the Council approves the capital budget and a comprehensive six-year CIP.

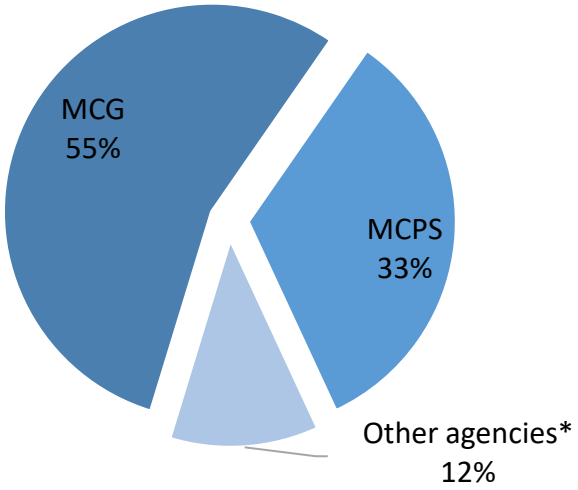
The Council may amend the approved CIP at any time (with a vote of six Councilmembers). Once a project is funded in the approved CIP, departments may begin work to develop design plans for facility construction. In practice, the County Executive submits and the County Council approves an amended six-year CIP in odd-numbered calendar years.

2. Trends in Budgeted CIP Expenditures

The full *FY24 Approved Capital Budget and FY23-FY28 Capital Improvements Program* included $5.7 billion in budgeted expenditures for FY23-F28 (six years). Of that amount, 55% or $3.1 billion was for projects administered by Montgomery County Government (MCG), 33% was for projects administered

by Montgomery County Public Schools (MCPS) and the remaining 12% was for projects administered by other agencies.

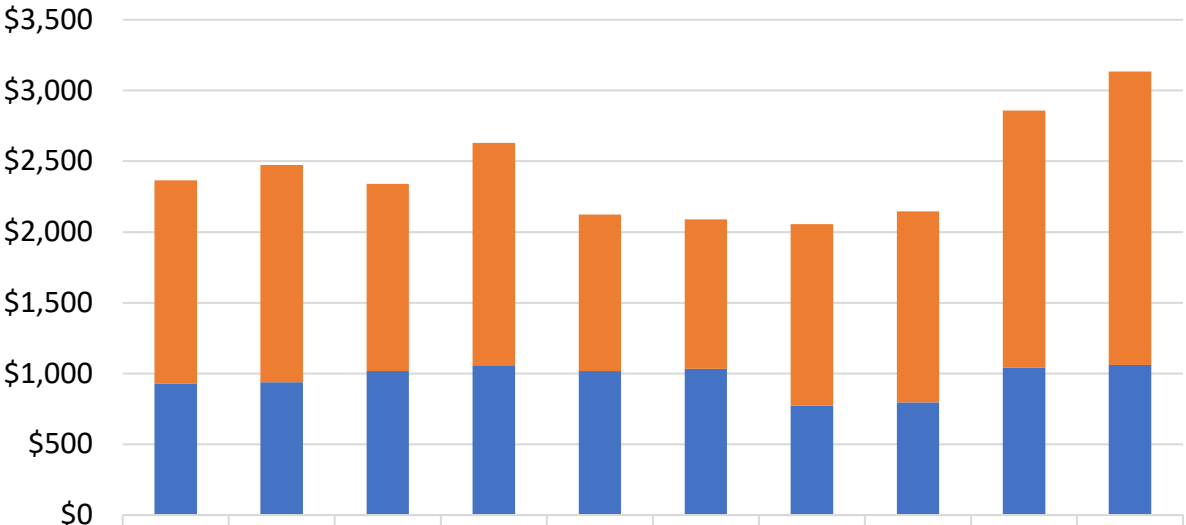
Chart 1.1 FY23-28 Six-Year CIP Budgeted Expenditures by Agency



Source: FY24 Approved Schedule CIP 200 All Agency Expenditures
* "Other agencies" refers to Montgomery College, the Maryland-National Capital Park and Planning Commission, the Revenue Authority, and the Housing Opportunities Commission of Montgomery County.

The following chart displays trends in six-year budgeted CIP expenditures for Montgomery County Government for the past ten CIP years.

Chart 1.2 Six-Year Budgeted CIP Expenditures for MCG by CIP Year ($ Millions)



	FY15 CIP	FY16 CIP	FY17 CIP	FY18 CIP	FY19 CIP	FY20 CIP	FY21 CIP	FY22 CIP	FY23 CIP	FY24 CIP
Years 3-6	$1,438	$1,534	$1,324	$1,572	$1,105	$1,056	$1,282	$1,352	$1,818	$2,075
Years 1 and 2	$928	$939	$1,017	$1,058	$1,019	$1,033	$774	$795	$1,042	$1,060

The data show that:

- Total CIP budgeted expenditures increased from $2.4 billion in FY15 to $3.1 billion in FY24, a 32% increase;
- The largest increase in six-year budgeted expenditures occurred between FY22 and FY23, coinciding with increased state and federal aid for transportation and other projects;
- Budgeted expenditures in Years 1 and 2 of each CIP increased from $928 million in FY15 to $1.1 billion in FY24, or by 14%; and
- Budgeted expenditures in Years 3 to 6 of each CIP (the "out years") increased from $1.4 billion to $2.5 billion, or by 44%.

Among other ways, MCG capital improvement projects are classified into eight major "categories" based on the nature of the project (e.g., transportation, general government, public safety). The next table displays the percentage of budgeted expenditures by category for each of the last six CIP years.

Table 1.3 Six-Year Budgeted CIP Expenditures for MCG by CIP Year and Category

MCG CIP Category	FY19 CIP	FY20 CIP	FY21 CIP	FY22 CIP	FY23 CIP	FY24 CIP
Total ($ millions)	**$2,170**	**$2,089**	**$2,056**	**$2,147**	**$2,859**	**$3,134**
Transportation	52%	50%	50%	50%	57%	57%
General Government	23%	25%	15%	14%	12%	11%
Conservation of Natural Resources	8%	6%	7%	6%	6%	5%
Public Safety	7%	7%	8%	8%	9%	8%
Culture and Recreation	6%	7%	9%	9%	5%	6%
Community Development and Housing	2%	2%	7%	7%	7%	8%
Recycling and Resource Management	1%	1%	3%	4%	2%	2%
Health and Human Services	1%	1%	2%	2%	3%	3%

The data show that:

- The category with the largest budgeted expenditures, Transportation projects, accounted for 50%-57% of the total six-year budgeted CIP expenditures in each of the last six CIPs; and
- The second largest category, General Government projects, accounted for 11%-25% of budgeted expenditures.

The following table displays six-year budgeted CIP expenditures for the past six CIPs by Council District (based on the new district boundaries established for the 2022 election cycle) in which the project was located. For this analysis, OLO mapped projects based on the geographic coordinates listed in the "Projects Data" spreadsheets available on the OMB website. It is important to note that in each year, the majority of budgeted expenditures were associated with projects that do not have geographic information associated with them, often because they include improvements across different locations.

Table 1.4 Percentage of Six-Year Budgeted CIP Expenditures for MCG by CIP Year and Council District Where Projects are Located ($ millions)

Council District (2022)	Where	FY19 CIP	FY20 CIP	FY21 CIP	FY22 CIP	FY23 CIP	FY24 CIP	Average
Total		**$2,170**	**$2,089**	**$2,056**	**$2,147**	**$2,859**	**$3,134**	
1	Bethesda, Potomac, Chevy Ch.	9%	9%	4%	5%	4%	4%	6%
2	Clarksburg, Germantwn, Poolesv.	2%	2%	4%	3%	4%	4%	3%
3	Rockville/Gaithersburg	5%	6%	5%	6%	6%	7%	6%
4	Takoma Pk, Silver Spr., N. Beth.	10%	12%	12%	12%	7%	6%	10%
5	White Oak/Burtonsville	5%	5%	3%	3%	3%	2%	3%
6	Wheaton, Glenmont	11%	7%	2%	3%	3%	3%	5%
7	Olney, Redland, Damascus	3%	3%	4%	3%	3%	3%	3%
	No geographic information	56%	57%	65%	64%	70%	72%	65%

The data show that for projects that had geographic information available, the geographic distribution of budgeted expenditures varied by CIP year. In general, District 4 accounted for larger percentages of budgeted CIP expenditures relative to other districts, while Districts 2, 5 and 7 accounted for lower percentages of budgeted expenditures (see Appendix A for more details).

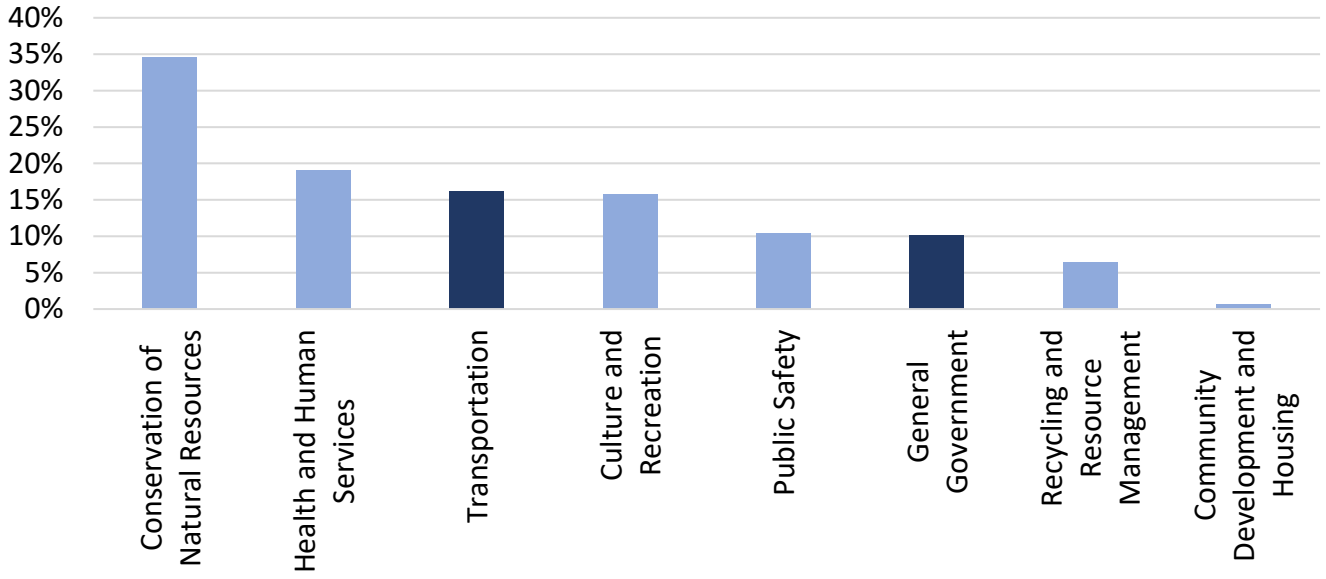
The data in the next table show six-year budgeted CIP expenditures by "cost element" – the five primary spending categories in each CIP project. The data show that on average, the planning, design, and supervision (PDS) cost element accounted for 16% of budgeted expenditures. The construction cost element accounted for the largest share of budgeted expenditures on average (55%).

Table 1.5 Six-Year Budgeted CIP Expenditures for MCG by CIP Year and Cost Element

Cost element	FY19 CIP	FY20 CIP	FY21 CIP	FY22 CIP	FY23 CIP	FY24 CIP	Average
Total ($ Millions)	**$2,170**	**$2,089**	**$2,056**	**$2,147**	**$2,859**	**$3,134**	
Construction	58%	56%	56%	55%	54%	53%	55%
Planning, Design and Supervision	14%	14%	18%	18%	15%	15%	16%
Other	15%	16%	12%	12%	13%	15%	14%
Site Improvements and Utilities	7%	8%	6%	6%	5%	6%	6%
Land	6%	6%	8%	8%	12%	11%	9%

Finally, data in the next chart show planning, design, and supervision costs as percentages of six-year budgeted CIP expenditures by category of projects. The data show that percentages of budgeted expenditures categorized as PDS varied significantly by category.

Chart 1.6 PDS as Percentage of Six-Year Budgeted CIP Expenditures by Category, FY24 CIP



While transportation and general government projects did not have the highest PDS costs among categories, recall that these two categories of projects accounted for the largest shares of total budgeted expenditures in the CIP (57% and 11%, respectively, in the FY24 CIP).

B. Department of Transportation Capital Project Process

In the *FY24 Approved Capital Budget and FY23-28 Capital Improvements Program*, Department of Transportation-administered projects accounted for 59%[2] of planned expenditures for Montgomery County Government. The Department of Transportation (DOT) is responsible for developing and maintaining County transportation infrastructure such as roads, bridges, bikeways, sidewalks, transit facilities, and bridges. Specifically:

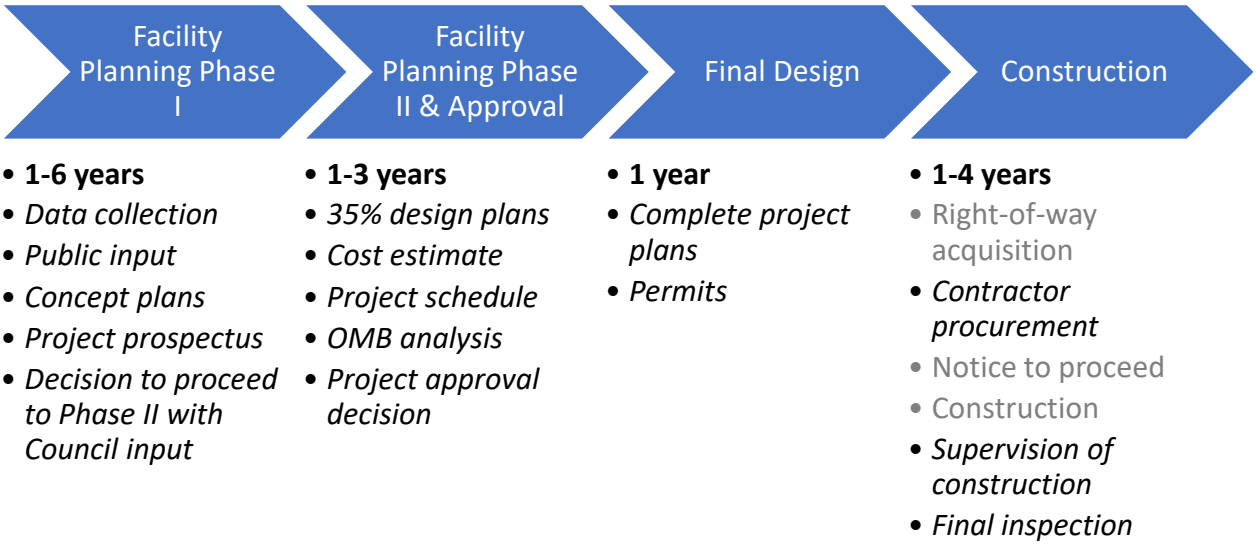
- **The Division of Transportation Engineering** oversees design and construction of transportation infrastructure; and
- **The Division of Highway Services** maintains transportation infrastructure.

This section provides an overview of the CIP process for County transportation projects and the aspects of the process that constitute planning, design and supervision. The exhibit below displays the four phases of a typical transportation project lifecycle and the elements associated with each phase. Elements in *italics* are part of the planning, design and supervision cost element. Elements in grey font

[2] Also represents 138 out of the FY24 approved 268 County projects, or 51%.

are part of other cost elements. The remainder of this section describes each phase. Note these phases occur after the master planning process,[3] which is outside the scope of this OLO study.

Transportation Project Lifecycle



1. Facility Planning

During the facility planning process, DOT studies the need for specific transportation projects, defines project scopes, and creates cost and schedule estimates. The Executive determines which project studies DOT will include in the facility planning process in consultation with relevant government agencies, and the Council may approve, modify or disapprove the list of projects. Elected officials use the information gathered through the facility planning process to determine whether to fund specific improvements as standalone projects in the CIP. Most of the costs associated with facility planning fall within the planning, design and supervision cost element of the CIP.

Phase 1. During the first phase of the facility planning process, DOT studies the need for specific projects and defines project features. DOT assigns an in-house staff project manager and typically selects an engineering contractor that works throughout the project on the design, permitting, and construction management. At times, DOT may conduct this work or parts of this work in-house rather than using a contractor if the timeline for the study is very short or for staff training purposes. Phase 1 includes:

- Data collection. DOT or its contractor reviews the relevant master plan, collects relevant traffic, environmental and other data, and forecasts future travel demand.

[3] The County Council approves master plans developed by the Planning Board for specific areas of the County. Master plans describe development goals for the area and recommend specific transportation infrastructure projects and other projects.

- Public input. During the Facility Planning Phase 1, DOT reaches out multiple times to stakeholders, including the community adjacent to the project location. DOT schedules virtual or hybrid public outreach meetings and promotes them via mail, e-mail, and social media. DOT identifies language needs and other community needs and develops plans to address those needs in consultation with the Office of Racial Equity and Social Justice (ORESJ). Recent examples of innovative public engagement efforts include pop up events at grocery stores and online interactive maps where the public can submit comments.[4] DOT accepts verbal and written comments at any time during the facility planning process.
- Concept plan. DOT or its contractor develops alternatives for the horizontal and vertical alignments and cross-sections of the project[5] and applies them to the study corridor (the geographic area where the project will be located). DOT compiles these elements to generate the concept plan for the project.
- Project prospectus. DOT or its contractor conducts a preliminary analysis of project impacts and costs, and DOT recommends whether the project should proceed to the second phase of facility planning.
- Approval decision. DOT conducts an informational meeting with the public. The public can comment on the project, and the DOT director determines whether the project will move forward. DOT briefs the M-NCPPC Planning Board on the project. Additionally, at this stage, the Council's Transportation & Environment (T&E) Committee receives a briefing on the project and provides feedback and guidance to DOT regarding the next (preliminary engineering) phase of facility planning.

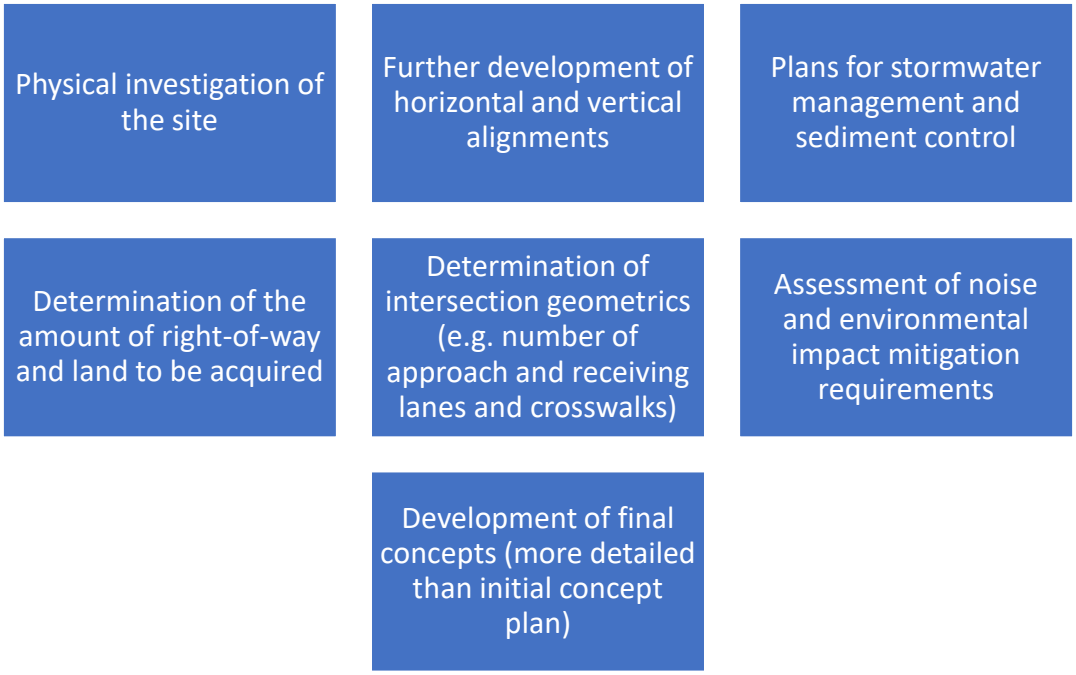
Phase 2. The second phase of facility planning serves to provide sufficient information to develop an accurate schedule and cost estimate so that policymakers can determine whether or not to allocate funding to create a standalone CIP project.

- 35% design plans. DOT uses the term "35% design plans" to refer to the preliminary engineering design work detailed in the exhibit below, which is often done by a contractor.
- Continued public input. DOT holds public briefings (typically two) to provide public updates and continues to receive questions and comments from the public.
- Detailed scope, schedule and cost estimate. DOT or its contractor identifies the specific elements of the project's design and tasks involved in construction, formulates a schedule for final design and construction, and estimates the total project cost.

[4] See this interactive online map with comment function (Tuckerman Lane Sidewalk/Bikeway)

[5] The horizontal alignment refers to the route of a road, bikeway or other project. The vertical alignment includes the gradient, or incline, and vertical curves of a project. The cross-section is a representation of a road or other improvement that displays the position and number of vehicle and bicycle lanes and sidewalks as well as other features such as drainage features. Together, these elements provide a three-dimensional layout for the project.

Preliminary Engineering Design Work aka 35% Design Plan Components



Transportation Feasibility Studies. In FY23, the Council approved a new CIP project: *Transportation Feasibility Studies*. This project provides for streamlined planning and initial design for transportation capital facilities in order to quickly assess project impact, scope and cost and in order to support a decision on whether to move forward with the project. This streamlined process is intended to avoid undergoing a resource-intensive facility planning process for projects that may not move forward.

2. Final Design

Projects that receive funding to become standalone projects in the CIP undergo final design after facility planning is complete. Final design may take up to several years to complete for larger projects. The following tasks occur during the final design phase:

- Final design. Alignments and profile of the project are finalized.
- Permits. The County applies for required permits from relevant agencies (Montgomery County Department of Environmental Protection, Maryland Department of Environment, U.S. Environmental Protection Agency, and U.S. Army Corps of Engineers) and makes any necessary design changes to avoid or mitigate environmental impacts.

3. Construction

While most costs incurred during the construction phase are categorized under the construction cost element, supervision of construction and final inspection are included in the planning, design and supervision cost element. Right-of-way acquisition is categorized under the "land" cost element. The construction phase includes the following tasks:

- Right-of-way acquisition. The County acquires any necessary rights-of-way[6] for the project.
- Contractor procurement. DOT bids the project out for construction and selects a contractor.
- Notice to proceed. Once the County and contractor have agreed on the terms of the contract, DOT issues the Notice to Proceed.
- Construction. The contractor breaks ground and constructs the project.
- Supervision of construction. During construction, DOT staff or its contractor supervise the contractor to ensure conformance with the design and other standards and specifications as well as ensure disruption to the community is minimized.
- Final inspection. When the project is complete, DOT conducts a final inspection and opens the project to the public.

C. Department of General Services Capital Project Process

In the *FY24 Approved Capital Budget and FY23-28 Capital Improvements Program*, Department of General Services-administered projects accounted for 22%[7] of planned expenditures for Montgomery County Government. The Department of General Services (DGS) "proactively serves the diverse business and service requirements of all County departments, providing a single point of government to government service, enabling departments to successfully complete their respective missions…."[8]

Within its mission, DGS is the lead for all County Government building capital projects. DGS' Division of Building Design and Construction Office develops and supervises capital projects. This division plans, designs, and constructs County public buildings to high performance standards while also paying close attention to citizen's input, environmental, and economic concerns.[9]

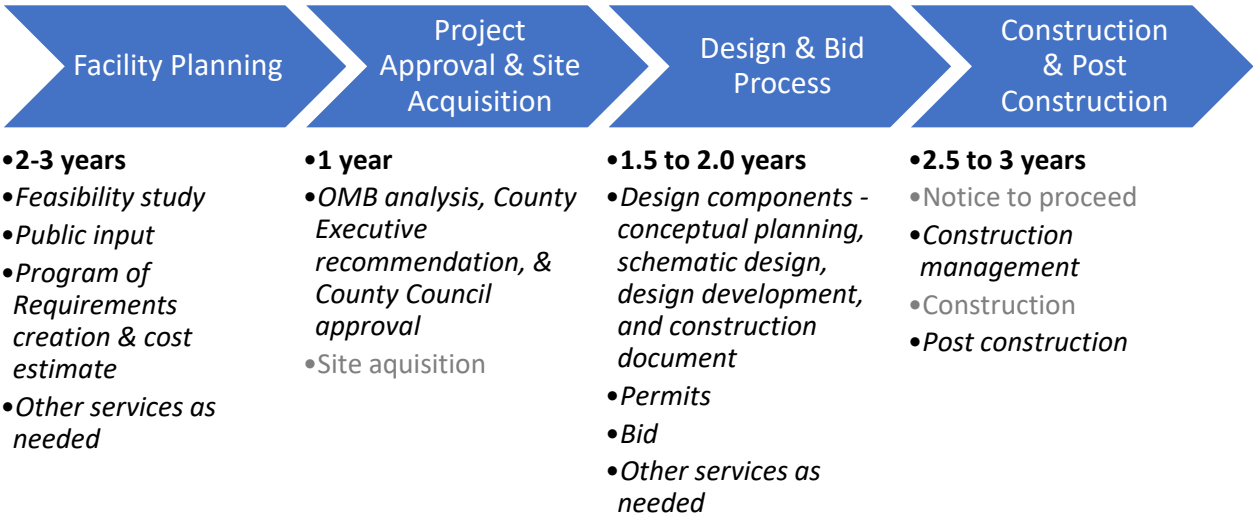
Two other DGS divisions are also responsible for capital projects, but they are not as directly involved in planning, design, and construction of County buildings:

[6] Rights-of-way refers to land dedicated by the government for roadways as well as for other transportation, electricity, natural gas, water, sewer, and telecommunication infrastructure.
[7] Also represents 90 of the 268 FY24 approved County projects, or 34%.
[8] https://www.montgomerycountymd.gov/DGS/Resources/Files/DGS-FY22AnnualReport.pdf , Page 2.
[9] https://www.montgomerycountymd.gov/DGS-BDC/Home.html

- **Energy and Sustainability:** oversees the overall greening of government operation across County departments and coordinates green government initiatives, such as Capital Advanced Energy Projects.[10]
- **Planning and Development:** implements and manages the County's redevelopment projects by creating opportunities for public-private partnerships that leverage County assets and facilitate Executive initiatives.[11]

This section provides an overview of the CIP process for County building and building-related projects and the aspects of the process that constitute planning, design, and supervision.[12] The exhibit below displays the phases of a typical building project lifecycle and the elements associated with each phase; the entire process usually takes between seven and nine years. Elements in *italics* are part of the planning, design and supervision cost element. Elements in grey font and not in italics are part of other cost elements. The remainder of this section describes each phase.[13]

DGS Project Lifecycle



[10] https://www.montgomerycountymd.gov/DGS-OES/AboutUs.html
[11] https://www.montgomerycountymd.gov/DGS/OPD/Home.html

[13] As with the DOT process, these phases occur after the master planning process, which is outside the scope of this OLO study.

1. Facility Planning

During the facility planning process, over a two-to-three-year period DGS studies the need for specific building or building-related projects, defines project scopes, and creates cost and schedule estimates. During a pre-screening process, the Executive determines which project studies DGS will include in the facility planning process and the Council may approve, modify or disapprove the list of projects. Elected officials use the information gathered through the facility planning process to determine whether to fund specific improvements as standalone projects in the CIP. Most of the costs associated with facility planning fall within the planning, design, and supervision cost element under the *Facility Planning: MCG* project.

At this point in the process, DGS assigns an in-house staff project manager and selects an architectural and engineering (AE) contractor that works throughout the project on the design, permitting, and construction management. DGS has a group of contractors on retainer to choose from for projects, eliminating the need for a separate solicitation for each project and saving considerable time (up to six months). In general, the AE contractor is supervised or led by the DGS project manager. Overall, the facility planning phase includes the following tasks:

- Feasibility Study: The AE contractor defines the project goals, identifies government and community needs, and then provides options to fulfill the goals and needs. The feasibility of affordable housing and childcare is also considered.

- Public Input. DGS holds public meetings near the proposed project's location and the public provides feedback in person. DGS also conducts virtual meetings and has found these are able to reach additional populations. Through DGS's website, community members can provide input via email throughout the entire project, see who's on the project team (DGS staff and contractors), the status, description, and useful links.

- Program of Requirements Creation and Cost Estimate. The AE contractor creates a written report that explains the functional and structural requirements for a facility, along with a preliminary cost estimate. Based on the feasibility study, it also details site or current building constraints and design objectives. To be included in the County Executive's recommended capital budget, the program of requirements (referred to as a POR) must be approved by the Office of Management and Budget, the County Executive's Office, and other departments that are aligned with the project.

- Other Services. DGS will contract out for other services needed, including surveying, envelope studies,[14] geotechnical studies,[15] affordable housing studies, and traffic studies.

2. Project Approval and Site Acquisition

The project approval – starting from POR approval to County Council funding – takes approximately one year. The site acquisition process (if needed) starts once the POR is approved and the time frame to acquire the site can vary, depending on site complexities. The second phase consists of the following tasks or steps:

- The project approval is threefold:

  - OMB Analysis. DGS, along with the corresponding department (e.g., the Department of Police for a police station), submit the project to OMB for the full six-year budget (for each odd fiscal year; even years are for amendments and urgent projects). OMB reviews the project for readiness, need, and affordability. Based on its analysis, OMB will make a recommendation to the County Executive.

  - County Executive Approval. After meetings with OMB, DGS, and related departments, the County Executive will include current and new projects in their recommended capital budget on January 15th.

  - County Council Approval. The County Council reviews all current and new projects first at the committee level and then with the full Council, DGS, OMB, and related departments present. The Council may alter or not include County Executive-proposed projects in the final approved capital budget in June.

Site acquisition: As early as the POR approval,[16] DGS's Office of Planning and Development will work with the using department (such as Police), the community, OMB, and the corresponding Regional Center to determine where the facility will be located and perform test fits.

[14] For facility renovation projects, the envelope (walls, roof, windows, and foundation) is inspected to test for potential moisture and air leakage issues.
[15] Inspecting the surface and subsurface of a building or potential building. Would include such tests as a soil sample.
[16] https://www.montgomerycountymd.gov/DGS/OPD/FacilityPlanningandSiteSelection.html

3. Design and Bid Process

Once the approval process is complete, DGS and the AE contractor begin the four-part design process (outlined below), which can take one to one and a half years. This process refines the initial work from facility planning and solidifies the project cost. During design, required permits are applied for and following design, the project is ready to be bid on. The tasks related to this phase are:

- Design: the four pillars of DGS' design phase – in chronological order – are described below:
    - Conceptual Planning. DGS and the contractor create the conceptual design (interim design to refine the project), the initial project schedule, and update costs.
    - Schematic Design. Converts the concepts into physical drawings and refines project development.
    - Design Development. Develops the project drawings and specifications to build.
    - Construction Document. Based on design development, a construction document is created to use for the bid process.

- Permits. DGS begins obtaining permits for the following (all not included for every project): new construction, alteration, use and occupancy, reforestation, demolition, water/sewer, and rail access points. These permits are through entities such as the County's Department of Permitting Services, the City of Takoma Park, the City of Gaithersburg, the City of Rockville, the Washington Suburban Sanitary Commission, and Chessie Seaboard Consolidated (CSX rail lines).

- Bid. A Request for Expression of Interest (REOI) solicitation is posted. This is where DGS will evaluate proposals based on pre-determined selection criteria in the solicitation. After evaluating proposals from vendors, DGS will send an invitation to bid to a select group of firms that meet requirements. Finally, DGS will award the construction contract to a firm from that final group, based mostly on cost.

  Other Services as Needed. Depending on the project, DGS may also hire a consultant with specialized services for areas such as childcare and environmental considerations.

4. Construction and Post Construction

Like in DOT, most construction and post-construction costs for DGS projects are categorized under the construction cost element. However, supervision or construction management and final inspection are within the planning, design, and supervision cost element. Construction typically lasts between one and one and a half years. Post construction lasts one year. This phase consists of the following tasks:

- Notice to Proceed. Once the County and vendor have agreed on the terms of the contract, DGS issues a notice to proceed.
- Construction Management. Construction oversight is provided both by the DGS project manager and the contracted architectural and engineering firm.
- Construction. The contractor breaks ground and constructs the building.
- Post-Construction. This is the year after the building is completed/opened and the contractor is responsible for any repairs or adjustments needed based on normal building use.

Spotlight: DGS' Office of Energy and Sustainability

The Office of Energy and Sustainability (OES) is responsible for three capital projects: *Energy Conservation: MCG*, the *Exelon-Pepco Merger Fund*, and the *AltaGas-WGL Merger Fund*. However, these projects operate differently than the rest of the DGS-administered capital projects:

- OES's staff (four positions), who provide project supervision, are funded through the operating budget (3.5 FTEs) and capital budget (0.5FTEs).

- Instead of focusing on one building or structure, these projects focus on several small projects – similar to ongoing "level-of-effort" projects such as roof repair for County buildings, where expenditures continue indefinitely. These projects are based on energy savings potential, cost savings, and quantifiable environmental benefits.[17]

- There is much heavier reliance on contractors to perform the planning, design, and supervision role due to the complexity and experience needed for the individual projects.

- While traditional building projects are mainly funded with General Obligation Bonds, these projects mainly rely on either utility merger funds (Exelon-Pepco Merger Fund) or utility incentives (Energy Conservation: MCG).

[17] https://www.montgomerycountymd.gov/OMB/Resources/Files/omb/pdfs/fy24/cip_pdf/P362105.pdf

D. Other County Departments' Capital Project Processes

Non-DOT- and non-DGS-administered projects accounted for the remaining 19%[18] of planned expenditures for Montgomery County Government in the *FY24 Approved Capital Budget and FY23-28 Capital Improvements Program*. Out of these 40 FY24 approved projects, 29 were active at the time of this report and the remaining 11 were either in closeout or pending closeout.[19] Unlike DOT- and DGS-administered projects, these projects' capital budget processes are not uniform and the administering department and owning[20] department are usually one in the same. Furthermore, several of these projects are non-traditional building or transportation-related capital projects such as the *Affordable Housing Fund* and the *Apparatus Replacement Program*.

Ninety-five percent[21] of planned expenditures for these projects for FY23-28 are administered by four departments: the Department of Environmental Protection (DEP), the Department of Technology Enterprise Business Solutions (TEBS), Department of Housing and Community Affairs (DHCA), and Montgomery County Fire and Rescue Service (MCFRS).

The data in the next table identify the administrating departments, their active projects, and process notes for the largest group of non-DOT- and DGS-administered projects.

Table 1.8 Other County Departments' Capital Processes

Administering Department	Project	Process Notes
Department of Environmental Protection	*Full Upgrade of Existing Recycling Center Complex*	Upgrade equipment at the Material Recycling Center.
	Gude Landfill Remediation	Specialized remediation at the Gude Landfill.
	Facility Planning: Stormwater Management	Differs from DOT and DGS - does not list facility planning projects and is solely dedicated to support the requirements for the County's Municipal Separate Storm Sewer System permit.

[18] Also represents 40 of the 268 FY24 approved County projects, or 15%.
[19] Closeout projects are those in which the project is completed and can be removed from the capital improvements plan. Once a project is placed in closeout, expenditures can no longer be charged against it. Pending closeout projects are those in which the project is close to completion and there are remaining invoices and other items to finalize; once those items are finalized, the project will convert to "closeout."
[20] The department that will provide programs and/or operate the building for the capital project.
[21] 18 out of the 40 projects.

Administering Department	Project	Process Notes
	Flood Control Study	Study to create the Comprehensive Flood Management Plan.
	Stormwater Management Facility Major Structural Repair	Closely resembles DOT and DGS projects. Substantial use of contractors, requiring engineering and architectural services, along with construction.
	Stormwater Management Retrofit: Countywide	Closely resembles DOT and DGS projects. Substantial use of contractors, requiring engineering and architectural services, along with construction.
	Wheaton Regional Dam Flooding Mitigation	Smaller-sized project that also resembles DOT and DGS projects and will be constructed in parallel with DOT's Dennis Avenue Bridge Replacement.
Department of Technology and Enterprise Business Solutions	*Business Continuity Phase II*	TEBS capital projects are administered by operating TEBS personnel (27) and contractor personnel (14). The level of involvement varies, but most of the resources are towards Fibernet and Business Continuity Phase II (19 TEBS staff; 6 contractor staff).
	County Radio Life Cycle Replacement	
	Digital Equity - Montgomery Connects	
	FiberNet	
	IJIS - Correction and Rehabilitation Information Management System (CRIMS) Upgrade	
Housing and Community Affairs	*Affordable Housing Acquisition and Preservation*	Used as funding vehicles to acquire and renovate properties to preserve the County's affordable housing inventory.
	Affordable Housing Opportunity Fund	
	Preservation of Naturally Occurring Affordable Housing Fund	
	Apparatus Replacement Program	

Administering Department	Project	Process Notes
Montgomery County Fire and Rescue Service	*Heart Monitor/Defibrillator Replacement*	Replacement of fire apparatus, vehicles, and heart monitor/ defibrillators, based on a schedule.

CIP Projects With PDS Expenditures Cancelled or Put on Hold Indefinitely

As part of this study, the Council requested that OLO examine projects with PDS expenditures in the last ten years that were subsequently cancelled or put on hold indefinitely. Executive Branch staff report that this is a rare occurrence. OLO examined data available for the FY19-FY24 CIPs and identified the following nine projects with PDS expenditures that were cancelled or put on hold indefinitely without construction of the planned improvements.

Project	Last CIP	FY24 Status	Total Cost ($000s)	PDS Total ($000s)	Basis for Cancellation or Hold
Total			**$32,381**	**$10,580**	
Bethesda CBD Streetscape	FY21	Closed	$416	$416	Private developers have been required to construct portions of the work
Old Blair Auditorium Reuse	FY21	Closed	$591	$591	Original plans to renovate auditorium changed due to MCPS decision on site use
Montgomery County Radio Shop Relocation	FY22	Closed	$61	$61	Related to MCPS Bus Depot and Maintenance Relocation
North County Transit Maintenance Depot	FY22	Closed	$15,995	$2,388	Concerns raised by the community
Kid Museum	FY23	Closed	$3	$1	A location was established through a lease agreement between Kid Museum and a private Landlord, no further action required.
Colesville/New Hampshire Avenue Community Revitalization	FY24	Closed	$720	$275	Limited property owner and business participation
Montrose Parkway East	FY24	Closed	$11,723	$4,713	Decision not to proceed with project
MCPS Bus Depot and Maintenance Relocation	FY25 (Rec)	Planning	$1,752	$1,015	Project is active and ongoing following challenges identifying a site
North Bethesda Community Recreation Center	FY25 (Rec)	Planning	$1,536	$1,536	Implementation of the White Flint Sector plan and affordability considerations

Chapter 2. Facility Planning

This chapter provides an overview of facility planning funding in the CIP and examines facility planning projects administered by DGS and DOT in detail. In the FY24 capital budget, the County budgeted $40 million for FY23-28 for facility planning projects administered by the County Government, an increase of 38% from the $22 million allocated in FY15 for FY15-20.

As noted in Chapter 1, facility planning is a transition stage for projects after the master plan or conceptual stage and before projects receive funding to become standalone projects. The facility planning process serves to develop initial design plans and cost and schedule estimates. During facility planning, departments also conduct community outreach and receive public input. All budgeted expenditures for facility planning are categorized as planning, design, and supervision (PDS) costs. This chapter is organized as follows:

A. Overview of County Government facility planning projects;
B. Analysis of DOT facility planning projects; and
C. Analysis of DGS's facility planning project.

In each year's CIP, the PDFs (Project Description Forms) for DOT's transportation infrastructure facility planning projects and for the DGS-administered facility planning project for County facilities include lists of candidate studies or studies underway for specific improvements. The next table summarizes findings from OLO's analysis of DOT and DGS facility planning studies and shows the disposition of current studies. Neither DOT nor DGS track expenditures by study.

Table 2.1 Transportation Infrastructure (DOT) and County Facility (DGS) Studies, FY15-FY24

Studies in the FY15-FY24 PDFs	DOT	DGS	Total
Total number of studies	**64**	**36**	**100**
Studies ended without becoming standalone projects	10	18	**28**
Studies currently underway or candidate studies	23	7	**30**
Previous candidate studies (not started)*	12	NA	**12**
Studies that became standalone projects	19	11	**30**
Studies that became standalone projects	***19***	***11***	***30***
Standalone projects delayed at least one year	*7*	*5*	***12***
Standalone projects with cost increases	*10*	*8*	***18***
Standalone projects initially funded only with PDS	*5*	*2*	***7***
Years from facility planning to actual/planned completion	**7-21 yrs**	**4-16 yrs**	**4-21 yrs**

* DOT distinguishes between studies that are started/underway and candidate studies; DGS does not distinguish between these.

A. Overview of Budgeted Expenditures for Facility Planning in the CIP

Facility planning projects are ongoing projects in the CIP that fund facility planning studies selected by the County Executive with input from the County Council. Each facility planning project in the CIP funds a specific category of facility planning studies. The following table displays the facility planning projects administered by the County Government.

Table 2.2 MCG Facility Planning Projects, FY24

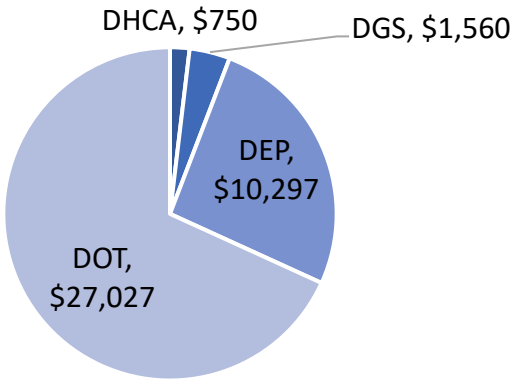
Project	Administering Department
Facility Planning: Stormwater Management	DEP
Facility Planning: MCG[1]	DGS
Facility Planning: HCD[2]	DHCA
Facility Planning Parking: Wheaton PLD[3]	DOT
Facility Planning Parking: Bethesda PLD	DOT
Facility Planning Parking: Silver Spring PLD	DOT
Facility Planning: Storm Drains	DOT
*Facility Planning: Pedestrian Facilities and Bikeways**	DOT
*Facility Planning: Roads**	DOT
*Facility Planning: Mass Transit**	DOT
Bus Rapid Transit: System Development	DOT

*Prior to FY23, DOT included roads, pedestrian facilities and bikeways and mass transit in one facility planning project – *Facility Planning: Transportation*.

The data in the next chart show the six-year total budgeted expenditures by department for County Government-administered facility planning projects for FY23-28. As noted at the beginning of the chapter, all budgeted costs for Montgomery County Government facility planning projects were categorized under the PDS cost element.

[1] MCG stands for Montgomery County Government
[2] HCD stands for Housing and Community Development
[3] PLD stands for Parking Lot District

Chart 2.3 FY23-28 Budgeted Expenditures for Facility Planning Projects ($000s)



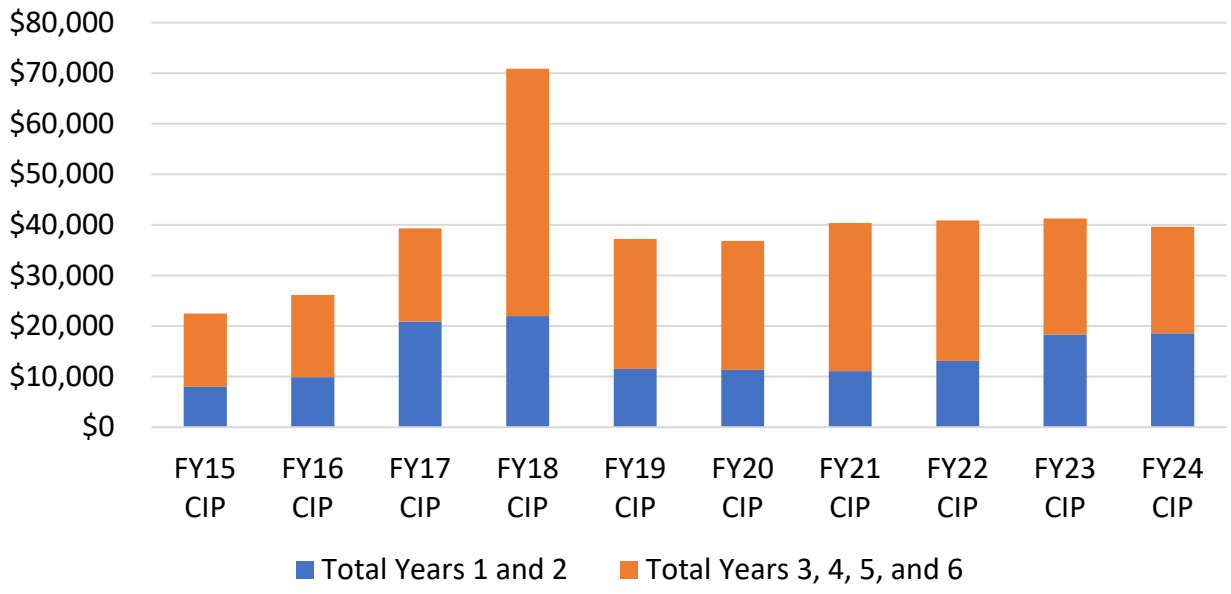
Source: FY24 Capital Budget and FY23-28 Capital Improvements Program.

The data shows that:

- MCG allocated a total of $40 million for FY23-28 for facility planning projects; and
- DOT projects accounted for $27 million or 68% of budgeted facility planning expenditures for FY23-28.

The data in the next chart show the trend in six-year budgeted expenditures for approved CIPs from FY15 to FY24 – broken down by costs in years one and two and costs in years three-six.

Chart 2.4 Six-Year Budgeted Expenditures ($000s) for Facility Planning Projects Administered by MCG by Approved CIP, FY15-FY24



The data show that for FY15-FY24:

- Total six-year budgeted expenditures increased from $23 million in FY15 to $40 million in FY24, a 76% increase;
- Budgeted expenditures for years one and two increased by $11 million or 131%; and
- Budgeted expenditures for years three to six increased by $7 million or 46%.

Of note, in FY18, total six-year budgeted expenditures for these projects increased to $71 million. This temporary large increase was due to the addition of costs associated with land, site improvements, utilities, construction, and other costs to the *Bus Rapid Transit: System Development* project. In the following year, these budgeted expenditures were moved to a standalone project (*Bus Rapid Transit: US 29*).

Facility Planning – Stormwater Management

The Department of Environmental Protection (DEP) administers facility planning for stormwater management. Stormwater management accounted for $10 million out of the $30 million in six-year budgeted expenditures for facility planning by the County Government in the *FY24 Capital Budget and FY23-28 Capital Improvements Program*.

Local jurisdictions in the United States manage systems that transport polluted stormwater into local water bodies. The U.S. Environmental Protection Agency regulates these systems, known as MS4s. Montgomery County holds a permit for its MS4 system, and must comply with permit requirements. The *Facility Planning - Stormwater Management* project funds monitoring of water quality and funds assessments of watersheds, stream health, and pollution sources as they pertain to County stormwater management, restoration projects, development, tree planning and reforestation, and other alternative best management practices.

Three additional ongoing projects in the CIP are related to facility planning but are not included in the above charts:

- *Facilities Site Selection – Montgomery County Government* provides for site selection activities such as appraisals, geotechnical services, environmental studies, title reports and surveys for specific projects. For FY23-28, this project included $150,000 in budgeted expenditures, of which 100% was categorized under the PDS cost element.

- *Transportation Feasibility Studies* is a new ongoing project approved in FY23 that provides for streamlined planning and initial design for transportation capital facilities that do not require a detailed alternatives analysis because limited viable solutions exist. For FY23-28, this project included $1.5 million in budgeted expenditures, of which 100% was categorized under the PDS cost element.
- *Bridge Design* includes funding to study and complete design for bridge projects under consideration for inclusion in the Capital Improvements Program (CIP). Selected projects typically consist of upgrading deficient bridges. For FY23-28, this project included $11.8 million in budgeted expenditures. The County pays 20% of design costs, while the state pays the remaining design costs and is responsible for managing the design process. Appendix B lists the bridge design studies included in the FY15-FY24 PDFs and their status.

B. DOT Facility Planning Studies

Chapter 1 of this report describes DOT's processes for planning, design and construction of transportation infrastructure improvements in detail. The exhibit below summarizes the two phases of facility planning in DOT. This section describes budgeted expenditures for DOT-administered facility planning projects and examines studies included in facility planning projects for roads, pedestrian and bicycle infrastructure, and mass transit.

- *Data collection*
- *Public input*
- *Concept plans*
- *Project prospectus*
- *Approval decision*

- *35% design plans*
- *Cost estimate*
- *Project schedule*

1. Budgeted Expenditures for DOT Facility Planning Projects

The next table summarizes facility planning projects administered by DOT in the *FY24 Capital Budget and FY23-28 Capital Improvements Program* and shows the percentage increase in six-year funding between FY15 and FY24.

As noted above, DOT administers facility planning projects that totaled $27 million in budgeted facility planning expenditures for FY23-28. These projects are displayed below under the following three categories: transportation, parking lot districts, and storm drainage. All budgeted expenditures for DOT facility planning projects were categorized under the PDS cost element.

Table 2.5 DOT Facility Planning Projects, FY24 Six-Year Budgeted Expenditures ($000s)

Facility Planning Category/Project	FY24 CIP Six-Year ($000s)	10-Year Change	Description
Transportation	**$12,250**	**+57%**	Planning and preliminary engineering design for new and reconstructed highway, pedestrian facility and bikeway, and mass transit projects under consideration for inclusion in the CIP.
Pedestrian and Bikeways	$5,715	*	
Roads	$5,060	*	
Mass Transit	$1,475	*	
Bus Rapid Transit (BRT)	**$10,000**	**+900%**	Initial steps, supporting studies and programmatic efforts for Bus Rapid Transit (BRT) Corridors.
Bus Rapid Transit	$10,000	+900%	
Parking Lot Districts	**$1,897**	**+41%**	Studies of public and private parking supply and demand in order to ensure an adequate amount of parking in the parking lot districts, and development of a Parking Facility Project Requirement (PFPR) that outlines general and specific features required for the project.
Bethesda	$630	+17%	
Silver Spring	$789	+46%	
Wheaton	$478	+77%	
Storm Drainage	**$2,880**	**+73%**	Preliminary and final design and land acquisition for storm drain projects.
Storm Drains	$2,880	+73%	
Total	**$27,027**	**+230%**	

* Prior to FY23, all facility planning studies related to roads, pedestrian facilities, bikeways, or mass transit were funded by the same facility planning project in the CIP.

The data show that:

- The three projects under the "transportation" category accounted for about $12 million (45%) of budgeted expenditures for DOT facility planning projects;
- Of that $12 million for transportation, facility planning for pedestrian facilities and bikeways ($6 million) was the largest expenditure, followed by roads ($5 million); and
- The *Bus Rapid Transit: System Development* project accounted for $10 million (37%) of budgeted expenditures for DOT's facility planning projects.

Of note, beginning with the FY23 Capital Budget and FY23-28 Capital Improvements Program, roads, pedestrian facilities and bikeways, and mass transit facility planning were divided into three separate facility planning projects. Prior to FY23, they were all categorized under one facility planning project in the CIP: "*Facility Planning – Transportation*."

2. Transportation Facility Planning Studies and Status of Related Standalone Projects

This section examines data from projects for the Transportation and Bus Rapid Transit categories in the prior table, which account for 82% of budgeted expenditures for DOT-managed facility planning projects. The data summarize information from the below PDFs in the approved CIPs for FY15 – FY24:

- *Facility Planning – Transportation (FY15-FY22)*
- *Facility Planning – Pedestrian Facility and Bikeway (FY23-FY24)*
- *Facility Planning – Roads (FY23-FY24)*
- *Facility Planning – Mass Transit (FY23-FY24)*
- *Bus Rapid Transit – System Development (FY15-FY24)*

Table 2.6 FY24 Status Summary of DOT Studies Listed in Facility Planning PDFs, FY15-24

	Pedestrian & Bikeways	Roads	Mass Transit	BRT	Total
Total Studies	**30**	**18**	**12**	**4**	**64**
Led to Standalone Projects	33%	22%	25%	50%	30%
Ended and Did Not Lead to Standalone Projects	13%*	6%	42%*	0%	17%
Currently Underway or Starting	17%	33%	25%	50%	23%
Current Candidate Studies	13%	17%	0%	0%	11%
Previous Candidate Studies	23%	22%	8%	0%	19%
Average Years to Become Standalone Project	**5**	**6**	**6**	**5**	**5**

*Planned private developments incorporate one of five mass transit studies and one of the four pedestrian facilities and bikeway studies that did not generate standalone projects.

The PDFs for these five projects list 64 facility planning studies for specific improvements that either are or were candidates for facility planning or for which facility planning is or was underway. The data show that studies for pedestrian facilities and bikeways and bus rapid transit were the most likely to result in standalone CIP projects. On the other hand, studies for mass transit improvements (other than bus rapid transit) were the most likely to end without leading to a standalone project.

The following subsections include data on the 64 individual studies in the five PDFs listed above from FY15-FY24. The data detail the length of time studies were in facility planning ("Years FP" in the tables below) and their current status. The year "Started" refers to the first year in which the study was categorized as "starting or underway." On the other hand, if a study was listed as a "candidate" study for a given year, the study did not start in that year.

Pedestrian Facility and Bikeway Studies. The following table displays studies listed in the *Facility Planning – Pedestrian Facilities and Bikeways* or *Facility Planning – Transportation* PDFs.

Table 2.7 Pedestrian Facility & Bikeway Studies Listed in the FY15-FY24 CIPs

Study (Pedestrian Facilities and Bikeways)	Started	Years FP	FY24 Status
Studies That Became Standalone Projects			
Oak Dr/MD27 Sidewalk	FY09	8	Prelim Design
Bradley Boulevard Bikeway (Wilson Ln-Goldsboro Rd)	FY09	8	Final Design
Franklin Ave Sidewalk (US29-MD193)	FY13	4	Pending Closeout
Goldsboro Rd Bikeway (MacArthur Blvd-River Rd)	FY13	6	Prelim Design
Life Sciences Center Loop Trail	FY15	2	Final Design
Bowie Mill Rd. Bikeway (MD115-MD108)	FY18	3	Prelim Design
Sandy Spring Bikeway (MD108-MD182 - Norwood Rd)	FY19	6	Prelim Design
Dale Dr Sidewalk (MD97-US29)	FY19	2	Final Design
Tuckerman Ln Sidewalk (Falls Rd-Old Georgetown Rd)	FY19	4	Prelim Design
Falls Rd Bikeway and Pedestrian Facility	FY21	2	Prelim Design
Studies Ended and Did Not Lead to Standalone Projects			
Tuckerman Ln Sidewalk (Gainsborough Rd-Old Georgetown Rd)	FY13	6	NA
MacArthur Blvd Bikeway Improvements Segment 1	FY17	4	NA
ADA Design Guidelines	FY21	3	NA*
Great Seneca Shared Use Path (Key West Ave-Darnestown Rd)	FY23	1	NA*
Studies Currently Underway			
Capitol View Ave/Metropolitan Ave (MD192) Sidewalk/Bikeway	FY21	4	FP Underway
Middlebrook Rd/Wisteria Dr Multi-modal Improvements	FY21	4	FP Underway
Shady Grove Rd Ped/Bike Improvements	FY23	2	FP Underway
Streateries (Woodmont, Price Ave/Elkins Ave, & Newell St)	FY24	1	FP Underway
Equitable Bikeways	FY25	0	Starting/Underway
Current or Former Candidate Studies That Have Not Begun			
Lyttonsville Bicycle and Pedestrian Priority Area	NA	0	NA
MacArthur Blvd Bikeway (Falls Rd-Stable Lane)	NA	0	NA
Pepco Pathway	NA	0	NA
Sixteenth Street Sidewalk (Lyttonsville Road-Spring Street)	NA	0	NA
Westlake/Rock Springs Complete Streets	NA	0	NA
Falls Road Sidewalk - West Side (River Road-Dunster Road)	NA	0	NA
MD355 (Clarksburg) Bypass	NA	0	NA
MacArthur Blvd Bikeway (Falls/Fawsett Road-Old Anglers Inn)	NA	0	Candidate
Grosvenor Ln Sidepath (Cheshire Ln to MD355)	NA	0	Candidate
Germantown MARC Station Bicycle & Pedestrian Improvements	NA	0	Candidate
Westlake/Rock Springs Complete Streets - Phase 1 Planning Only	NA	0	Candidate

* The ADA Design Guidelines study was not intended to result in a standalone project, but rather to produce design guidelines. The Great Seneca Shared Use Path study was cancelled as a developer will complete the project.

The data show that for pedestrian and bikeway facilities studies in the FY15-FY24 CIPs:

- 30 studies were listed, of which 19 had started as of FY24, and 11 were current or previous candidate studies and had not started as of FY24;
- 10 of 30 studies completed facility planning, became standalone projects, and are now in preliminary or final design;
- Studies that became standalone projects spent an average of five years in facility planning;
- Four studies ended and did not result in standalone projects (see note under table); and
- Five studies were underway or starting at the time of writing.

Road Studies. The following table displays road studies listed as "underway or to start" and "candidate studies" for facility planning in the approved CIPs for FY15 to FY24. Some studies listed started prior to FY15.

Table 2.8 Road Studies Listed in the FY15-FY24 CIPs

Study (Roads)	Started	Years FP	FY24 status
Studies that Became Standalone Projects			
Dorsey Mill Rd Extended and Bridge (over I-270)	FY09	10	Final Design
Summit Ave Extended (Plyers Mill Rd - University Blvd)	FY15	8	Prelim. Design
US 29 Mobility & Reliability	FY19	2	Prelim. Design
North High St Extended to Morningwood Dr	FY19	2	Final Design
Studies Ended and Did Not Lead to Standalone Projects			
Midcounty Hwy Extended (Mont Village Ave. - MD27)	FY17	2	NA
Studies Currently Underway			
Crabbs Branch Way Extended to Amity Dr	FY19	6	FP Underway
Old Columbia Pike/Prosperity Dr Widening (Stewart-Cherry Hill)	FY19	6	FP Underway
Bethesda One-way St Conversion Study	FY21	4	FP Underway
MD355 Corridor Study (Milestone to Clarksburg Rd)*	FY21	4	FP Underway
Prioritizing MCDOT Capital Projects	FY21	4	FP Underway
Norfolk Ave Shared Street	FY21	4	FP Underway
Current or Former Candidate Studies That Have Not Begun			
Great Seneca Hwy, Sam Eig and Muddy Branch Intersections	NA	0	NA
MD355 at Gude Drive Intersection	NA	0	NA
Oakmont Ave Improvement (Shady Grove Rd-Railroad St)	NA	0	NA
MD355 (Clarksburg) Bypass	NA	0	NA
Long Branch Master Planned Connections*	NA	0	Candidate
Parklawn Dr/Nicholson Ln Improvements	NA	0	Candidate
High Incident Network Facility Planning	NA	0	Candidate

The data show that for road studies in the FY15-FY24 CIPs:

- 18 studies were listed in the CIPs from FY15 to FY24, of which 11 included years in which the study was underway or starting, and seven candidate studies that did not start yet;
- Four studies completed facility planning and became standalone projects that are currently in either preliminary or final design stages;
- Studies that became standalone projects spent an average of six years in facility planning;
- One study ended and did not result in standalone projects; and
- Six studies were underway as of the publication of the FY24 Capital Budget.

Mass Transit Studies. The table below displays mass transit studies listed in the *Facility Planning – Mass Transit or Facility Planning – Transportation* PDFs in the approved CIPs for FY15 FY24.

Table 2.9 Mass Transit Studies Listed in the FY15-FY24 CIPs

Study (Mass Transit)	Started	Years FP	FY24 Status
Studies that Became Standalone Projects			
Lakeforest Transit Center Modernization	FY11	8	Final Design*
Clarksburg Transit Center	FY21	3	Prelim Design*
Boyds Transit Improvements	FY15	6	Prelim Design
Studies Ended and Did Not Lead to Standalone Projects			
Upcounty Park-and-Ride Expansion	FY11	10	NA
New Transit Center/Park-and-Ride	FY13	4	NA
Germantown Transit Center Expansion	FY13	8	NA
Milestone Transit Center Expansion	FY13	8	NA
Hillandale Bus Layover	FY15	3	NA*
Studies Currently Underway			
Metropolitan Grove Park and Ride	FY23	2	FP Underway
Reorientation of transit around zero-emissions fleet	FY23	2	FP Underway
White Oak Transit Center	FY21	4	FP Underway
Former Candidate Study			
Olney Longwood Park-and-Ride	NA	0	NA

* The Clarksburg Transit Center and Lakeforest Transit Center are parts of the two MD-355 BRT projects. The Hillandale Bus Layover will be addressed through the private developer-funded Hillandale Gateway project.

The data show that for mass transit studies in the FY15-FY24 CIPs:

- 12 studies were listed in the CIPs, of which 11 had started as of FY24, and one was listed only as a "candidate" study and had not started as of FY24;
- 3 of 12 studies completed facility planning, became standalone projects or were incorporated into them, and are now in preliminary or final design;
- 5 studies ended and did not result in standalone projects (of which one will be addressed by a private developer); and
- 3 studies were underway as of the publication of the FY24 Capital Budget.

Bus Rapid Transit Studies. The table below displays the bus rapid transit studies described in the *Bus Rapid Transit – System Development* PDFs in the approved CIPs for FY15- FY24. The data show this project has funded four studies, two of which have led to standalone projects as of FY24. Two studies are currently underway.

Table 2.10 Bus Rapid Transit Studies Listed in the FY15-FY24 CIPs

Study (Bus Rapid Transit)	Started	Years FP	FY24 Status
Studies that Became Standalone Projects			
MD355 Corridor	FY15	5	Prelim Design/Final Design*
MD29 Corridor	FY15	4	Pending Closeout/Prelim Design*
Study Currently Underway			
New Hampshire Ave	FY22	3	FP Underway
North Bethesda Transitway	FY22	3	FP Underway

*The MD355 and MD29 Corridor studies each led to two standalone projects (four in total).

3. Progress of Transportation Facility Planning Studies that Became Standalone Projects

This section specifically examines transportation facility planning studies that became standalone projects. The table below lists each of the 19 studies identified above as having led to a standalone CIP project, the year in which facility planning began, the year the corresponding standalone project started, and the estimated completion date. The data also show the following two metrics:

- **Years Delay** refers to the difference between the estimated completion dates when the project started and in the most recent PDF as of FY24; and
- **Change in Cost as Of FY24** refers to the change in the estimated total project cost from the year the project was created to the most recent estimate as of FY24.

Table 2.11 DOT-Administered Projects That Completed Facility Planning and Became Standalone Projects, FY15-FY24

Project	FP Began	Stand-alone Project Start	Est. Completion as of FY24	Years Delay	Change in Cost as of FY24 ($000s)
Roads					
Dorsey Mill Rd Extended and Bridge (over I-270)	FY09	FY19	Beyond FY28	2+	$5,670
Summit Ave Extended (Plyers Mill Rd-University Blvd)	FY15	FY23	FY31	0	$0
North High St Extended to Morningwood Dr	FY19	FY23	FY25	0	$0
Pedestrian Facilities and Bikeways					
Oak Dr/MD27 Sidewalk	FY09	FY19	FY28	0	$0
Bradley Boulevard Bikeway (Wilson Ln-Goldsboro Rd)	FY09	FY19	FY27	2	($51)
Franklin Ave Sidewalk (US29-MD193)	FY13	FY19	FY23	1	$0
Goldsboro Rd Bikeway (MacArthur Blvd - River Rd)	FY13	FY20	Beyond FY28	4+	$0
Life Sciences Center Loop Trail	FY15	FY17	FY27	0	$12,501
Bowie Mill Rd Bikeway (MD115-MD108)	FY18	FY21	FY29	0	$0
Sandy Spring Bikeway (MD108-MD182-Norwood Rd)	FY19	FY23	FY26	0	$0
US 29 Pedestrian and Bicycle Improvements*	FY19	FY22	NA	1	$3,500
Dale Dr Sidewalk (MD97-US29)	FY19	FY21	FY26	0	$1,766
Tuckerman Ln Sidewalk (Falls Rd-Old Georgetown Rd)	FY19	FY23	Beyond FY28	0	$0
Falls Rd Bikeway and Pedestrian Facility	FY21	FY16	Beyond FY28	0	$2,281
Mass Transit					
Boyds Transit Improvements	FY15	FY19	FY25	0	$5,030
Bus Rapid Transit					
Bus Rapid Transit: US 29	FY15	FY19	FY24[4]	4	$550
Bus Rapid Transit: US 29 Phase 2*	FY15	FY22	NA	NA	$3,500
Bus Rapid Transit: MD355 Central	FY15	FY21	FY29	1	$411,580
Bus Rapid Transit: MD355 South/North	FY15	FY23	NA	NA	$2,796

*The US 29 Mobility and Reliability Study (from Facility Planning – Roads) contributed to two standalone projects: US 29 Pedestrian and Bicycle Improvements, and Bus Rapid Transit: US 29 Phase 2.

The data in the table show that:

- The total lifespan of transportation projects from the start of facility planning to the estimated completion year ranged from 7 to over 21 years;

[4] US29/BRT was opened to public service in FY20. These are remaining funds in the project, likely to be closed out.

- As of FY24, 7 out of 19 projects had their estimated completion dates moved back at least 1 year; and
- As of FY24, 10 out of 19 projects had a higher estimated total cost than when the project was first created, and one project showed a small cost decrease.

Standalone Projects with Initial Cost Estimates That Only Include PDS Costs

In its review of facility planning studies that led to standalone projects, OLO identified five transportation projects and two MCG standalone projects approved by the Council with initial cost estimates that only included PDS costs and did not include estimates or placeholders for construction costs. As shown in the table below, the cost estimates for four of these projects have increased significantly since the projects were created. Staff report the practice of including only PDS costs for projects that will eventually require additional funding for construction and other cost elements limits the County's ability to effectively plan for the future.

Table 2.12 Standalone Projects With Initial Cost Estimates That Include PDS Costs Only

Project	Project Start	Initial Cost Estimate	Cost Estimate as of FY24 ($000s)
Transportation			
Life Sciences Center Loop Trail	FY17	$400	$12,901
Sandy Spring Bikeway (MD108-MD182-Norwood Rd)	FY23	$200	$200
Bus Rapid Transit: US 29–Phase 2	FY22	$6,250	$9,750
Bus Rapid Transit: MD355 Central	FY21	$18,000	$429,580
Bus Rapid Transit: MD355 South/North	FY23	$9,700	$12,496
MCG			
Clarksburg Library	FY15	$2,134	$15,363
Wheaton Arts and Humanities Center	FY21	$100	$40,325

C. DGS Facility Planning

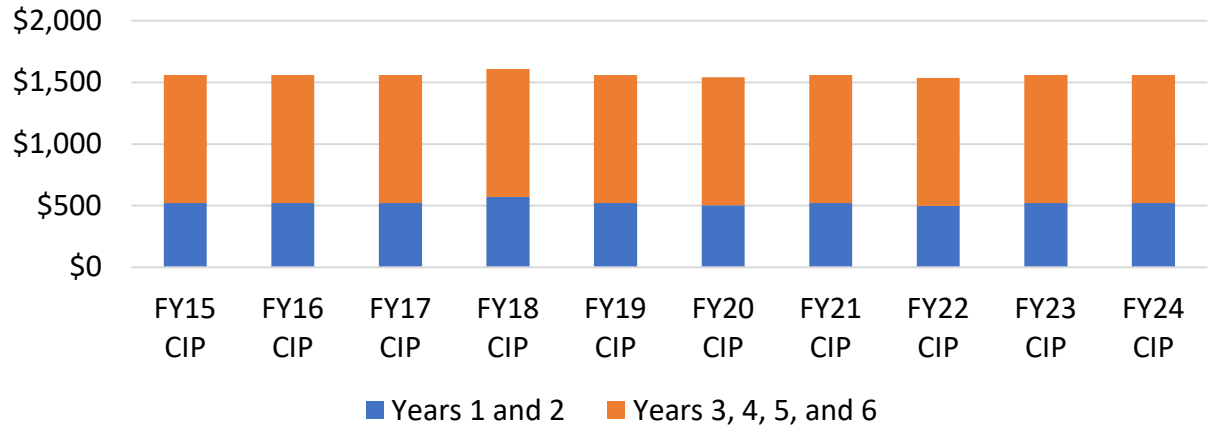
Chapter 1 of this report describes DGS's processes for planning, design and construction of County facilities in detail. As described in Chapter 1, prior to the establishment of a stand-alone project, DGS (using in-house staff and/or contractors) develops a Program of Requirements (POR), which outlines the structural and functional requirements of the proposed facility, and estimates design and

construction costs. The costs associated with these facility planning tasks are included in the *Facility Planning: MCG* project in the CIP. This section summarizes budgeted expenditures for this project and examines the trajectory of studies included in the project PDF.

1. Budgeted Expenditures for *Facility Planning: MCG*

The chart below displays budgeted six-year expenditures for *Facility Planning: MCG* project for the CIPs from FY15 to FY24. The chart shows that budgeted expenditures have remained flat over 10 CIP years.

Chart 2.13 *Facility Planning - MCG*: FY15-Y24 Budgeted Six-Year Expenditures ($000s)



2. Facility Planning: MCG Studies and Current Status

Each PDF for *Facility Planning: MCG* project includes a list of facility planning studies for County Government facilities. The studies listed are either underway or are candidates for facility planning. The following table shows all studies listed in the *Facility Planning – MCG* PDFs from FY15 to FY24. The year started refers to the first year in which the study was listed (DGS may not have started the study in that year). The "Years FP" refers to the number of years that the study was listed in the PDF. The data show that from FY15 to FY24:

- 36 studies were listed in the CIPs;
- 11 of 36 (31%) studies completed facility planning, became standalone projects, and are in planning, ongoing, pending closeout or closed as of FY24;
- Studies spent between 2 and 10 years in facility planning before becoming standalone projects;
- 18 studies (50%) ended and did not result in standalone projects (4 of which are being or were addressed as part of other CIP or private projects); and
- 7 studies (19%) were listed as candidates or underway as of the publication of FY24.

Table 2.14 Studies Listed in the FY15-FY24 CIPs in the PDF for Facility Planning: MCG

Project	Started	Years FP	FY24 Status
Studies that Became Standalone Projects			
Avery Road Treatment Center	FY07	10	Pending closeout
Silver Spring Library Reuse	FY13	8	Ongoing
Clarksburg Library	FY13*	4	Planning
White Flint Fire Station	FY15	4	Prelim Design
Public Safety Communications Center/System and EOC	FY15	4	Pending closeout*
Wheaton Arts and Humanities Center	FY15	7	Planning
Noyes Library	FY15	4	Final design
Grey Courthouse	FY16*	3	Closed*
Rockville Core Parking	FY17	2	Closeout*
Children's Museum	FY19	2	Closed*
Chevy Chase Library Redevelopment	FY21	2	Planning
Studies That Did Not Lead to Standalone Projects			
1301A Piccard Drive	FY05	11+	NA*
Laytonsville Fire Station	FY05	11+	NA
Clarksburg Rec/Aquatic Center	FY05	2	NA
Multi-User Central Warehouse	FY11	7	NA
Poolesville Depot Improvements or Poolesville Depot	FY11*	2	NA
Seven Locks Signal Shop	FY13	6	NA
Wheaton Health and Human Services Facility	FY13	5	NA
3rd District Police Station Reuse	FY13	5	NA*
Damascus Depot Improvements	FY15	8	NA
Bushey Drive Reuse	FY17	5	NA*
Montgomery Hills Fire Station	FY17	2	NA
Olney Civic Commons	FY17	2	NA
Shady Grove Fire Station	FY17	2	NA
Wheaton Parking Lot 13 Redevelopment	FY19	4	NA*
Takoma Park Aquatic Center/Pool/Adventist Partnership	FY18	3	NA
County Facility Refresh (non-library)	FY19	4	NA
Poolesville Services Co-location Study	FY20	3	NA
North County Transit Depot	FY21	2	NA
Current Studies			
Bethesda Recreation Center	FY18	7	FP Underway
4th District Police Station	FY21	4	FP Underway
Alternate Emergency Communications Center	FY21	3	FP Underway
Hillandale Fire Station #24 Renovation/Replacement	FY21	4	FP Underway
Montgomery Village Fire Station #39	FY21	4	FP Underway
Countywide Space Strategy	FY23	2	FP Underway
Poolesville Community Facility	FY23	2	FP Underway

3. Progress of MCG Facility Planning Studies that Became Standalone Projects

This section specifically examines MCG facility planning studies that became standalone projects. The table below lists each of the 11 studies identified above as having led to a standalone CIP project, the year in which facility planning began, the year that the corresponding standalone project started, and the estimated completion date. It also shows the following two metrics:

- **Years Delay** refers to the difference between the estimated completion date for the project in the year when the project started, and the most recent PDF as of FY24; and
- **Change in Cost as of FY24** refers to the change in the estimated cost from the year that the project was created to the most recent estimate as of FY24.

Table 2.15 DGS-Administered Projects That Completed Facility Planning and Became Standalone Projects, FY15-FY24

Project	FP Began	Project Start	Est. Completion as of FY24	Years Delay	Cost Change as of FY24 ($000s)
Avery Road Treatment Center	FY07	FY15	FY21	2	$5,216
Silver Spring Library Reuse	FY13	FY23	FY22	0	($645)
Clarksburg Library	FY13*	FY15	FY28	0	$13,229
White Flint Fire Station	FY15	FY15	FY26	6	$10,398
Public Safety Communications Center/System and EOC	FY15	FY19	FY18	0	$6,550
Wheaton Arts and Humanities Center	FY15	FY21	Beyond FY28	0	$40,225
Noyes Library	FY15	FY17	FY25	0	$1,521
Grey Courthouse	FY16*	FY17	FY21	1	$2,400
Rockville Core Parking	FY17	FY17	FY20	2	$1,990
Children's Museum	FY19	FY19	NA	0	($10,847)
Chevy Chase Library Redevelopment	FY21	FY23	Beyond FY28	2+	$0

The data in the table show that:

- The total lifespan of MCG projects from the start of facility planning to the estimated completion year ranged from 4 to 16 or more years;
- As of FY24, 5 out of 11 projects had estimated completion dates delayed 1 year or more; and
- As of FY24, 8 out of 11 projects had a higher estimated total cost than when the project was first created, including one project which showed an increase of over $40 million; and
- three projects showed cost decreases between project creation and the most recent cost estimate.

Chapter 3. Planning, Design, and Supervision Costs

The Council asked OLO to examine County capital projects to better understand the costs of planning, design, and supervision (PDS). This chapter analyzes actual expenditures for PDS costs for Department of Transportation (DOT)- and Department of General Services (DGS)-administered County projects over eight years (FY16-FY23). The analysis focuses on PDS cost elements, their associated tasks, County staff, vendors, and contract services. OLO also concentrated on the facility planning projects' costs for both DOT and DGS.

This chapter is organized as follows:

A. OLO Data Analysis Methodology;
B. County Staff Expenditures in the Capital Improvements Program;
C. DOT Planning, Design, and Supervision Costs – All Projects;
D. DOT Planning, Design, and Supervision Costs – Facility Planning Projects;
E. DGS Planning, Design, and Supervision Costs – All Projects; and
F. DGS Planning, Design, and Supervision Costs – Facility Planning Project.

Below are key findings from analyzing FY16 to FY23 expenditures:

	DOT-Administered Projects	**DGS-Administered Projects**
Percentage of Planning, Design, and Supervision (PDS) among cost elements	21%	17%
Within PDS, the largest component among Planning, Design, and Construction Management (Supervision)	Design, at $23.0M or 68% of all PDS components per year.	Design, at $5.3M or 49% of all PDS components per year.
Contract Services vs. Department Staff within PDS	Contract services accounted for 62% of all PDS costs, followed by DOT staff (31%) and all other remaining operating expenses (7%).	DGS staff accounted for 49% of all PDS costs, followed by contract services (47%), and all other remaining operating expenses (4%).
Types of contract services primarily used	Engineering and architectural services	Building design
Top vendors or entities used for contract services	Rummel, Klepper, & Kahl; Stantec Consulting Services; SC/BA, Wheaton Office; and Gannett Fleming & Greenman-Pederson, a Joint Venture	Housing Opportunities Commission; Gale Associates; Hughes Group Architects; EDG2; and Grimm and Parker, BKV.

	DOT-Administered Projects	DGS-Administered Projects
Minority, Female, and Disabled Businesses used for PDS	Three Minority, Female, and Disabled Businesses (MFD). These vendors represented 8% of the top vendors used (those with expenditures over $705K). Among the 37 top vendors used, 21 had MFD subcontractor participation (57%).	Four Minority, Female, and Disabled Businesses (MFD). These vendors represented 17% of the top vendors used (those with expenditures over $500K). Among the 24 top vendors used, 16 had MFD subcontractor participation (67%).
Facility Planning Projects - PDS component percentages	Within DOT's facility planning projects (excluding bridges), planning averaged $2.5M (53%) per year, followed by design at $2.2M (46%), and construction management at $37.8K (1%).	Within DGS's one facility planning project, planning averaged $157.6K (82%) per year, followed by construction management at $17.6K (9%), and design at $16.8K (9%).
Facility Planning Projects - Contract Services vs. Department Staff within PDS	Contract services accounted for 77% of all PDS costs, followed by DOT staff (21%), and all other remaining operating expenses (1%).	Contract services accounted for 51% of all PDS costs, followed by DGS staff (45%), and all other remaining operating expenses (4%).

A. OLO Data Analysis Methodology

To get a better understanding of the capital budget expenditure data for County projects, OLO reviewed the "Capital Projects" report from the County's Enterprise Business Intelligence Reporting Projects and Grants Dashboard in Oracle as of November 2023.[1] With assistance from the Office of Management and Budget (OMB), OLO first identified DOT- and DGS- administered capital projects from the FY24 approved capital budget.[2] OLO focused on DOT- and DGS- administered projects because out of 268 FY24 approved County capital projects, DOT and DGS administer 228 or 85%. Furthermore, DOT and DGS have consistent processes throughout their projects, while other departments' projects occur infrequently, with much less uniformity.

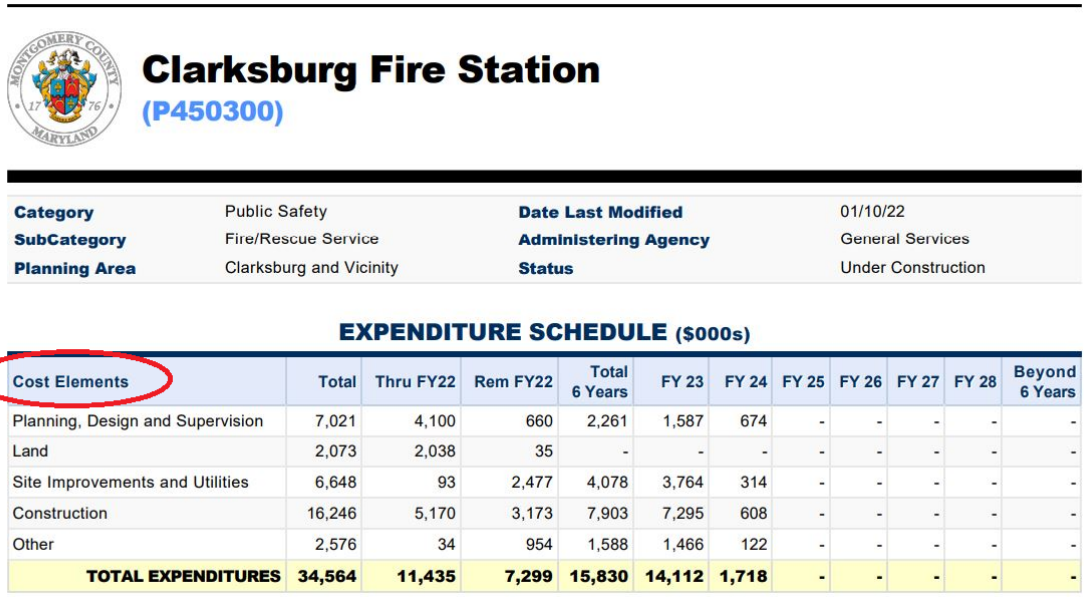
[1] Used data starting in FY16 because before that year, total project expenditures were modified due to the removal of expenditures from level-of-effort projects (smaller, ongoing projects, like roof maintenance) to Oracle's Fixed Asset Module to begin depreciation. That process stopped in FY16. FY23 was the last year studied since it was the last fiscal year completed at the time of the analysis. Also, to match expenditures on PDFs, financial adjustments from year-to-year like accruals were not adjusted. Finally, OLO followed the General Ledger's Chart of Account and used account codes for staffing and contract services analysis.

[2] https://apps.montgomerycountymd.gov/BASISCAPITAL/Common/Index.aspx The lists of DOT- and DGS- administered projects examined are in Appendix C.

OLO pulled expenditures with task-level data from Oracle – the most detailed level of data available. OLO then used OMB's accounting codes to catalogue the task associated with each expenditure to match the associated cost elements from a PDF[3] using the same process that OMB uses to create PDFs' expenditure data.

To provide a visual explanation, the graphic below from the Clarksburg Fire Station PDF lists the five cost elements found in every PDF:

- Planning, design, and supervision;
- Land;
- Site improvements and utilities;
- Construction; and
- Other.



Clarksburg Fire Station
(P450300)

Category	Public Safety	**Date Last Modified**	01/10/22
SubCategory	Fire/Rescue Service	**Administering Agency**	General Services
Planning Area	Clarksburg and Vicinity	**Status**	Under Construction

EXPENDITURE SCHEDULE ($000s)

Cost Elements	Total	Thru FY22	Rem FY22	Total 6 Years	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	Beyond 6 Years
Planning, Design and Supervision	7,021	4,100	660	2,261	1,587	674	-	-	-	-	-
Land	2,073	2,038	35	-	-	-	-	-	-	-	-
Site Improvements and Utilities	6,648	93	2,477	4,078	3,764	314	-	-	-	-	-
Construction	16,246	5,170	3,173	7,903	7,295	608	-	-	-	-	-
Other	2,576	34	954	1,588	1,466	122	-	-	-	-	-
TOTAL EXPENDITURES	**34,564**	**11,435**	**7,299**	**15,830**	**14,112**	**1,718**	**-**	**-**	**-**	**-**	**-**

The table on the next page shows the task level data in Oracle and how OMB combines this granular data into the respective CIP cost elements.

[3] OMB provided OLO the roll-up table information they use to create their project description forms' expenditure data.

Oracle's Project and Grants Tasks (Most Detailed Level of Work)	CIP Cost Elements
• Planning • Design • Construction Management (Supervision)	**Planning, Design, and Supervision**
• Land	**Land**
• Site Improvements • Utilities	**Site Improvements and Utilities**
• Construction	**Construction**
• Other	**Other**

OLO then focused on the Planning, Design, and Supervision cost element. However, to get a more granular analysis for PDS expenditures, OLO also examined the expenditures at the task level (Planning, Design, and Construction Management). Furthermore, OLO reviewed expenditure and invoice comments on projects as needed.

Staff and Contractor Costs

When comparing the costs of contractors to the costs of County DOT/DGS staff, OLO identified the projects' staff costs (personnel services) and contract costs based on the County's chart of accounts within the general ledger. OLO also included Indirect Costs for County staff costs. Indirect Costs are the total cost for a service that is provided by and budgeted for within other departments (e.g., Management and Budget, Human Resources, County Attorney, Finance, General Services, Procurement, and Technology and Enterprise Business Solutions).[4] Costs for staff work done for other departments are then charged to the respective department (including capital projects) that receives the services. This mainly occurs in non-General Fund (or Current Revenue) capital projects, grants, or enterprise funds receiving County Government services from General Funded departments.

[4] https://apps.montgomerycountymd.gov/BASISOPERATING/Common/Chapter.aspx?ID=GLOS .

Multiple Year Analysis

Because the CIP spans multiple years and appropriations[5] carry over from year to year, expenditures were mainly examined in multiple years. Consequently, the cost data in the following sections are not compared to "budgeted" data because the timeframes for each type of data do not neatly overlap.

B. County Staff Expenditures in the Capital Improvements Program

Most staff costs for County personnel who work on the CIP are charged across CIP projects, with a smaller number of projects' County-related staff charged to the operating budget. [6] For staff charged to the CIP, these costs are spread across numerous CIP funding sources, including General Obligation bonds (GO bonds).[7]

OLO compared Montgomery County practices for allocating staff costs in its CIP to other local jurisdictions and to MCPS. OLO found that Prince George's County exclusively charges its CIP staff costs to the operating budget instead of the capital budget. While others, like Howard County, use a mix of capital and operating budget funds to cover CIP staff costs (similar to Montgomery County). (See Appendix D)

Both DOT and DGS reported that charging staff among projects is a complicated process. To ensure they have enough funding to cover staff costs, the departments create formulas to apply the costs across current projects. The issue for the two departments is that while their staff (project managers) remain constant, the projects change from year-to-year – especially the projects' expenditures and associated funding. This requires constant adjustments to staff charges across projects as the departments look for project funding capacity for staff. This also may lead to inaccurate project costs (i.e., multiple project manager charges against projects that have capacity – even if a project manager is not directly related to the project).

Instead of allocating capital budget staff across projects, MCPS places all its staff expenditures in a dedicated project, "*Design and Construction Management*."[8] The project is funded at $4.9M per year using GO bonds and staff[9] "provide project administration, in-house design, and engineering services in the Department of Facilities Management and the Division of Construction." This removes the complex process of allocating staff costs to projects. Contract services' expenditures are aligned with

[5] Appropriations are the authority to spend money within a specified dollar limit, according to the glossary for the FY24 approved operating budget. The Council approves appropriations for each capital project.
[6] Examples of projects with County staff charged to the operating budget are those administered by the Department of Technology and Enterprise Business Solutions and the Department of General Service's Office of Energy and Sustainability.
[7] The Office of Management and Budget noted these staff costs are allowable and essential to putting the asset in service.
[8] https://www.montgomerycountymd.gov/OMB/Resources/Files/omb/pdfs/fy24/cip_pdf/P746032.pdf
[9] 42 FTEs in FY23. Within the $4.9M, salaries and wages were $3.9M and benefits were the remaining $1.0M.

each respective project (like County Government projects). Below is the PDF for MCPS' *Design and Construction Management* project.

Design and Construction Management
(P746032)

Category	Montgomery County Public Schools	**Date Last Modified**	05/18/23
SubCategory	Countywide	**Administering Agency**	Public Schools
Planning Area	Countywide	**Status**	Ongoing

EXPENDITURE SCHEDULE ($000s)

Cost Elements	Total	Thru FY22	Rem FY22	Total 6 Years	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	Beyond 6 Years
Planning, Design and Supervision	104,975	74,426	1,149	29,400	4,900	4,900	4,900	4,900	4,900	4,900	-
TOTAL EXPENDITURES	**104,975**	**74,426**	**1,149**	**29,400**	**4,900**	**4,900**	**4,900**	**4,900**	**4,900**	**4,900**	**-**

FUNDING SCHEDULE ($000s)

Funding Source	Total	Thru FY22	Rem FY22	Total 6 Years	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	Beyond 6 Years
G.O. Bonds	104,975	74,426	1,149	29,400	4,900	4,900	4,900	4,900	4,900	4,900	-
TOTAL FUNDING SOURCES	**104,975**	**74,426**	**1,149**	**29,400**	**4,900**	**4,900**	**4,900**	**4,900**	**4,900**	**4,900**	**-**

C. DOT Planning, Design, and Supervision Costs – All Projects

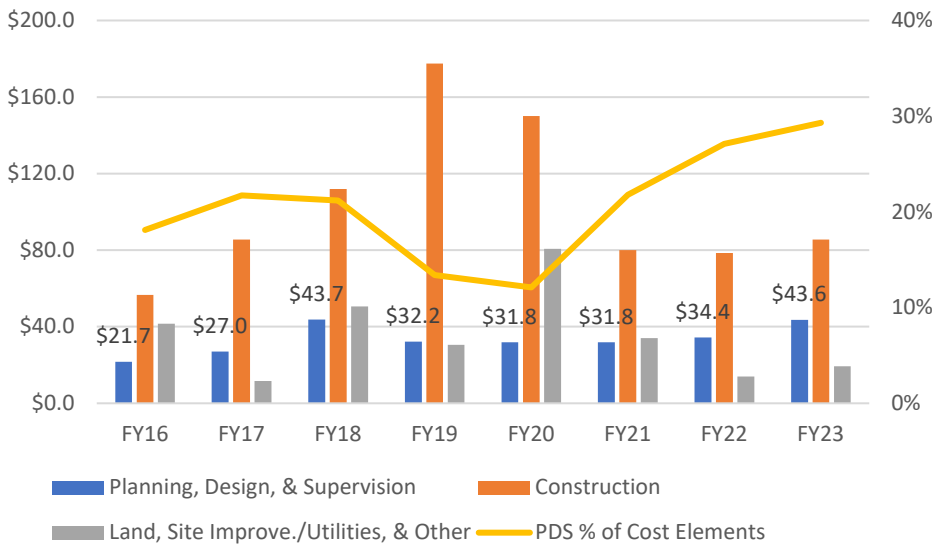
This section examines the Planning, Design, and Supervision costs for all Department of Transportation CIP projects. The data in the subsections analyze costs:

- At the CIP cost element level;
- At the tasks or subsections level;
- By DOT staff and contract services; and
- By the vendor and types of services.

1. PDS within CIP Project Cost Elements

The data in the next chart show PDS costs for all DOT CIP projects by cost element for FY16-FY23.

Chart 3.1 PDS as a Percentage of CIP Cost Elements, FY16-23
($ in millions)



Note: Since Land, Site Improvements and Utilities, and Other cost elements were smaller amounts, they were combined for display purposes.

From FY16 to FY23, the PDS cost element made up 21% of total project costs. PDS had the lowest percentage of total costs in FY19 ($32.2M or 13%) and FY20 ($31.8M or 12%) due to projects that were well into the construction phase, having more construction costs and little or no PDS costs (e.g., patching and resurfacing projects).

These FY19 and FY20 projects included: *Wheaton Redevelopment Program* ($107.4M), *Bethesda Metro Station South Entrance* ($31.7M), *Bus Rapid Transit: US 29* ($31.0M), *Resurfacing Residential/Rural* ($27.3M), *Capital Crescent Trail* $14.0M), *Residential and Rural Road Rehabilitation* ($13.4M), *Resurfacing: Primary/Arterial* ($13.4M), and *Sidewalk and Curb Replacement* ($12.4M).

PDS made up the highest percentage of total costs in FY22 ($34.4M or 27%) and FY23 ($43.6M or 29%) when projects had a higher focus on PDS[10] and less on construction. Projects from these years included: *Traffic Signals* ($7.4M), *Bus Rapid Transit: MD355 Central* ($7.1M), *Bus Rapid Transit: System Development* ($4.1M), *Pedestrian Safety Program* ($4.0M), *Bridge Renovation* ($3.7M), *Bridge Design* (3.2M), *Facility Planning: Roads* ($3.1M), and *Bus Rapid Transit: Viers Mill* ($3.1M).

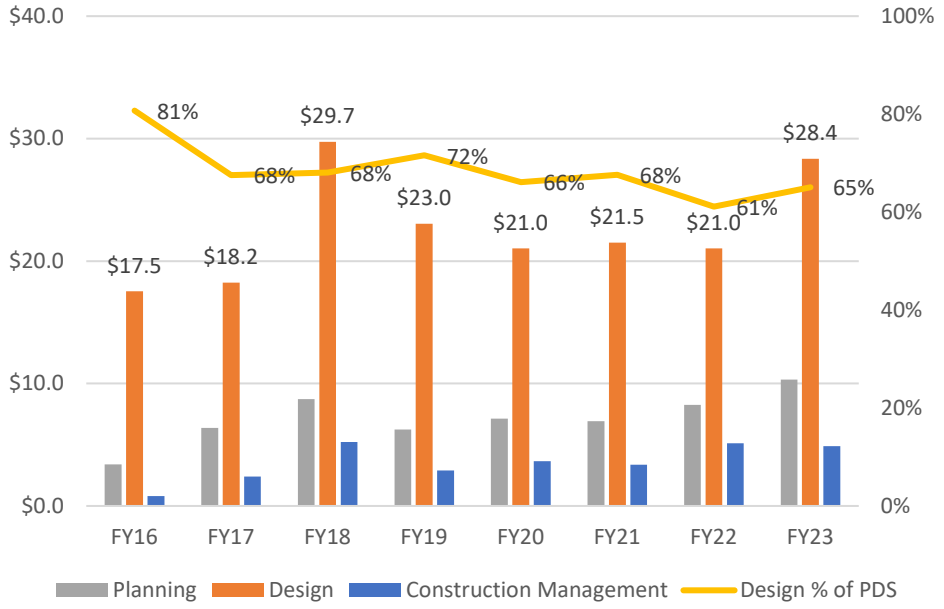
2. PDS Costs by Task

The data in the next table show PDS costs broken down by its task components – Planning, Design, and Construction Management (Supervision). The design component is consistently the largest portion of the expenditures, with an average of $23.0M per year or 68% of all PDS tasks. Average costs for

[10] PDS expenditures in parentheses.

planning were $7.1M per year or 21% of PDS costs and average costs for construction management were $3.5M per year or 11%.

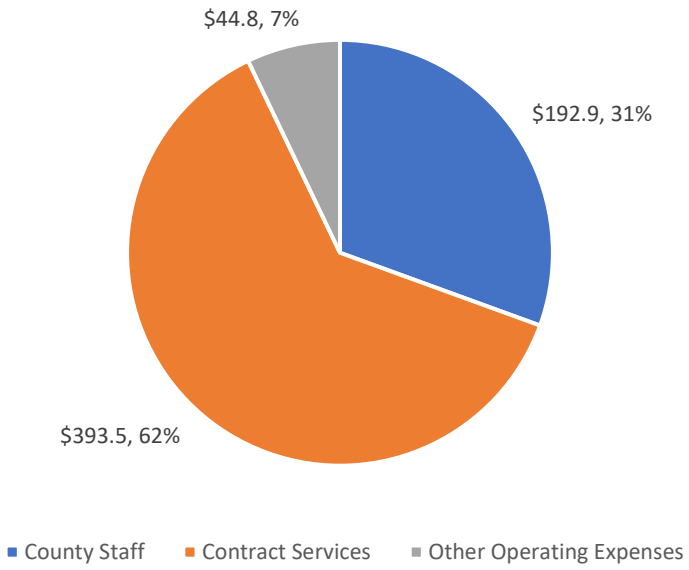
Chart 3.2 Design as a Percentage of PDS Tasks, FY16-23
($ in millions)



3. PDS Costs: County Staff vs. Contractors

The data in the next pie chart break down PDS costs among County staff, contract services, and other operating expenses. From FY16 to FY23, contract services accounted for 62% of all PDS costs, followed by DOT staff (31%) and all other remaining operating expenses (7%).

Chart 3.3 Percentage of FY16 to FY23 PDS Costs by Contract Services, DOT Staff, and Other Operating Expenses ($ in millions)



The data in the next table show costs broken down by year.

Table 3.4 FY16 to FY23 PDS Costs by DOT Staff, Contract Services, and Other Operating Expenses ($ in millions)

	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23
Contract Services	$13.5	$18.1	$34.5	$22.8	$18.8	$20.7	$23.5	$31.5
County Staff	$7.8	$8.5	$8.3	$9.0	$10.7	$10.5	$10.7	$10.7
Other Operating Expenses	$0.4	$0.4	$0.9	$0.4	$2.3	$0.6	$0.2	$1.4
Total	**$21.7**	**$27.0**	**$43.7**	**$32.2**	**$31.8**	**$31.8**	**$34.4**	**$43.6**

When reviewing these from FY16 to FY23, County staff expenditures were consistent with a low of $7.8M in FY16 and a high of $10.7M in FY20, 22, and 23. Contractor services had a low of $13.5M in FY16 and highs of $34.5M in FY18 and $31.5M in FY23.

FY18 contractor costs were primarily due to professional contract services for the *Wheaton Redevelopment Program* ($7.2M), *Bus Rapid Transit System Development* ($5.4M), *Clarksburg*

Transportation Connections ($4.0M), and *State Transportation Participation* ($2.5M)[11]. FY23 contractor costs were primarily for *Bus Rapid Transit: MD355* ($3.1M), *Traffic Signals* ($2.4M), *Bus Rapid Transit: Viers Mill* ($2.0M), *Pedestrian Safety Program* ($1.9M), *Bus Rapid Transit System Development* ($1.5M), *Bridge Renovation* ($1.4M), *Facility Planning: Roads* ($1.3M), *White Flint West Workaround* ($1.2M), and *Bridge Design* ($1.1M).

4. PDS Vendors and Services Provided

This subsection identifies the top vendors that DOT used for contract services from FY16-FY23. The data in the next table show DOT's top CIP contractors and the services provided. Examples are given for services that are not self-explanatory.

The three top contractors from FY16 through FY23 were Rummel, Klepper & Kahl ($23.5M), Stantec Consulting Services ($19.7M), and SC/BA (Wheaton Apartments) ($19.1M). Out of the top 37 vendors, [12] DOT used three certified Minority, Female, and Disabled Businesses (MFD) vendors:[13] Baldwin Line Construction of Maryland ($4.2M), Mercado Consultants ($3.2M), and EBA Engineering ($1.4M).[14] These vendors represented 8% of top vendors (3 out of 37) used by DOT from FY16-FY23. Among the top 37 vendors used, 21 had MFD subcontractor participation (57%).

Table 3.5 FY16 to FY23 Top PDS Service Contract Funding ($ in millions)

Vendor	Services Provided	Funds Expended
Rummel, Klepper, & Kahl	• Engineering & Architectural Services • Information System Services (e.g., construction inspection services) • Pedestrian Safety Activities (e.g., pedestrian design plans, pedestrian engineering service) • Other Professional Services (e.g., provide professional engineering software, engineering services) • Other Non-Professional Services (e.g., preconstruction services,[15] construction manager at risk services,[16] archeology services)	$23.5M
Stantec Consulting Services	• Engineering & Architectural Services • Other Professional Services (e.g., topographic surveys, assistance with property acquisition, construction inspection services)	$19.7M

[11] According to the FY24 approved Project Description Form, this project is the County's participation in funding of state and Washington Metropolitan Area Transit Authority (WMATA) transportation projects that will add transportation capacity to County networks, reduce traffic congestion in areas of the County, and provide overall benefits to the public at large.
[12] Vendors with expenditures of $705K or more.
[13] Businesses that are at least 51% owned, controlled, and managed daily by a minority person(s) as defined by County Code and regulations. https://www.montgomerycountymd.gov/PRO/DBRC/mfd.html
[14] Certified vendors were confirmed by the Office of Procurement.
[15] Pre-construction services include planning, cost estimating, scheduling, land acquisition, design development, engineering, and permitting, among other pre-construction services.
[16] Acts on behalf of the County to help complete the project within the guaranteed maximum price.

Planning, Design, and Supervision Costs

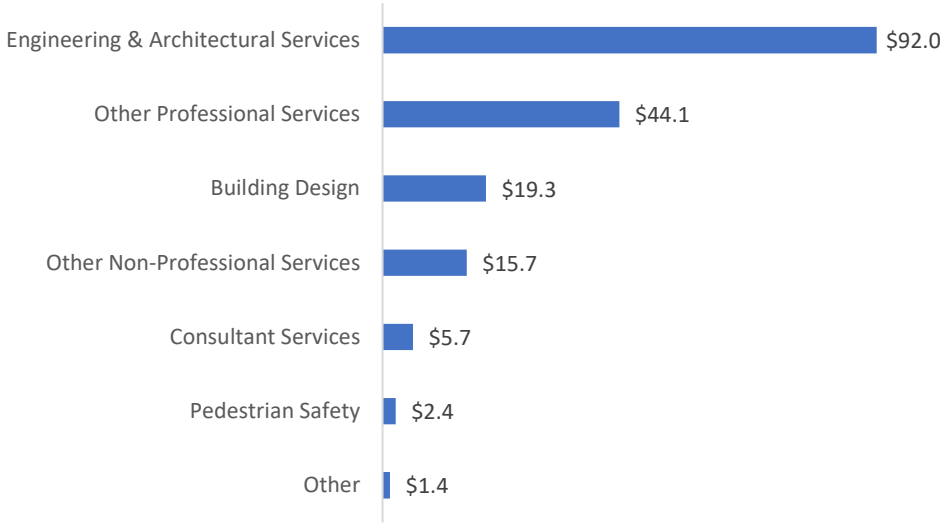
Vendor	Services Provided	Funds Expended
	• Other Non-Professional Services (e.g., electronic technicians, on-site support staff)	
SC/BA, Wheaton Office	• Engineering & Architectural Services • Building Design	$19.1M
Gannett Fleming & Greenman-Pedersen, a Joint Venture	• Engineering & Architectural Services • Other Professional Services (e.g., bus rapid transit studies and analysis, transportation funding strategy and outreach) • Other Non-Professional Services (e.g., primary/arterial resurfacing, engineering services)	$14.4M
Whitman, Requardt & Associates	• Engineering & Architectural Services • Consultant Services (e.g., peer reviews, interior tenant improvements, engineering services) • Other Professional Services (e.g., traffic engineering, right-of-way framework, design and engineer bus priority improvements) • Other Professional Services (e.g., engineering services for transportation facilities, trail tunnel design)	$9.1M
Johnson, Mirmiran, & Thompson	• Engineering & Architectural Services • Other Professional Services (e.g., construction inspection services, engineering services) • Other Non-Professional Services (e.g., utility coordination, responding to requests for information during construction)	$7.9M
STV	• Engineering & Architectural Services • Pedestrian Buffer Treatments (e.g., on-site support for construction services) • Pedestrian Safety Activities (e.g., traffic studies, engineering design, transportation analysis) • Other Professional Services (e.g., traffic engineering, right-of-way framework, design and engineer bus priority improvements) • Other Non-Professional Services (e.g., on-site traffic and engineering and operations consulting)	$5.5M
Concrete General	• Engineering & Architectural Services • Other Professional Services (e.g., construction manager-at-risk for bus rapid transit construction)	$5.0M
Holbert Apple Associates	• Engineering & Architectural Services • Consultant Services (e.g., condo plat development, engineering, design for deck repairs, field inspector services, peer review) • Maintenance - Building Structure (e.g., truck canopy for parking lot district services building) • Maintenance - Electrical (e.g., electrical fire alarm system replacement)	$5.0M

Vendor	Services Provided	Funds Expended
	• Building Construction (e.g., field inspection services, as needed engineering services) • Building Design	

In the next chart, the data overwhelmingly show the top services that DOT contracted for were engineering and architectural services ($92.0M), followed by other professional services ($44.1M). Other professional services included planning and design related to topographical studies, construction inspection services, traffic signal control services, relocating fiber optic cable, storm drainage investigations, field surveys, etc.

The next largest DOT expenditures were for building design services ($19.3M) and other non-professional services ($15.7M). Building design services were primarily associated with three projects: *Wheaton Redevelopment Program*, *Parking Lot Districts Service*, and *Parking Silver Spring Facility Renovations*. Other non-professional services included planning and design related to preconstruction services, construction manager-at-risk services, bus rapid transit studies and analysis, pedestrian bridge construction, culvert[17] replacement, etc.

Chart 3.6. Top FY16 to FY23 PDS Services Provided by Contractors (in millions)



Note: "Other" services include building construction, maintenance – electrical, and bus shelter installation.

[17] According to the Cambridge Dictionary, a culvert is a pipe for waste water that crosses under roads, railroads, etc.

D. DOT Planning, Design, and Supervision Costs – Facility Planning Projects

This section focuses on the Planning, Design, and Supervision costs for the Department of Transportation's eight[18] facility planning projects. As in the last section, data show costs:

- At the CIP cost element level;
- At the tasks or subsections level;
- By DOT staff and contract services; and
- By the vendor and types of services.

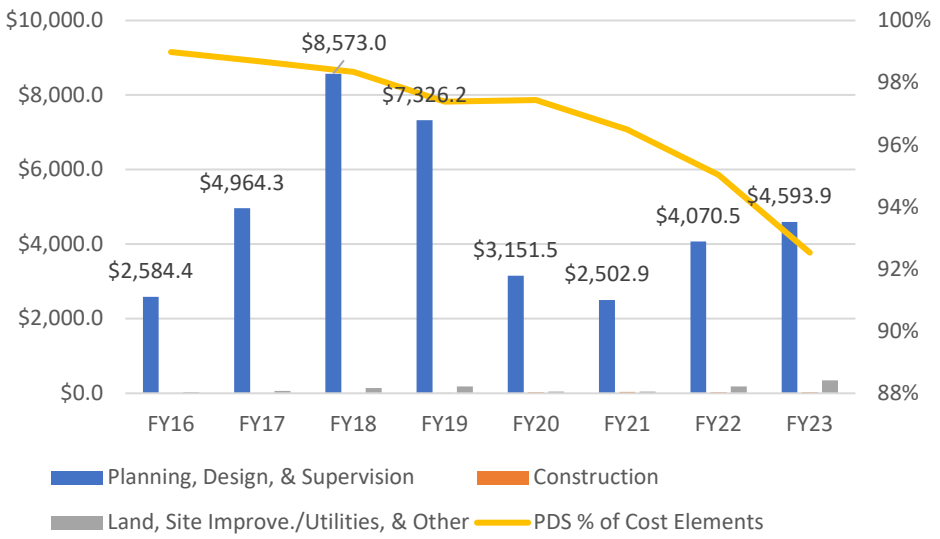
The *Facility Planning: Bridges* project is displayed and analyzed separately from the other eight facility planning projects. DOT representatives reported to OLO that *Facility Planning: Bridges* differs from other facility planning projects because costs for the entire design of the project (preliminary and final) are accounted for in one project, whereas all other facility planning projects only account for preliminary design and the remaining design funds are allocated to respective stand-alone projects.

1. PDS within Facility Planning Projects' Cost Elements – Excluding *Facility Planning: Bridges*

When focusing on DOT's eight facility planning projects expenditures from FY16 to FY23, Planning, Design, and Supervision (PDS) was 97% of total project costs, averaging $4.7M per year. The remaining 3% or $149.0K per year was mainly spent on land-related costs, site improvements, and utilities. The combined $15.9M in PDS costs in FY18 and FY19 was mainly due to the focus on *Bus Rapid Transit (BRT): System Development* ($10.8M).

[18] Bus Rapid Transit: System Development, Facility Planning: Pedestrian Facilities and Bikeways, Facility Planning Parking: Bethesda Parking Lot District, Facility Planning Parking: Silver Spring Parking Lot District, Facility Planning Parking: Wheaton Parking Lot District, Facility Planning: Roads, Facility Planning: Mass Transit, and Facility Planning: Storm Drains. Note: the facility planning projects for pedestrian facilities and bikeways, roads, and mass transit were previously combined into one project prior to FY23 – "Facility Planning: Transportation."

Chart 3.7 PDS as a Percentage of Facility Planning Project CIP Cost Elements, FY16-23
($ in thousands)

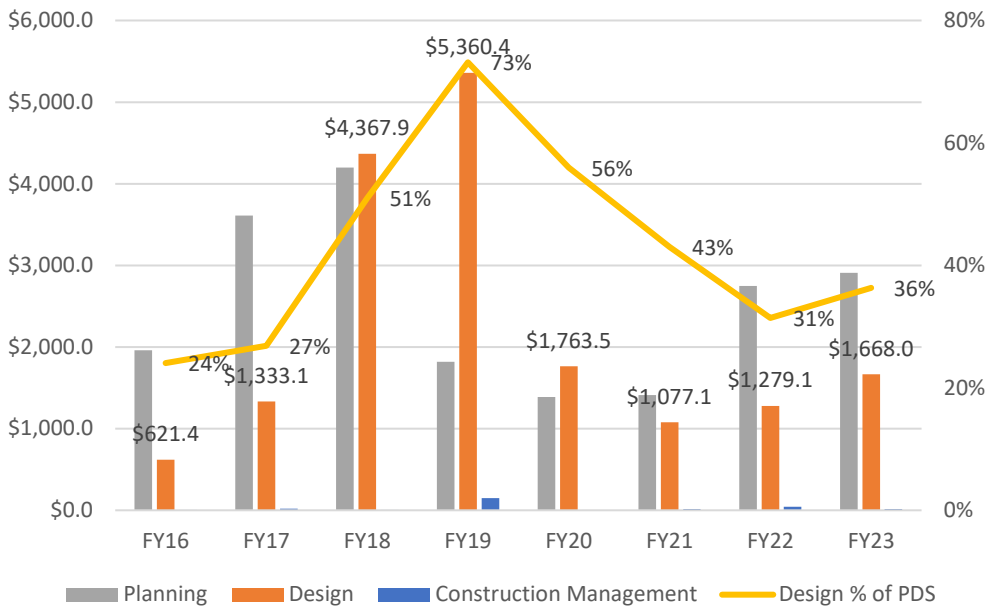


Note: The smaller amounts of Land, Site Improvements and Utilities, and Other cost elements were combined for display purposes.

2. Facility Planning Projects: PDS by Task – Excluding *Facility Planning: Bridges*

When PDS is broken down by its task components – Design, Planning, and Construction Management – planning and design are consistently the largest portions of the expenditures spent with averages of $2.5M per year (53%) on planning and $2.2M per year (46%) on design. The remaining $32.0K per year (1%) was spent on construction management. Again, the highest design costs were in FY18 and FY19, mainly due to *BRT: System Development*.

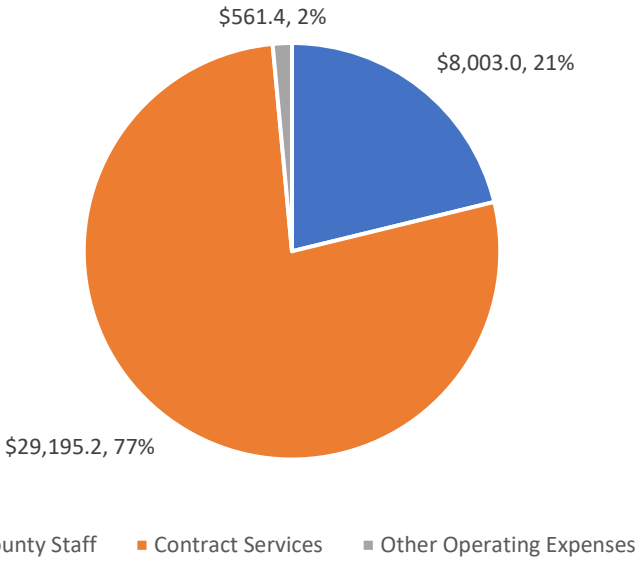
Chart 3.8 Design as a Percentage of All PDS Tasks, FY16-23
($ in thousands)



3. Facility Planning Projects: PDS Costs - County Staff vs. Contractors – Excluding *Facility Planning: Bridges*

The data in the next table show that from FY16 to FY23, contract services accounted for 77% of all PDS costs, followed by DOT staff (21%) and all other remaining operating expenses (2%).

Chart 3.9 Percentage of FY16 to FY23 PDS Costs by Contract Services, DOT Staff, and Other Expenses
($ in thousands)



The data in the next table show that County staff expenditures varied throughout the eight years studied, averaging $1.0M per year, with highs in FY18 ($1.3M) and FY19 ($1.1M), again due to staff involvement with *BRT: System Development*. Contract services averaged $3.7M per year, with highs of $7.1M in FY18 and $6.1M in FY19. These higher amounts were primarily due to engineering and architecture services and other professional services for *BRT: System Development* ($9.8M).

Table 3.10 FY16 to FY23 PDS Costs by DOT Staff, Contract Services, and Other Operating Expenses ($ in thousands)

	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23
Contract Services	$1,794.9	$3,778.6	$7,123.4	$6,128.6	$2,213.9	$1,456.5	$3,083.0	$3,616.4
County Staff	$737.9	$1,127.4	$1,317.1	$1,130.6	$870.1	$912.9	$971.5	$935.6
Other Operating Expenses	$51.6	$58.4	$132.6	$67.0	$67.5	$133.5	$16.0	$34.8
Total	**$2,584.4**	**$4,964.4**	**$8,573.0**	**$7,326.2**	**$3,151.5**	**$2,502.9**	**$4,070.5**	**$4,586.8**

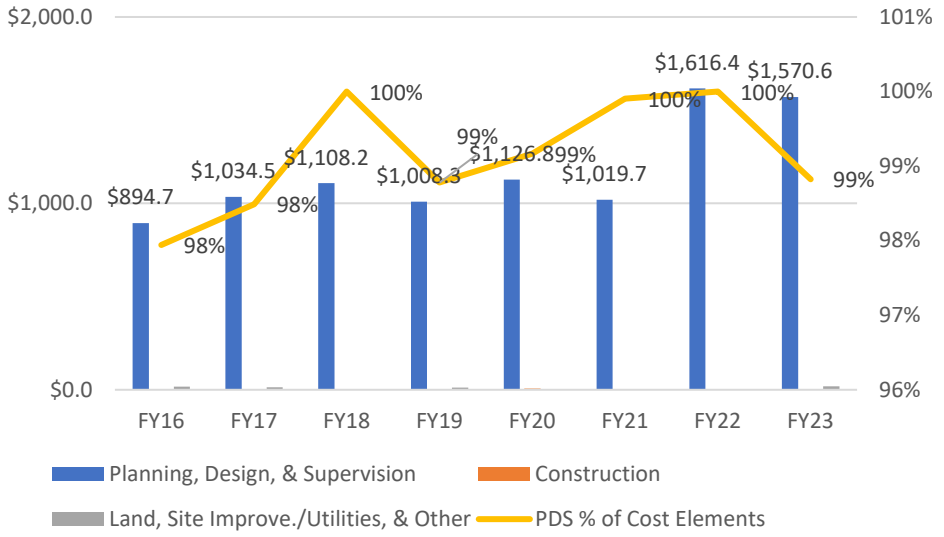
4. Facility Planning Projects: PDS Vendors and Services Provided – Excluding *Facility Planning: Bridges*

From FY16 through FY23, engineering and architectural services were the main services provided for by the following top vendors: Gannett Flemming and Greenman-Pederson ($2.8M), Rummel, Klepper & Kahl ($1.5M), Johnson, Mirmiran, & Thompson ($1.4M), Whitman, Requardt & Associates ($1.4M), and the Wilson T. Ballard Company ($1.3M).

5. PDS within Facility Planning Projects' Cost Elements – *Facility Planning: Bridges*

When focusing on Facility Planning: Bridges' expenditures from FY16 to FY23, PDS was 99% of the total project costs, averaging $1.2M per year. The remaining 1% or $9.5K per year was mainly spent on land-related costs.

Chart 3.11 PDS as a Percentage of Facility Planning: Bridges CIP Cost Elements, FY16-23 ($ in thousands)

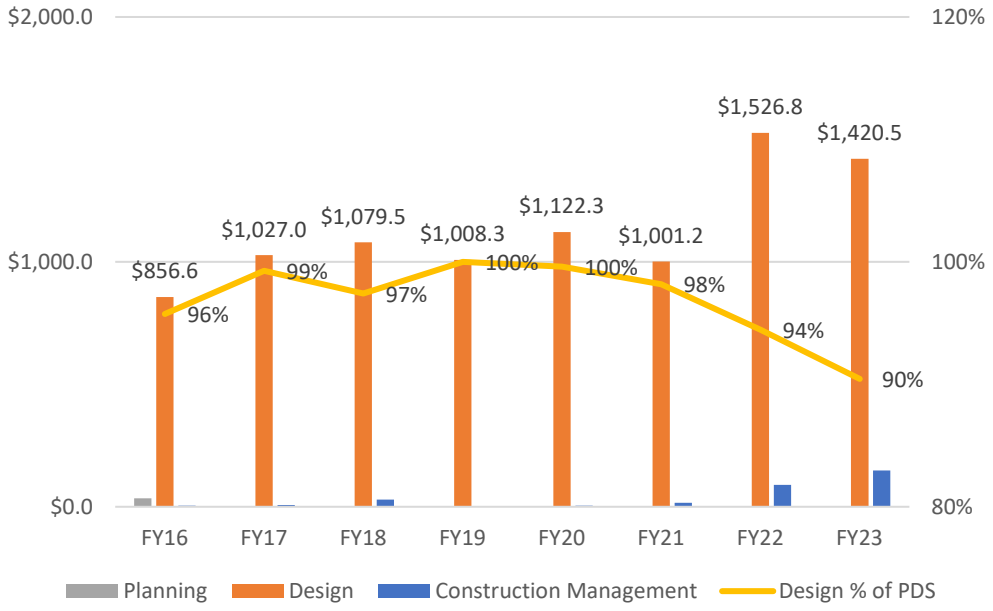


Note: The smaller amounts of Land, Site Improvements and Utilities, and Other cost elements were combined for display purposes.

6. Facility Planning Projects: PDS by Task – *Facility Planning: Bridges*

When PDS is broken down by its task components – Design, Planning, and Construction Management – design was consistently the largest portion of expenditures spent with an average of $1.1M per year (96%), followed by construction management at $37.4K per year (3%), and planning at $4.8K per year (1%).

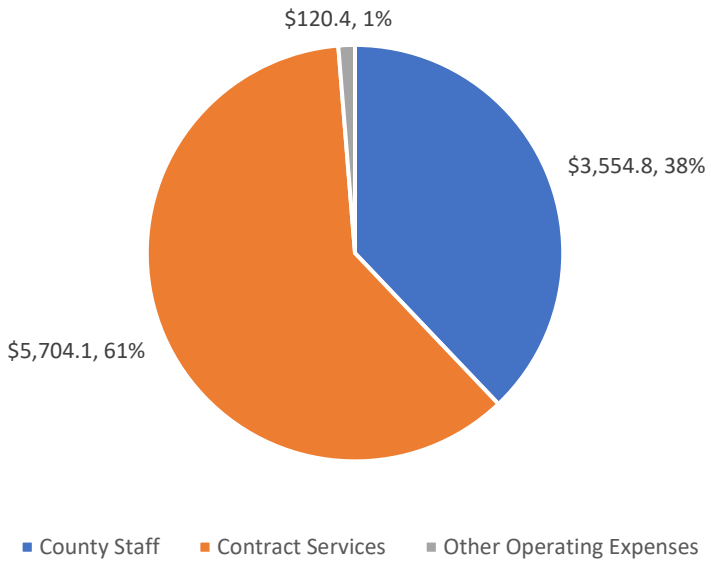
Chart 3.12 Design as a Percentage of All Bridges PDS Tasks, FY16-23
($ in thousands)



7. Facility Planning Projects: PDS Costs - County Staff vs. Contractors – *Facility Planning: Bridges*

From FY16 to FY23, contract services accounted for 61% of all PDS costs, followed by DOT staff (38%) and all other remaining operating expenses (1%).

Chart 3.13 Percentage of FY16 to FY23 PDS Costs by Contract Services, DOT Staff, and Other Expenses ($ in thousands)



For PDS costs in *Facility Planning: Bridges*, County staff expenditures remained consistent throughout the eight years studied, averaging $444.3K per year, with a high of $532.1K in FY22 and a low of $344.9K in FY18. Contract services averaged $713.0K per year, with a high of $1.1M in both FY22 and FY23. The higher amounts in FY22 and FY23 were primarily due to engineering and architecture services needed for utility coordination, short span bridge inspections, on-site structural engineering, and preliminary engineering for the replacement and rehabilitation of bridges.

Table 3.14 FY16 to FY23 PDS Costs by DOT Staff, Contract Services, and Other Operating Expenses ($ in thousands)

	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23
County Staff	$413.8	$450.6	$344.9	$360.4	$515.4	$449.5	$532.1	$488.1
Contract Services	$470.0	$562.7	$754.2	$630.0	$594.3	$559.8	$1,071.8	$1,061.3
Other Operating Expenses	$10.9	$21.2	$9.1	$17.9	$17.0	$10.5	$12.5	$21.3
Total	**$894.7**	**$1,034.5**	**$1,108.2**	**$1,008.3**	**$1,126.8**	**$1,019.7**	**$1,616.4**	**$1,570.6**

8. Facility Planning Projects: PDS Vendors and Services Provided – Facility Planning: Bridges

From FY16 through FY23, engineering and architectural services were the main services provided for the following top vendors: Whitney, Bailey, Cox, and Magnani ($1.2M), the State Highway Administration of Maryland ($1.2M), Whitman, Requardt and Associates ($924.3K), Mercado Consultants ($646.6K), and Stantec Consulting Services ($609.5K).

E. DGS Planning, Design, and Supervision Costs – All Projects

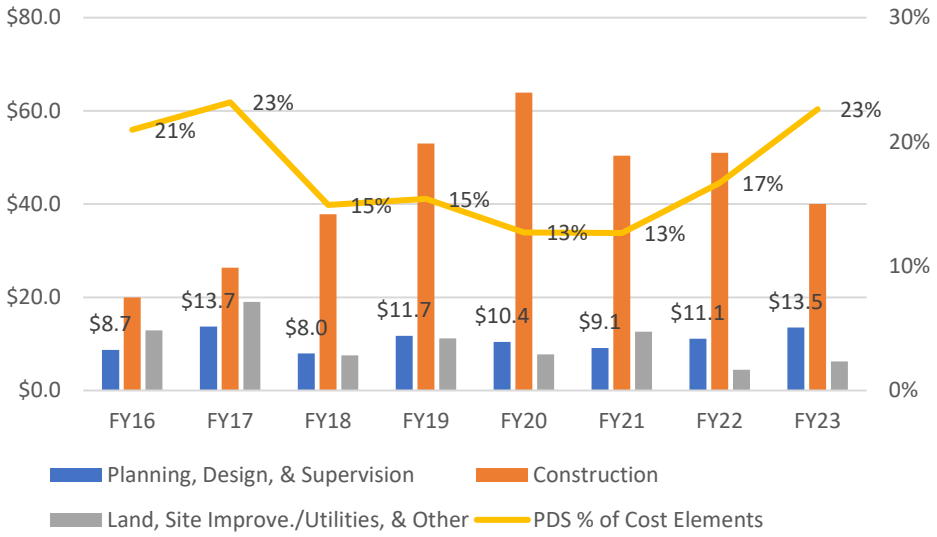
This section examines the Planning, Design, and Supervision costs for all Department of General Services projects:

- At the CIP cost element level;
- At the tasks or subsections level;
- By DGS staff and contract services; and
- By the vendor and types of services.

1. PDS within CIP Project Cost Elements

The data in the next chart show PDS as a percentage of CIP cost elements.

Chart 3.15 PDS as a Percentage of All CIP Cost Elements, FY16-23
($ in millions)



Note: The smaller amounts of Land, Site Improvements and Utilities, and Other cost elements were combined for display purposes.

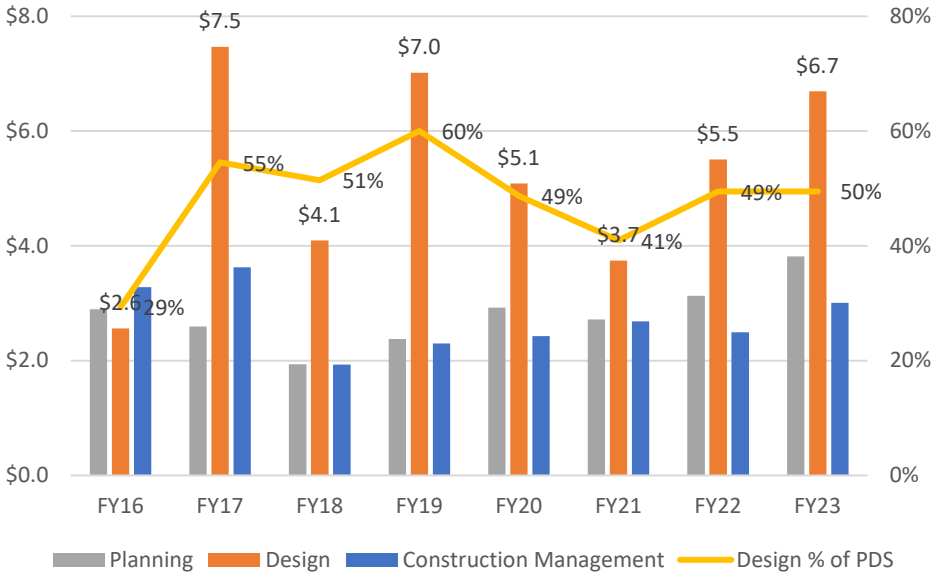
The data show that from FY16 to FY23, PDS costs were 17% of total project costs, on average. PDS had the lowest percentage of total costs in FY20 (13% or $10.4M) and FY21 (13% or $9.1M) due to the large amounts spent on projects that were well into the construction phase. These projects, with their construction expenditures in FY20 and FY21, included: *Silver Spring Recreation and Aquatic Center* ($23.0M), *Rockville Core (Grey Courthouse)* ($20.8M), *Council Office Building Renovations* ($9.5M), *Energy Systems Modernization* ($7.2M), *American with Disabilities Act Compliance* ($7.1M), *Avery Road Treatment Center* ($6.3M), *Martin Luther King Jr. Indoor Swim Center Renovation* ($4.6M), and *Roof Replacement: MCG* ($4.3M).

PDS was the highest percentage of total costs in FY17 (23% or $13.7M) and FY23 (23% or $13.5M). The larger percentage in FY17 was due to less construction and project timing/a higher focus on PDS[19] for such projects as *Avery Road Treatment Center* ($2.9M), *Roof Replacement* ($2.5M), *Criminal Justice Complex* ($1.5M), and *Americans with Disabilities Act (ADA) Compliance* ($1.5M). The larger percentage in FY23 was due to additional planning/design for *Kennedy Shriver Aquatic Center* ($1.4M), *Americans with Disabilities Act Compliance* ($1.3M), *Public Safety Communications Center, Phase II* ($1.2M), and *Clarksburg Fire Station* ($1.1M).

2. PDS by Task

When PDS is broken down by its task components, data show that design was consistently the largest portion of the expenditures, with an average of $5.3M per year (49%) from FY16 to FY23. Design costs were highest from FY17 through FY19 ($18.6M total) mainly due to the changing dynamics of the design for the *Silver Spring Recreation and Aquatic Center* ($4.5M), *Clarksburg Fire Station* ($1.6M), and the *Criminal Justice Complex* ($1.5M). The higher costs were also due to increased design and plans for *American with Disabilities Act Compliance* ($1.5M) and *Library Refurbishment Level of Effort* ($1.1M). Construction Management[20] averaged $2.7M per year (25% of PDS tasks) and Planning averaged $2.8M per year (26%).

Chart 3.16 Design as a Percentage of All PDS Tasks, FY16-23
($ in millions)

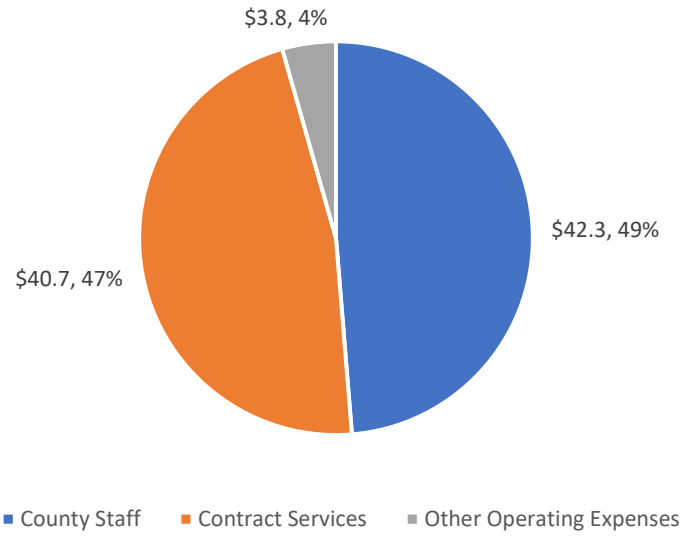


[19] PDS expenditures in parentheses.
[20] DGS staff charges are mainly placed in construction management (DGS staff project supervision).

3. PDS Costs: County Staff vs. Contractors

From FY16 to FY23, DGS staff accounted for 49% of all PDS costs, followed by contract services (47%), and all other remaining operating expenses (4%)

Chart 3.17 Percentage of FY16 to FY23 PDS Costs by Contract Services, DGS Staff, and Other Expenses ($ in millions)



The data show that for PDS costs for staff from FY16-FY23, DGS staff expenditures ranged from $5.0M to $5.8M from FY17 to FY22, with a low of $2.7M in FY16 and a high of $7.2M in FY23. Lower FY16 costs were due to a larger reliance on professional/contractual services ($4.5M) – especially for *Roof Replacement* ($1.2M), *Americans with Disabilities Act Compliance* ($1.2M), and *Planned Lifecycle Asset Replacement* ($1.0M). DGS staff expenditures were high ($7.2M) in FY23 due to more staff funding primarily charged to *American with Disabilities Act Compliance* ($1.0M), *Martin Luther King Jr. Indoor Swim Center Renovation* ($0.8M), *Silver Spring Recreation and Aquatic Center* ($0.6M), *MC Detention Center Partial Demolition* ($0.5M), *Clarksburg FS* ($0.4M), and *Library Refurbishment Level of Effort* ($0.4M).

Contract Services costs were highest in FY17 at $9.5M primarily due to *Avery Road Treatment Center* ($2.8M), *Roof Replacement: MCG* ($2.4M), *Criminal Justice Complex* ($1.4M), and *Library Refurbishment Level of Effort* ($0.6M).

Table 3.18 FY16 to FY23 PDS Costs by DGS Staff, Contract Services, and Other Operating Expenses ($ in millions)

	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23
County Staff	$2.7	$5.0	$5.2	$5.0	$5.6	$5.8	$5.8	$7.2
Contract Services	$4.5	$9.5	$2.5	$6.7	$4.4	$3.1	$4.5	$5.5
Other Operating Expenses	$1.5	($0.7)	$0.2	$0.2	$0.6	$0.3	$0.9	$0.9
Total	**$8.7**	**$13.7**	**$8.0**	**$11.9**	**$10.7**	**$9.1**	**$11.1**	**$13.5**

Note: Negative expenditures in FY17 were due to financial adjustment, moving expenditures from FY16 purchase order to FY17 for the Library Refurbishment LOE.

4. PDS Vendors and Services Provided

This subsection identifies the top vendors that DGS used for contract services from FY16-FY23. The data in the next table show DGS' top CIP contractors and the services provided. Examples are given for services that are not self-explanatory.

From FY16 through FY23, DGS spent the most on three vendors/entities: the Housing Opportunities Commission ($4.6M), Gale Associates ($3.8M), and Hughes Group Architects ($3.8M). The Housing Opportunities Commission was entirely used for building design services for the Silver Spring Recreation and Aquatic Center where it provided architectural/engineering services for design, permitting, and construction administration.

Out of the top 24 vendors,[21] DGS used four vendors for certified Minority, Female, and Disabled Businesses (MFD) services from FY16-FY23: NOA Architecture Planning Interiors ($2.2M), Weigand Associates ($2.0M), Sheladia Associates ($1.0M), and the Robert B. Balter Company ($312.5K).[22] These vendors represented 17% (4 out of 24) of the top vendors used from FY16-FY23. Among the top 24 vendors used, 16 had MFD subcontractor participation (67%).

The next table shows the vendors, services provided (in order from most to least used), and the service contracts amount expended.

Table 3.19 FY16 to FY23 Top PDS Service Contracts Expended by Vendor

Vendor	Services Provided	Funds Expended ($ in millions)
Housing Opportunities Commission	• Building Design	$4.6M
Gale Associates	• Engineering & Architectural Services • Consultant Services (e.g., building envelope inspection services, supervision for replacing roofs) • Maintenance - Roofing (e.g., waterproofing, site drainage control, roof and gutter repairs) • Trash Hauling/Removal Agreements (e.g., engineering consultant for roof replacement and oversight) • Building Construction (e.g., building envelope commissioning services, on-call roof consulting)	$3.8M

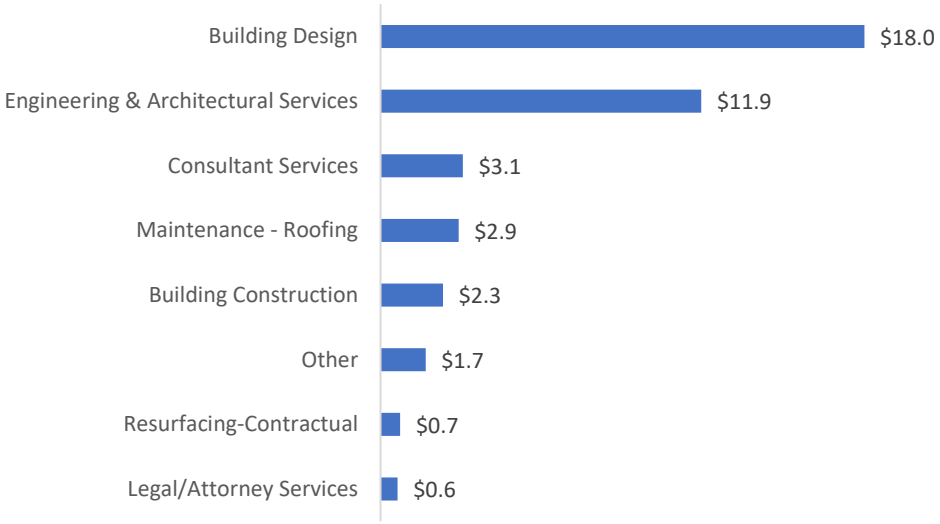
[21] Vendors with expenditures of $500K or more.
[22] Certified vendors were confirmed by the Office of Procurement.

Vendor	Services Provided	Funds Expended ($ in millions)
	• Building Design • Resurfacing - Contractual (e.g., investigate water leaks, construction administration and monitoring services for roof replacement) • Other Professional Services (e.g., metal roof replacement design)	
Hughes Group Architects	• Environmental Services (e.g., environmental design for buildings, net-zero enhancements for zero Green House Gas) • Building Design	$3.8M
EDG2	• Engineering & Architectural Services • Building Design	$2.5M
Grimm and Parker, BKV	• Engineering & Architectural Services • Consultant Services (e.g., additional engineering for right-of-way tree protection plan) • Building Design	$2.3M
NOA Architecture Planning Interiors	• Engineering & Architectural Services • Environmental Services (e.g., environmental design/consulting) • Consultant Services (e.g., ADA remediation) • Building Construction (e.g., playground replacement, construction administration services) • Building Design	$2.2M
Weigand Associates	• Engineering & Architectural Services • Consultant Services (e.g., review, analyze, and recommend solution for hot water issues) • Building Design	$2.0M
Duane Cahill Mullineaux & Mullineaux	• Engineering & Architectural Services • Consultant Services (e.g., ADA consulting services, architectural services for remediation) • Building Design	$1.9M
Vatica Contracting	• Maintenance - Roofing (e.g., waterproofing, site drainage control, roof and gutter repairs)	$1.7M
OKKS Studios	• Engineering & Architectural Services • Building Construction (e.g., elevator modification) • Building Design	$1.5M

Expenditures from FY16 to FY23 showed that building design ($18.0M) and engineering and architectural services ($11.9M) were the top services procured (72.5% of services). Although not represented in the top vendor companies from FY16 to FY23, legal/accounting services ($0.6M) appear

as one of the top services. These services were for the following projects: *Facility Planning: MCG*, *MCPS Bus Depot and Maintenance*, *White Oak Science Gateway Redevelopment*, and the *Clarksburg Fire Station*.

Table 3.20 Top FY16 to FY23 PDS Services Provided by Contractors ($ in millions)



Note: "Other" services include maintenance – plumbing, maintenance – carpentry, and other professional services.

F. DGS Planning, Design, and Supervision Costs – *Facility Planning: MCG* Project

This section only focuses the Planning, Design, and Supervision costs for the *Facility Planning: MCG project*. As in the last section, data show costs:

- At the CIP cost element level;
- At the tasks or subsections level;
- By DGS staff and contract services; and
- By the vendor and types of services.

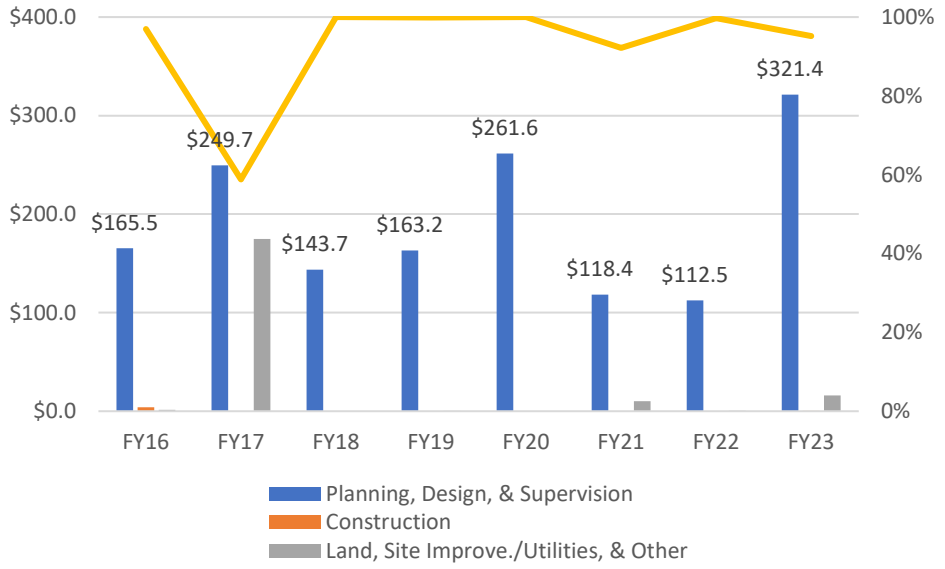
1. Facility Planning Project: PDS within Cost Elements

Looking at expenditures by cost elements, PDS was 88% of total project costs, averaging $192K per year, followed by Other[23] (11% or $25.3K), and the remaining cost elements (1% or $0.5K per year). PDS costs were 100% of total project costs in four of the eight years. DGS costs were highest in FY23 at

[23] An amount of $174.9K in personnel cost expenditures was charged to the project's "Other" cost element in FY17 from the *Environmental Compliance: MCG* project, causing the one-year anomaly.

$321.4K, mainly for preparation development of test fits at the *Wheaton Arts and Cultural Facility*, designs for *401 Hungerford Drive*, and for the preparation/development of a Program of Requirements for the *Poolesville Community Facility*.

Chart 3.21 PDS as a Percentage of Facility Planning CIP Cost Elements, FY16-23 ($ in thousands)



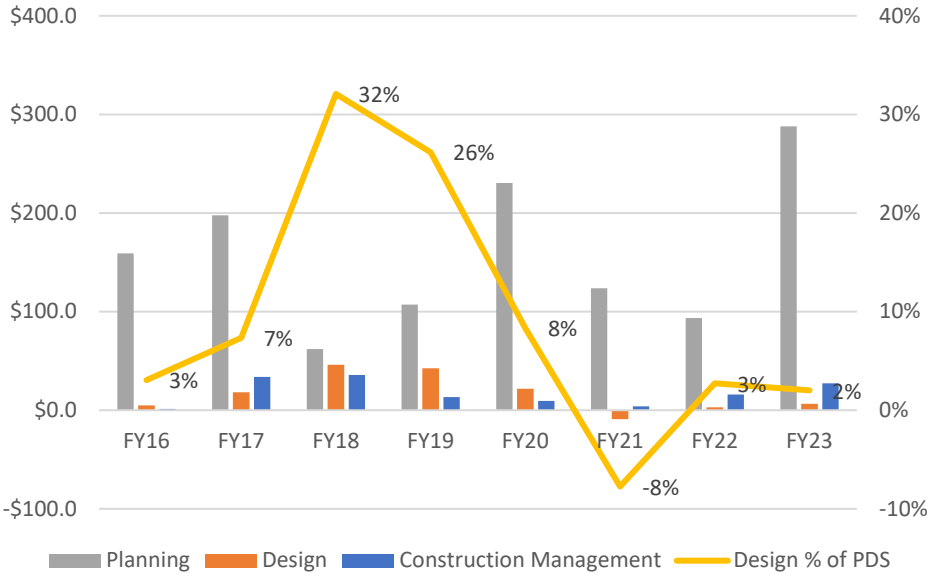
Note: The smaller amounts of Land, Site Improvements and Utilities, and Other cost elements were combined for display purposes.

2. Facility Planning Project: PDS by Task

When breaking down PDS costs by task components, planning was consistently the largest portion of expenditures, with an average of $157.6K per year (82%) from FY16 to FY23. Construction management averaged $17.6K per year (9%) and design[24] averaged $16.8K per year (9%). As opposed to DOT, DGS places their engineering and architectural services in the planning task for the *Facility Planning: MCG* project – explaining why expenditures on planning were higher and expenditures on design were lower.

[24] In FY21, there was a net negative expenditure for the design task to account for transfer of costs from the Environmental Compliance: MCG project.

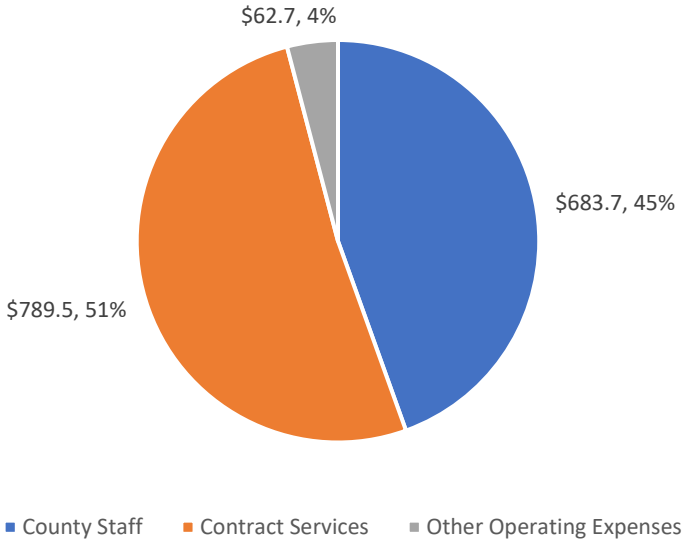
Chart 3.22 Design as a Percentage of All PDS Tasks, FY16-23
($ in thousands)



3. Facility Planning Project: PDS Costs - County Staff vs. Contractors

From FY16 to FY23, contract services accounted for 51% of all PDS costs, followed by DGS staff (45%) and all other remaining operating expenses (4%).

Chart 3.23 Percentage of FY16 to FY23 PDS Costs by Contract Services, DGS Staff, and Other Expenses
($ in thousands)



DGS staff expenditures ranged from a low of $9.9K in FY17 to a high of $114.K in FY22. Contract services ranged from a low of $1.3K in FY21 to a high of $182.3K in FY23. When DGS staff costs were lower, contract services were higher to perform the work needed. For example, in FY16 and FY17, DGS staff costs were just $84.5K compared to $330.3K spent on contract services. This was due to more professional engineering and architectural services needed for the *Clarksburg Community Pool*, the *Public Safety Communication Center*, and the *Grey Courthouse*.

In FY23, the highest year for spending on contract services ($182.K), services mainly included architectural and engineering for the preparation and development of test fits for the *Wheaton Arts and Cultural Facility* and *401 Hungerford Drive*, along with the preparation and development of a Program of Requirements for the *Poolesville Community Facility*.

Table 3.24 FY16 to FY23 PDS Costs by DGS Staff, Contract Services, and Other Operating Expenses ($ in thousands)

	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23
County Staff	$9.9	$74.6	$45.1	$112.5	$114.4	$102.7	$88.6	$135.9
Contract Services	$155.5	$174.8	$97.9	$50.7	$119.4	$1.3	$7.6	$182.3
Other Operating Expenses	$0.0	$0.3	$0.6	$0.0	$27.8	$14.4	$16.4	$3.1
Total	**$165.5**	**$249.7**	**$143.7**	**$163.2**	**$261.6**	**$118.4**	**$112.5**	**$321.4**

4. Facility Planning Project: Planning, Design, and Supervision Vendors and Services Provided

For the top contractors from FY16 through FY23, engineering and architectural services were the main services provided by the following top vendors: NOA Architecture Planning Interiors ($242.4K), OKKS Studios ($174.7K), Duane Cahill Mullineaux and Mullineaux ($160.1K), and Grimm and Parker, BKV ($66.1K). During that time period, NOA and OKKS also provided environmental services and building design, respectively.

Chapter 4. Innovative Capital Budgeting Practices

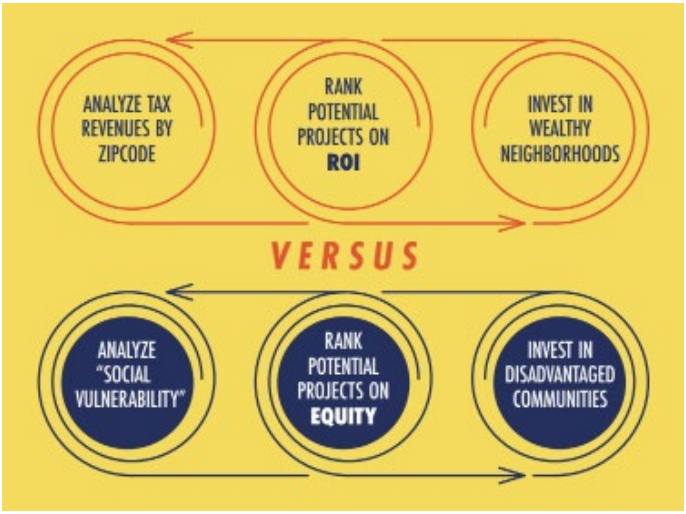
OLO reviewed how other state and local jurisdictions use different capital budget strategies to address constituent and government needs. This chapter describes some of these strategies.

These different strategies apply different rubrics to help prioritize projects, seek to expand engagement with Black, Indigenous, and People of Color (BIPOC) community members, categorize projects based on considerations beyond funding, and utilize available digital means. This chapter is organized as follows:

A. Including Equity with Capital Budget Prioritization;
B. Furthering Equitable and Inclusive Planning and Involvement;
C. Creating a Fiscally Unrestricted Capital Plan; and
D. Utilizing Digital Tools.

A. Including Equity with Capital Budget Prioritization

Jurisdictions can use a capital budget as one way to address inequities, based on the significant power of funding that can be directed to geographical areas that historically have lacked public and/or private investment.[1] Including an equity lens in the development of a capital program can challenge jurisdictions to shift their thinking from ranking projects primarily based on return on investment to ranking project potential by equity, as illustrated in the graphic below.[2]



[1] "Report: Equity in Capital Improvement Planning Processes," a What Works Cities Budgeting for Equity Recovery report, by the Public Financial Management Company in association with Bloomberg Philanthropies.
[2] Ibid.

This section highlights two ways that the City of Baltimore works to promote equity in its CIP: (1) the Baltimore Department of Public Works' (BDPW) Project Selection Tool; and (2) the Baltimore Department of Planning's CIP Distribution Analysis.

1. BDPW Project Selection Tool

The City of Baltimore's Department of Public Works (BDPW) has included equity as a consideration in its capital budget processes since 2019 – and has developed a distinctive "quadruple bottom approach" to apply equity *and* performance lens to four categories: environmental, social, economic, and project implementation. Although its focus is on water quality, the department noted that it can be applied and modified to any type of capital project.

BDPW began reworking its capital process in 2012 based on the federal Environmental Protection Agency's (EPA) guidance for an Integrated Planning Framework (IPF) to implement plans under the Clean Water Act. This voluntary approach helped jurisdictions prioritize capital investments, while encouraging sustainable and comprehensive solutions.[3] The six elements of IPF are:

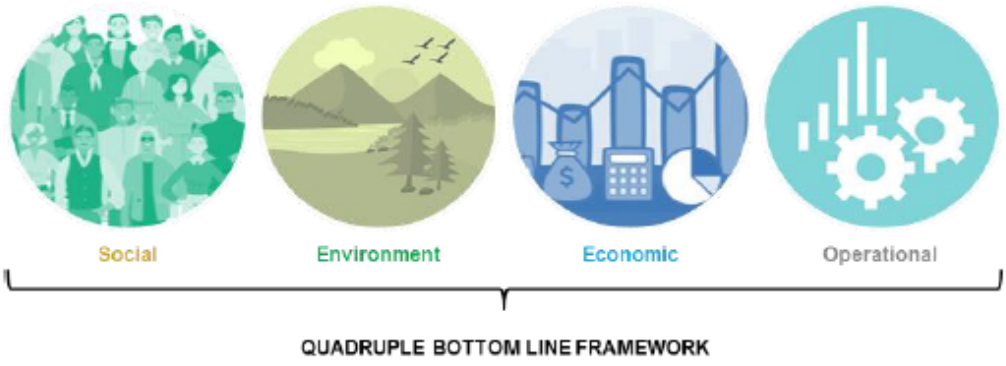
1. A description of water quality, human health, and regulatory issues to be addressed in the plan.
2. A description of existing wastewater and stormwater systems under consideration and summary information describing the systems' current performance.
3. A process which opens and maintains channels of communication with relevant community stakeholders in order to give full consideration of the views of others in the planning process and during implementation of the plan.
4. A process for identifying, evaluating, and selecting alternatives and proposing implementation schedules.
5. A process for evaluating the performance of projects identified in a plan, which may include evaluation of monitoring data, information developed by pilot studies and other studies.
6. A process for identifying, evaluating and selecting proposed new projects or modifications to ongoing or planned projects and implementation schedules based on changing circumstance.[4]

In 2017, BDPW modified the IPF to become the "Quadruple Bottom Approach" to rate and prioritize projects. It began using this approach to organize project data into a "consistent and systematic

[3] "Baltimore City's Integrated Planning Framework in Capital improvement Program and Equity Lens" presentation, by Yosef Kebede and Mohammed Rahman, Baltimore City Department of Public Works.
[4] https://www.epa.gov/npdes/integrated-planning-municipal-stormwater-and-wastewater

framework and evaluate them against a set criterion."[5] It chose social, environmental, economic, and operations as the performance categories[6] with 17 criteria that create the "quadruple bottom-line."

Figure 4.1 Baltimore Department of Public Works'
Quadruple Bottom-Line Performance Areas & Evaluation Criteria



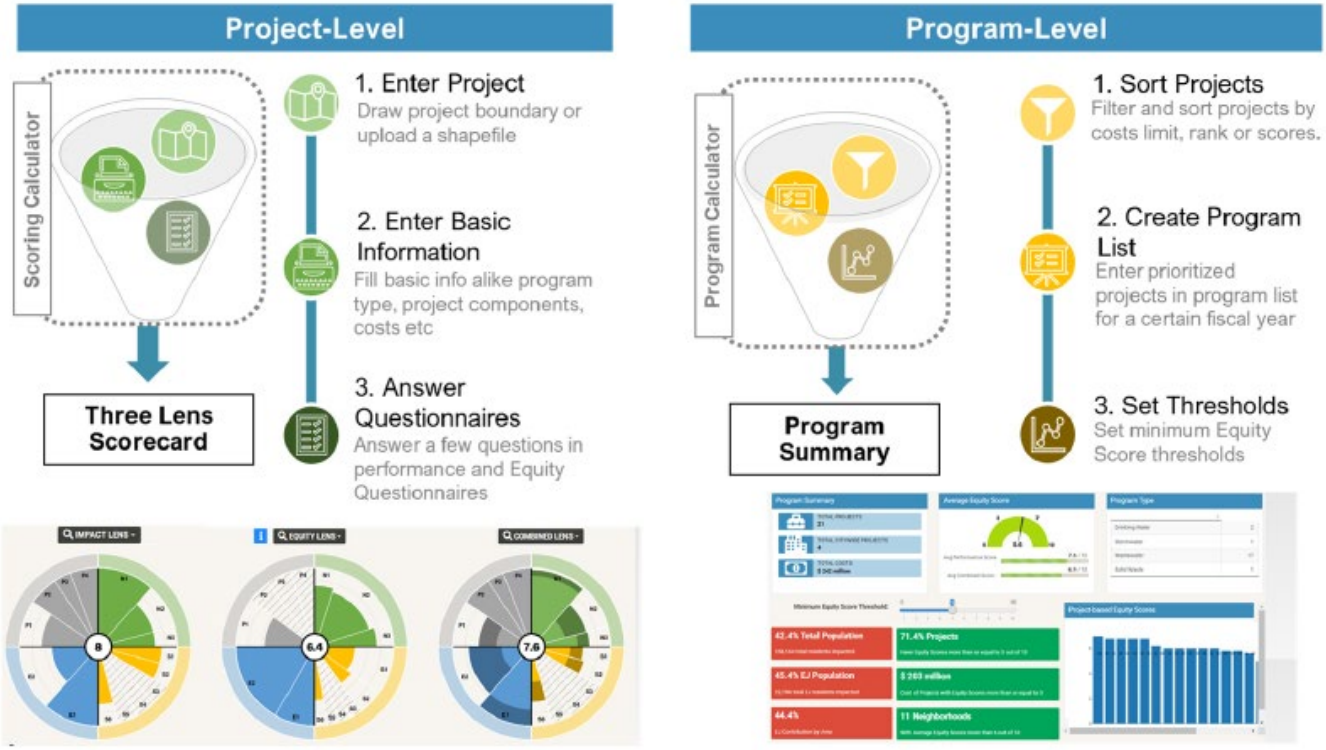
		Criteria	Project Type			
			Wastewater	Water	Stormwater	Solid Waste
Social	S1	Public Health	X	X	X	X
	S2	Public Safety	X	X	X	X
	S3	Quality of Life	X	X	X	X
	S4	Customer Satisfaction	X	X	X	X
Environmental	E1	Regulatory Driven Projects	X	X	X	X
	E2	Improvements to Air	X	X	X	X
	E3	Improvements to Water	X	X	X	X
	E4	Improvements to Land	X	X	X	X
	E5	Resource Efficiency	X	X	X	X
	E6	Habitat Creation	X	X	X	X
	E7	Climate Change Vulnerabilities	X	X	X	X
Economic	E1	Alternate Funding Source	X	X	X	X
	E2	Economic Benefit	X	X	X	X
Operational (Project Implementation)	P1	Service Life and Consequence of Failure	X	X	X	X
	P2	Better Performance of System	X	X	X	X
	P3	Time Component	X	X	X	X
	P4	System Impact	X	X	X	X

Source: "Baltimore Equity TBL Methodology," prepared by AECOM for the City of Baltimore Department of Public Works, December 15, 2022.

[5] "Baltimore Equity TBL Methodology," prepared by AECOM for the City of Baltimore Department of Public Works, December 15, 2022, page 4.
[6] Latest iteration of the categories, from 2022.

Capital projects are then evaluated at the project level and then at the program level through defined lenses with specific criteria for rating/prioritization.

Figure 4.2 BDPW Project Prioritization Levels



Source: "Baltimore Equity TBL Methodology," prepared by AECOM for the City of Baltimore Department of Public Works, December 15, 2022.

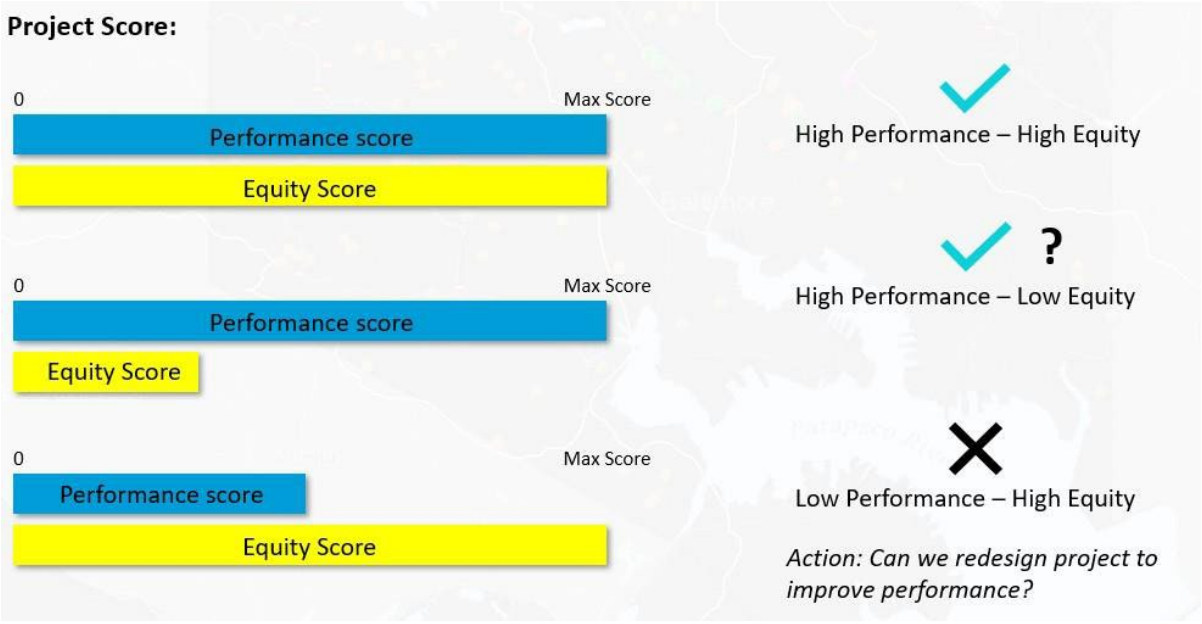
The process uses the lenses of impact, equity[7], and a combination of both for project evaluation. A description of each lens and how they are scored[8] are in the next table.

[7] Equity lens added in 2020.
[8] "Baltimore Equity TBL methodology," pages 7-8.

Lens	Description and How it is Scored
Impact	• Intended to communicate the overall performance impact across the four performance areas. • Measured through a set of criteria under each category and based on responses to a project questionnaire, data, and attributes associated with the project. • Considers the direct area and population of a project but does not analyze specific disadvantaged populations.
Equity	• Intended to evaluate the equity dimensions of each of the impact lens criterion and measure two questions with an emphasis on minority, disadvantaged, and vulnerable population groups: 1. *Who benefits from the project?* 2. *Does the project satisfy the project area's special needs?*
Combined Impact & Equity	• Combines the numeric values from the impact and equity lens criterion to create a hybrid measuring the overall performance for both.

The impact and equity scores are combined and weighted, with weighted at impact at 67% and equity weighted at 33%. Impact and equity scores can also be analyzed side-by-side, which can identify if or when a project needs to be redesigned to meet higher impact or equity outcomes (shown below).

Figure 4.3 Comparing Project Impact and Equity Scores



Source: "Baltimore Equity TBL Methodology," prepared by AECOM for the City of Baltimore Department of Public Works, December 15, 2022.

2. BDP CIP Distribution Analysis

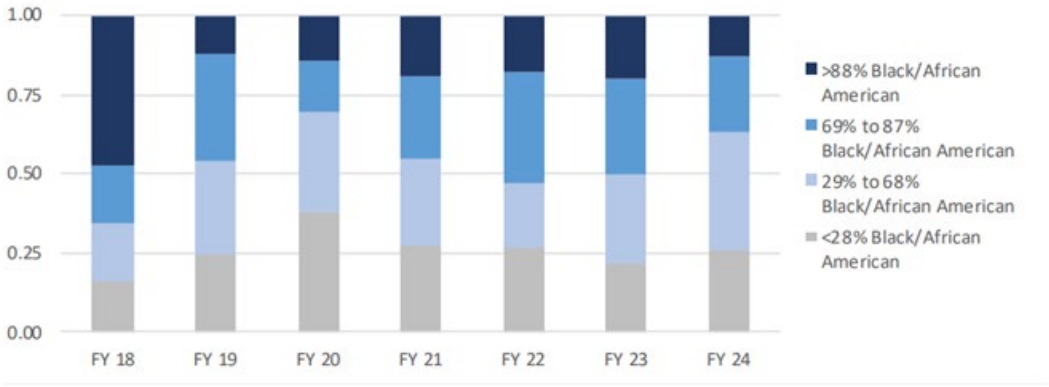
The Baltimore Planning Commission, which is staffed by the Baltimore Department of Planning (BDP), is responsible for the primary review and approval of the City's CIP. While BDPW's Project Selection Tool supports the development of the BDPW's CIP proposal, the BDP's annual CIP Distribution Analysis examines the full proposed CIP after it has been completed. In 2019, BDP worked with the Baltimore Neighborhood Indicators Alliance-Jacob Francis Institute at the University of Baltimore (BNIA) to develop a methodology for analyzing the capital budget by geography, using neighborhoods as a proxy for race and income. Based on this methodology and subsequent modifications, BDP's annual analysis calculates the following metrics:

- **The percentage of dollars mapped by agency** – many projects do not have geographic information available and cannot be mapped because they fund urgent needs or other needs that do not have specific locations planned at the time the budget is proposed or passed;
- **Per capita investment by Community Statistical Area (CSA)** – BDP uses Geographical Information Systems (GIS) technology to map projects in order to determine which CSA(s) their budgeted dollars are associated, and separates analyses for BDPW projects and all other projects;[9]
- **Investments by race and income** – BDP calculates the percentages of BDPW and non-BDPW budgeted expenditures within CSAs with specified percentage ranges of Black or African American residents and median household income levels.

The next table displays the results of BDP's analysis of investments by percentage of Black or African American residents in a CSA in the FY18-FY24 CIPs.

[9] BDPW, which manages water, wastewater and stormwater utility projects, is responsible for the largest and most expensive CIP projects; non-BDPW projects including transportation infrastructure, housing, city facilities, and community development projects.

Table 4.4 Ratio of Per Capita DPW Allocations by Percent of Residents – Black/African-American, FY18-24



Source: FY24 Capital Improvement Program Distribution Analysis, Baltimore Department of Planning, June 2023, FY24 CIP Distribution Analysis Draft.pdf (baltimorecity.gov)

B. Furthering Equitable and Inclusive Planning and Involvement

Including equity in the project planning phase can help ensure traditionally underserved communities are involved and engaged. Some jurisdictions have created processes to help expand community participation in the development of capital programs and budgets and questioned traditional or status quo practices.[10] This section describes two: the City of Philadelphia's "Participatory Budgeting"[11] for capital projects that started in 2020, and the City of Oakland, California's community outreach to communities underrepresented in government participation.

City of Philadelphia. The City of Philadelphia began "Participatory Budgeting"[12] for capital projects in 2020. The approach seeks to have the community directly involved in the budgeting process and increase racial equity considerations in city spending decisions.[13] Most importantly, the city aimed to broaden participation, especially from historically marginalized communities, create more equitable and effective spending, and create stronger relationships among residents, community groups, and the

[10] "Best Practices for CIP Development and Promoting Healthy Communities," by the Baltimore Metropolitan Council, 2021, Executive Summary, page 8.
[11] The non-profit Participatory Budgeting Project worked with Philadelphia on this process, along with other cities such as Seattle, Boston, and Oakland. More information about this nonprofit is available on its website: https://www.participatorybudgeting.org/
[12] The non-profit Participatory Budgeting Project worked with Philadelphia on this process, along with other cities such as Seattle, Boston, and Oakland. More information about this nonprofit is available on its website: https://www.participatorybudgeting.org/
[13] https://www.phila.gov/2020-12-01-philadelphia-announces-participatory-budgeting-other-equitable-budgeting-initiatives-to-reduce-racial-disparities-and-improve-community-outcomes/

government.[14] Residents are able to generate ideas and vote on how to spend $1 million on capital projects.

Before the initial capital budget discussions occurred, the Re-Imagine Philadelphia Steering Committee – comprised of community members – created rules and an engagement plan that includes a four-step process:[15]

1. **Brainstorm Ideas.** Community members share ideas via in-person meetings or online. The only rules are that the capital projects must cost $15,000 or more and they must have a useful life over five years for investments in the city's physical and technical infrastructure, community facilities, and public buildings.

2. **Develop Proposals.** The ideas are narrowed down and developed into feasible projects.

3. **Vote.** The community members vote on the proposals that best meet the community's needs.

4. **Fund Winning Projects.** The City of Philadelphia funds and implements the winning projects.

City of Oakland, California. As for more inclusion in the wider capital improvements program, the City of Oakland, California makes a point of reaching out to communities every two years - especially those who were previously unrepresented in previous outreach.[16] In the early stages of the capital planning process (before departments submit projects), the city engages in the following efforts to overcome communication barriers to underserved and/or unrepresented communities:[17]

- The city hosts targeted meetings intentionally in districts with higher proportions of Black, Indigenous, and People of Color (BIPOC) residents, families with low-incomes, and people who do not speak English. The city chose to use a targeted approach to meetings within communities (e.g., at places such as churches, non-profit buildings, etc.) instead of traditional meetings within government boundaries or districts (e.g., meetings held at a regional center solely based on district boundaries).
- A considerable number of community centers, nonprofits, churches, and community-based organizations are contacted to share locations of the meeting. City staff also asked these same groups if they were already holding events and if staff could attend to speak about the capital budget.

[14] https://www.phila.gov/programs/participatory-budgeting/
[15] Ibid.
[16] "Best Practices for CIP Development and Promoting Healthy Communities," by the Baltimore Metropolitan Council, 2021, pages 18-19.
[17] "Prioritizing Community Values in Capital Budgeting: a Case Study from the City of Oakland," by Elliot Karl, 2021.

- The meeting organizers make it clear how feedback would be used and how the impacts of the feedback would be communicated back to the public. The content of the meeting also included key technical concepts, civic procedural constraints, and a survey that ranked capital project prioritization factors.
- The public information distributed is translated into Spanish, Mandarin Chinese, and Vietnamese (reflecting the largest language groups in Oakland).

However, despite these efforts, BIPOC participation in meetings and responses to surveys can still be disproportionately low. To address that issue, survey responses are totaled and weighted by Oakland's demographic profile to ensure more inclusive representation.[18]

Overall, it should be noted that this effort to get input and feedback from communities that have not historically been represented required plenty of resources: consultants to create fliers, posters, and presentation content; consultants with public engagement experience among communities who have been historically underrepresented; and donated time from staff with language fluency.[19]

C. Creating a Fiscally Unrestricted Capital Plan

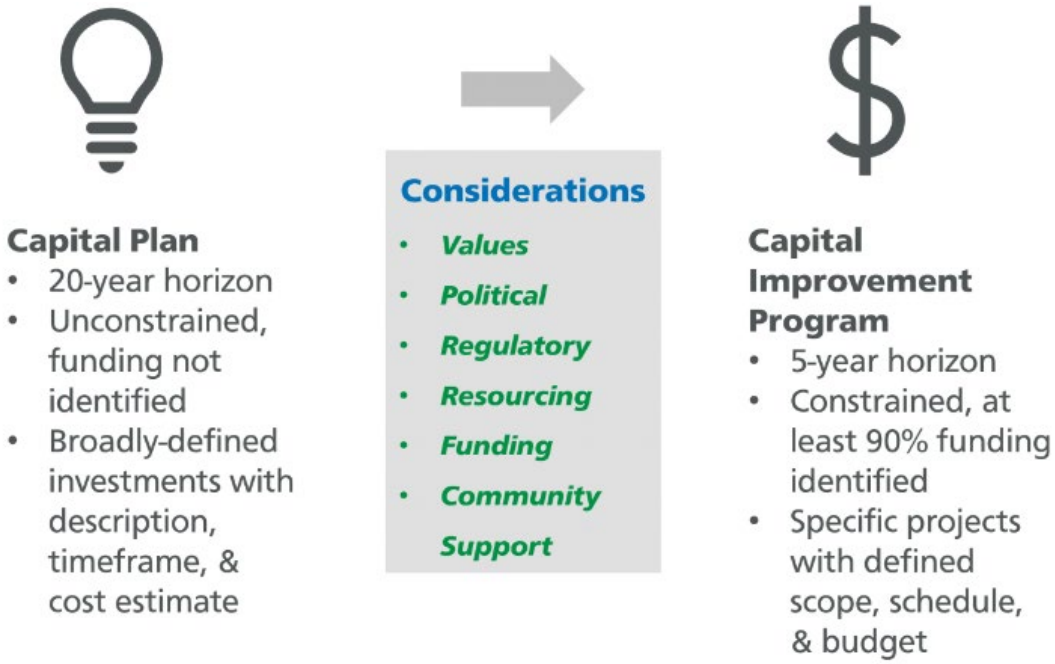
Once a capital improvements plan is approved, available funding is dedicated to projects for implementation. Many jurisdictions, however, do not keep track of what happens to unfunded projects not included in a capital improvements plan. Keeping track of those unfunded projects in a transparent manner can provide a pipeline of projects for consideration if/when funding is obtainable. It can also communicate to the public the gap between capital needs and funding available.[20] Also, keeping track of these projects separately and transparently can be an alternative to shifting planned expenditures for County projects into the out-years (beyond the first two years) or the "Beyond 6 Years" column. This section describes processes used by the San Francisco Municipal Transportation Agency (SFMTA) and New Jersey Transit.

The SFMTA's 20-Year Unconstrained Capital Plan[21] is an example of a fiscally unrestricted capital plan that is updated every two years. The plan is a foundation of unfunded projects that SFMTA draws from to create its five-year capital budget.
SFMTA creates the plan by first identifying long-range goals it wants to achieve, such as Vision Zero or Zero Emissions. Then problems/needs and the ideas to solve them are identified through observed data, responses to legislation and regulations, requests from elected officials, and community

[18] Ibid.
[19] "Prioritizing Community Values in Capital Budgeting…"
[20] "Best Practices for CIP Development and Promoting Healthy Communities," by the Baltimore Metropolitan Council, 2021, Executive Summary, page 8.
[21] https://www.sfmta.com/reports/2023-20-year-unconstrained-capital-plan

members and organizations. These ideas are then turned into plans, studies, and strategies and then refined into capital needs for the 20-Year Unconstrained Capital Plan. Finally, projects are identified from the plan for the five-year capital improvements plan using the following considerations: value, political, regulatory, resourcing, funding, and community support.[22] Once a project makes its way into the five-year capital budget, it is removed from the plan.[23]

Figure 4.5 San Francisco Municipal Transportation Agency
20-Year Capital Plan to 5-Year Capital Improvements Plan Project Flow



Source: SFMTA's 20-Year Unconstrained Capital Plan Website

New Jersey Transit follows the practice of including unfunded projects with the funded capital improvements plan. As part of its capital improvements plan, New Jersey Transit includes an unconstrained financial summary (with other tables showing the exact projects), as shown in the next graphic.

[22] https://www.sfmta.com/sites/default/files/reports-and-documents/2023/11/sfmta_2023_unconstrained_capital_plan.pdf , page 8.
[23] https://www.sfmta.com/projects/20-year-unconstrained-capital-plan

Appendix A Table 1: Capital Plan Financial Summary (Update)

($ in Millions)

CAPITAL PLAN FY2021-2025	FY2021	FY2022	FY2023	FY2024	FY2025	5 YEAR TOTAL
Major Projects and Programs *Table 2*	314.48	711.77	1,048.08	1,907.25	1,644.61	5,626.19
Other Ongoing NJ TRANSIT Projects and Programs *Table 3*	975.29	848.31	1,183.66	1,028.37	1,169.21	5,204.84
TOTAL EXISTING FUNDING	1,289.77	1,560.08	2,231.74	2,935.62	2,813.82	10,831.03

Unfunded Projects and Programs	FY2021	FY2022	FY2023	FY2024	FY2025	5 YEAR TOTAL
Major Projects and Programs *Table 2*	-	-	273.60	690.62	903.57	1,867.80
Other Rehabilitation Projects and Programs *Table 4*	-	-	239.03	188.78	156.28	584.08
TOTAL FUNDING NEED			512.63	879.40	1,059.85	2,451.87

TOTAL CAPITAL PLAN	1,289.77	1,560.08	2,744.37	3,815.02	3,873.66	13,282.90

Source: 2022 NJ Transit Capital Plan Updated Financial Sheets (Unconstrained)

These unfunded projects and programs are viewed more as aspirational for the next capital improvements program.[24]

D. Utilizing Digital Tools

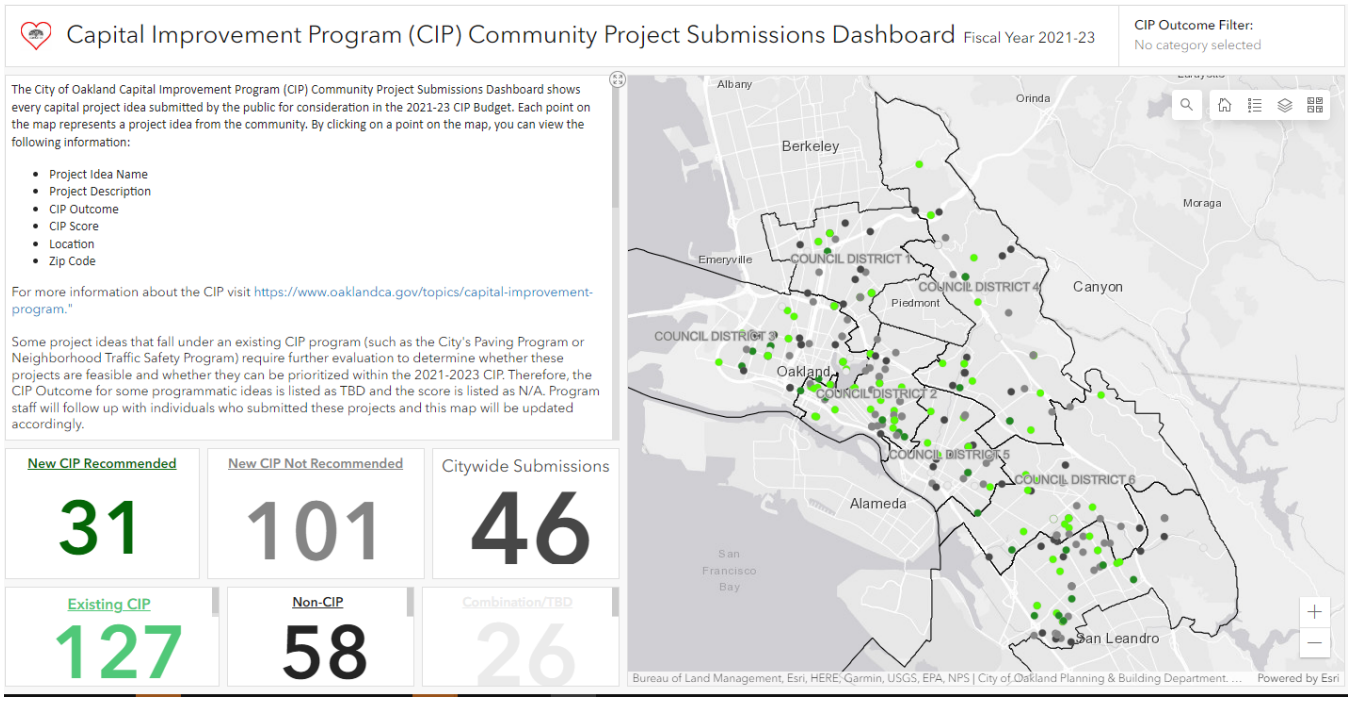
Utilizing digital tools available can help constituents engage/understand detailed budget documents/confusing processes and help stakeholders make decisions from project creation to project completion. While the County has utilized numerous digital capabilities for the capital budget presentation, project statuses, and providing an outlet for public input, there are also other digital tools available to help the capital budget process.

In addition to the outreach by the City of Oakland to engage the public (see page 73), residents are encouraged to submit ideas through an online portal and those submissions are tracked[25] and used by the city. These requests are individually responded to, go to the corresponding department, and they are considered alongside or integrated into a department proposal.

[24] "Best Practices for CIP Development and Promoting Healthy Communities," by the Baltimore Metropolitan Council, 2021, page 9.

[25] https://oakgis.maps.arcgis.com/apps/dashboards/d2807f24a1194848b531b0b3a98ab53a

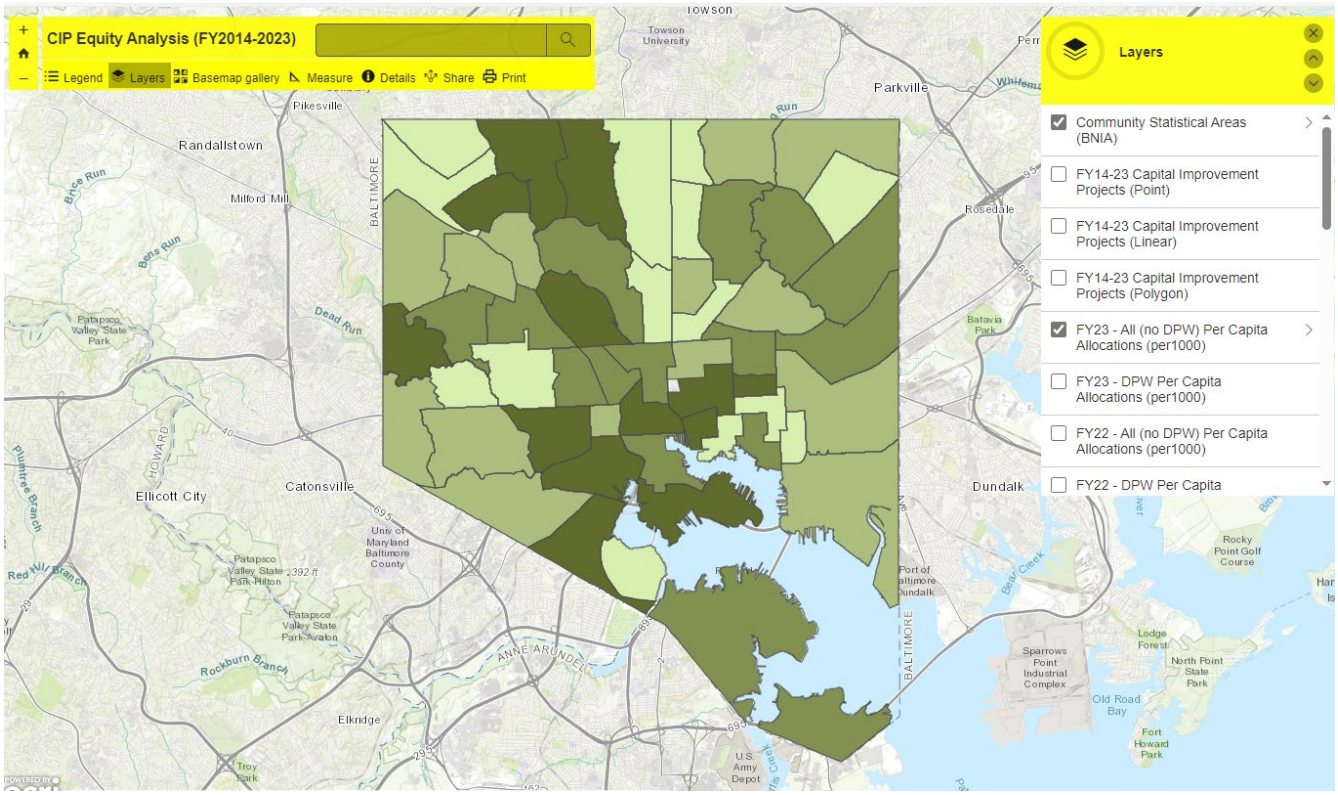
Figure 4.6 City of Oakland's Community Project Submissions Dashboard



Similarly, the City of Baltimore uses ArcGIS to provide the public an interactive map showing the results of its CIP distribution analysis (see page 73) above for more details on this analysis). Using this map, residents may view:

- Per-capita CIP allocations for BDPW and non-BDPW projects by Community Statistical Area (CSA); and
- Specific projects and the total CIP allocation associated with each project.

Figure 4.7 Baltimore Department of Planning CIP Distribution Analysis Interactive Map



[CIP Equity Analysis (FY2014-2023) (arcgis.com)]

Chapter 5. Findings and Discussion Items

Capital projects fund major improvements to facilities and infrastructure in Montgomery County. The Capital Improvements Program (CIP) is the comprehensive presentation of capital project expenditure estimates, funding requirements, capital budget requests, and program data for the construction of all public buildings, roads, and other facilities planned by County agencies over a six-year period. Capital projects are broken down by five "cost elements," – 1) planning, design, and supervision; 2) land; 3) site improvements and utilities; 4) construction; and 5) other.

The Council asked the Office of Legislative Oversight (OLO) to undertake this report to describe the processes, costs, and timing associated with the planning, design and supervision cost element in County Government CIP projects including facility planning projects. As the data in the report show, expenditures on transportation projects and general government projects make up the two largest categories of expenditures in the County Government's capital budget. Accordingly, much of the data and information in the report focuses on the two departments that administer the bulk of these projects – the Department of Transportation's (DOT) and Department of General Services' (DGS).

This chapter summarizes the major findings from this report and presents discussion items developed by the Office of Legislative Oversight (OLO) for Council consideration. This chapter includes two sections:

A. Major Report Findings; and
B. OLO Discussion Items for Council Consideration.

A. Major Report Findings

Chapter 1: County Capital Improvements Program and Planning, Design, & Supervision Overview

Finding #1. The capital budget is the County's annual appropriation to fund major improvements to facilities and infrastructure by the County Government and other County agencies. The Capital Improvements Program (CIP) is a six-year plan that identifies individual projects and presents cost estimates, funding sources, and program data for the construction of public infrastructure and facilities.

The process for adopting the capital budget and the CIP frequently begins with studies to evaluate the cost and feasibility of potential infrastructure and facilities projects. When a department gets to the point where it wants to include a specific project in the CIP, potential projects are submitted to the

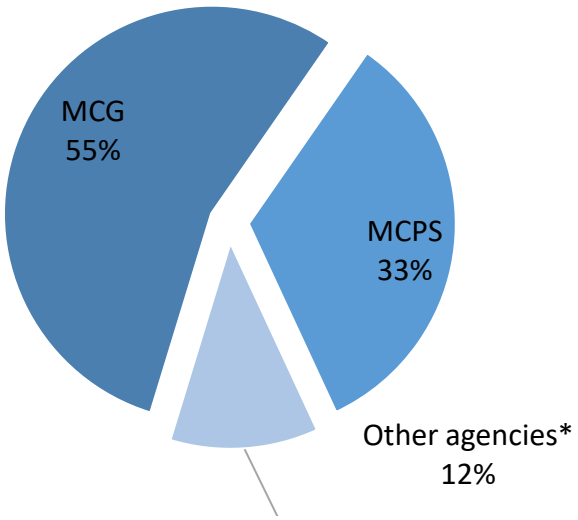
Office of Management and Budget (OMB) for evaluation based on need, readiness, and affordability. In addition, starting with the FY23 CIP cycle, departments must work with the Office of Racial Equity and Social Justice (ORESJ), utilizing the Capital Budget Equity Tool, to consider the impacts of selected projects on racial disparities and inequities in the County. ORESJ also evaluates and identifies projects with the most potential to reduce racial disparities and inequities in the County.

Following the OMB and ORESJ analyses, the County Executive reviews the proposed capital projects and on or before January 15 of even-numbered calendar years, the County Executive transmits to the County Council a recommended comprehensive CIP for the upcoming six fiscal years. The Council holds public hearings and conducts worksessions on the recommended CIP and on or before June 1 of even-numbered calendar years, the Council approves a comprehensive six-year CIP, which it can amend at any time. In practice, the Executive submits and the Council approves an amended six-year CIP in odd-numbered calendar years.

Finding #2. The FY24 Approved Capital Budget and FY23-FY28 Capital Improvements Program included $5.7 billion in budgeted expenditures for FY23-F28 (six years). Of that amount, 55% or $3.1 billion is for 268 capital projects administered by Montgomery County Government (MCG).

The FY24 Approved Capital Budget and FY23-FY28 CIP included $5.7 billion in budgeted expenditures for FY23-F28 (six years). Of that amount, 55% or $3.1 billion is for projects administered by Montgomery County Government (MCG), 33% is for projects administered by Montgomery County Public Schools (MCPS) and the remaining 12% is for projects administered by other County agencies.

FY23-28 Six-Year CIP Budgeted Expenditures by Agency



* "Other agencies" refers to Montgomery College, the Maryland-National Capital Park and Planning Commission, the Montgomery County Revenue Authority, and the Housing Opportunities Commission of Montgomery County.

Finding #3. For budgeted CIP expenditures with geographic information available for the last six approved CIPs, Council District 4 accounted for the largest percentage of budgeted expenditures, on average, compared to the other Council districts. Districts 2, 5 and 7 accounted for the lowest percentages of budgeted expenditures.

The following table displays six-year budgeted CIP expenditures for the past six CIPs by the Council District in which the project was located (based on the new district boundaries established for the 2022 election cycle). Note that in each year, the majority of budgeted expenditures were associated with projects that do not have geographic information associated with them, often because they include improvements across multiple locations.

The data in the table show that the geographic distribution of budgeted CIP expenditures varied by CIP year. On average, District 4 accounted for the larger percentage of budgeted CIP expenditures and Districts 2, 5 and 7 accounted for the lowest.

Percentage of Six-Year Budgeted CIP Expenditures for MCG by CIP Year and Council District Where Projects are Located ($ millions)

Council District (2022)	Where	FY19 CIP	FY20 CIP	FY21 CIP	FY22 CIP	FY23 CIP	FY24 CIP	Average
Total		**$2,170**	**$2,089**	**$2,056**	**$2,147**	**$2,859**	**$3,134**	
1	Bethesda, Potomac, Chevy Ch.	9%	9%	4%	5%	4%	4%	6%
2	Clarksburg, Germantwn, Poolesv.	2%	2%	4%	3%	4%	4%	3%
3	Rockville/Gaithersburg	5%	6%	5%	6%	6%	7%	6%
4	Takoma Pk, Silver Spr., N. Beth.	10%	12%	12%	12%	7%	6%	10%
5	White Oak/Burtonsville	5%	5%	3%	3%	3%	2%	3%
6	Wheaton, Glenmont	11%	7%	2%	3%	3%	3%	5%
7	Olney, Redland, Damascus	3%	3%	4%	3%	3%	3%	3%
	No geographic information	56%	57%	65%	64%	70%	72%	65%

Finding #4. In the CIPs from FY19 to FY24, Planning, Design and Supervision costs accounted for 16% of budgeted expenditures on average.

As stated above, this report describes the processes, costs, and timing associated with planning, design and supervision (PDS) in County Government CIP projects including facility planning projects. The data in the next table show six-year budgeted CIP expenditures by "cost element" – the five primary spending categories in each CIP project. The data show on average, the PDS cost element. Construction accounted for the largest share of budgeted expenditures (55%).

Six-Year Budgeted CIP Expenditures for MCG by CIP Year and Cost Element

Cost element	FY19 CIP	FY20 CIP	FY21 CIP	FY22 CIP	FY23 CIP	FY24 CIP	Average
Total ($ Millions)	**$2,170**	**$2,089**	**$2,056**	**$2,147**	**$2,859**	**$3,134**	
Construction	58%	56%	56%	55%	54%	53%	55%
Planning, Design and Supervision	14%	14%	18%	18%	15%	15%	16%
Other	15%	16%	12%	12%	13%	15%	14%
Site Improvements and Utilities	7%	8%	6%	6%	5%	6%	6%
Land	6%	6%	8%	8%	12%	11%	9%

Finding #5. Within MCG, the Department of Transportation (DOT) administered 59% of planned expenditures in the FY24 Approved Capital Budget and the 23-28 CIP, the Department of General Services (DGS) administered 22%, and all other departments administered the remaining 19%.

For this project, OLO focused on DOT- and DGS-administered projects because they have the most impact on the CIP and the departments have consistent processes throughout the lifespan of their projects, while other departments' capital projects occur infrequently, with much less uniformity.

Finding #6. DGS and DOT have somewhat similar project lifecycles for capital improvement projects. The departments' processes differ in that DOT consults with the Council in the middle of the facility planning process, while DGS-administered facility planning studies receive Council feedback only after facility planning is completed.

During their facility planning processes, DOT and DGS study the need for specific projects, define project scopes, and create cost and schedule estimates. The Executive determines which project studies to include in the facility planning process in consultation with relevant government agencies, and the Council may approve, modify or disapprove the list of projects. Elected officials use the information gathered through the facility planning process to determine whether to fund specific

improvements as standalone projects in the CIP. Most of the costs associated with facility planning fall within the planning, design and supervision cost element of the CIP.

If a project is approved as a standalone project, the departments proceed to final design and construction. A key difference between DOT and DGS processes is that DOT divides facility planning into two phases. When a facility planning study reaches the end of Phase I, the Council's Transportation & Environment Committee holds a worksession to receive a briefing on the study and provide feedback and guidance to DOT regarding the next phase of facility planning.

DOT Project Lifecycle

DGS Project Lifecycle

Finding #7. Planning, Design, and Supervision costs occur throughout the lifecycles of both DOT- and DGS-administered projects.

PDS costs include a variety of different tasks that occur from facility planning to project completion. The following table summarizes the tasks that fall under the PDS cost element for DOT and DGS projects in each phase.

PDS Tasks by Project Phase

Project Phase	DOT	DGS
Facility Planning	• *Data collection* • *Public input* • *Concept plans* • *Project prospectus* • *Decision to proceed to Phase II with Council input* • *35% design plans* • *Cost estimate* • *Project schedule*	• *Feasibility study* • *Public input* • *Program of Requirements creation & cost estimate* • *Other services as needed*
Project Approval & Site Selection	• *OMB analysis, County Executive recommendation, & County Council approval*	• *OMB analysis, County Executive recommendation, & County Council approval*
Final Design	• *Complete project plans* • *Permits*	• *Design components - conceptual planning, schematic design, design development, and construction document* • *Permits* • *Bid* • *Other services as needed*
Construction & Post-Construction	• *Contractor procurement* • *Supervision of construction* • *Final inspection*	• *Construction management* • *Post construction*

Finding #8. Four departments administer 95% of non-DOT- and non-DGS- administered projects: the Department of Environmental Protection, the Department of Technology Enterprise Business Solutions, Housing and Community Affairs, and Montgomery County Fire and Rescue Service.

The administrating departments, their active projects, and process notes for the largest group of non-DOT- and DGS-administered projects are below.

Other County Departments' Capital Processes

Administering Department	Project	Process Notes
Department of Environmental Protection	*Full Upgrade of Existing Recycling Center Complex*	Upgrade equipment at the Material Recycling Center.
	Gude Landfill Remediation	Specialized remediation at the Gude Landfill.
	Facility Planning: Stormwater Management	Differs from DOT and DGS - does not list facility planning projects and is solely dedicated to support the requirements for the County's Municipal Separate Storm Sewer System permit.
	Flood Control Study	Study to create the Comprehensive Flood Management Plan.
	Stormwater Management Facility Major Structural Repair	Closely resembles DOT and DGS projects. Substantial use of contractors, requiring engineering and architectural services, along with construction.
	Stormwater Management Retrofit: Countywide	Closely resembles DOT and DGS projects. Substantial use of contractors, requiring engineering and architectural services, along with construction.
	Wheaton Regional Dam Flooding Mitigation	Smaller-sized project that also resembles DOT and DGS projects and will be constructed in parallel with DOT's Dennis Avenue Bridge Replacement.
Department of Technology and Enterprise Business Solutions	*Business Continuity Phase II*	TEBS capital projects are administered by operating TEBS personnel (27) and contractor personnel (14). The level of involvement varies, but most of the resources are towards Fibernet and Business Continuity Phase II (19 TEBS staff; 6 contractor staff).
	County Radio Life Cycle Replacement	
	Digital Equity - Montgomery Connects	
	FiberNet	
	IJIS - Correction and Rehabilitation Information Management System (CRIMS) Upgrade	
Housing and Community Affairs	*Affordable Housing Acquisition and Preservation*	Used as funding vehicles to acquire and renovate properties to preserve the County's affordable housing inventory.
	Affordable Housing Opportunity Fund	

Administering Department	Project	Process Notes
	Preservation of Naturally Occurring Affordable Housing Fund	
Montgomery County Fire and Rescue Service	*Apparatus Replacement Program*	Replacement of fire apparatus, vehicles, and heart monitor/defibrillators, based on a schedule.
	Heart Monitor/Defibrillator Replacement	

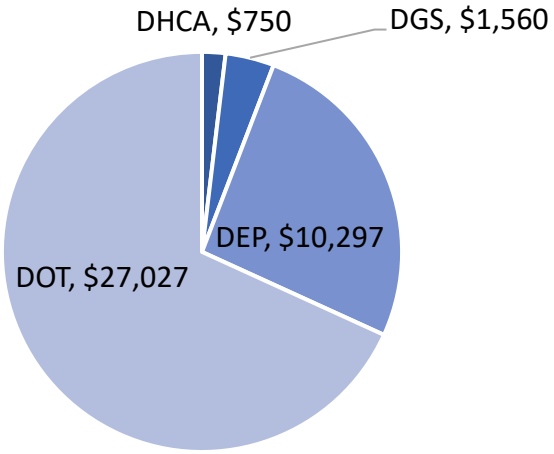
Chapter 2: Facility Planning Projects

Finding #9. Combined six-year budgeted expenditures for the County Government's eleven facility planning projects increased from $23 million in the FY15 CIP to $40 million in the FY24 CIP, or by 76%.

Many individual CIP projects begin in facility planning, a small group of CIP projects each focused on a specific category of infrastructure (e.g., stormwater management, parking, roads). Facility planning *projects* fund facility planning *studies* that evaluate the cost and feasibility of individual infrastructure projects with the goal of determining whether a project should become a standalone project.

Four County departments administer the 11 facility planning projects: DOT administers eight, and DGS, DEP, and DHCA each administer one. Each facility planning project in the CIP funds a specific category of facility planning studies. The chart below displays the six-year total budgeted expenditures for the 11 facility planning projects by department for FY23-28. For FY23-28, all budgeted costs for MCG facility planning projects were categorized under the planning, design, and supervision cost element.

FY23-28 Budgeted Expenditures for Facility Planning Projects ($000s)



Finding #10. The eight DOT-administered facility planning projects accounted for $27 million in the FY24 CIP's six-year budgeted expenditures.

The table below summarizes facility planning projects administered by DOT in the FY24 Capital Budget and FY23-28 CIP. It also shows the percentage increase in six-year funding between FY15 and FY24.

DOT Facility Planning Projects, FY24 Six-Year Budgeted Expenditures ($000s)

Facility Planning Category/Project	FY24 CIP Six-Year Total ($000s)	10-Year Change	Description
Transportation	**$12,250**	**+57%**	Planning and preliminary engineering design for new and reconstructed highway, pedestrian facility and bikeway, and mass transit projects under consideration for inclusion in the CIP.
Pedestrian and Bikeways	$5,715	*	
Roads	$5,060	*	
Mass Transit	$1,475	*	
Bus Rapid Transit (BRT)	**$10,000**	**+900%**	Initial steps, supporting studies and programmatic efforts for Bus Rapid Transit (BRT) Corridors.
Bus Rapid Transit	$10,000	+900%	
Parking Lot Districts	**$1,897**	**+41%**	Studies of public and private parking supply and demand in order to ensure an adequate amount of parking in the parking lot districts, and development of a Parking Facility Project Requirement (PFPR) that outlines general and specific features required for the project.
Bethesda	$630	+17%	
Silver Spring	$789	+46%	
Wheaton	$478	+77%	
Storm Drainage	**$2,880**	**+73%**	Preliminary and final design and land acquisition for storm drain projects.
Storm Drains	$2,880	+73%	
Total	**$27,027**	**+230%**	

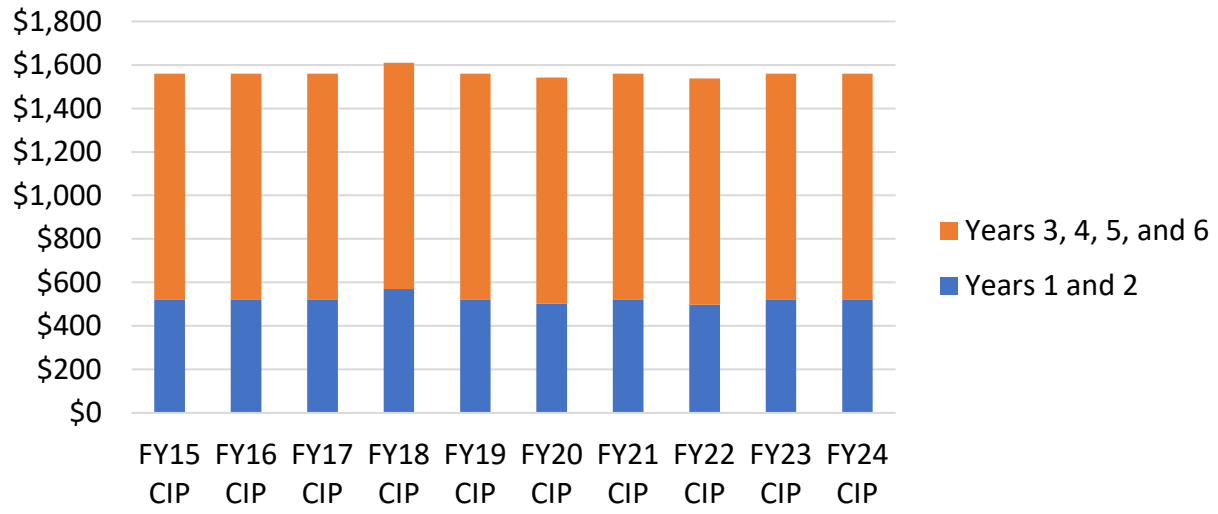
* Prior to FY23, all facility planning studies related to roads, pedestrian facilities, bikeways, or mass transit were funded by the same facility planning project in the CIP.

Finding #11. Six-year budgeted expenditures for the one DGS-administered facility planning project have remained flat over 10 CIP years at about $1.6 million.

Prior to the establishment of a stand-alone project for a County facility, DGS (using in-house staff and/or contractors) develops a Program of Requirements (POR) that outlines the structural and

functional requirements of the proposed facility and estimates design and construction costs. The costs associated with these facility planning tasks are included in the *Facility Planning: MCG* project in the CIP. The chart below displays budgeted six-year expenditures for the *Facility Planning: MCG* project for the CIPs from FY15-FY24.

Facility Planning - MCG: FY15-Y24 Budgeted Six-Year Expenditures ($000s)



Finding #12. Of the 100 studies included in DOT and DGS's facility planning projects between FY15 and FY24, 30 became standalone projects, 28 ended without becoming standalone projects, and the remaining 42 are currently underway or have not started. The total lifecycle of projects from facility planning to completion was 4-21 years.

The Project Description Forms (PDFs) for the facility planning CIP projects for pedestrian facilities and bikeways, roads, mass transit, and County facilities administered by DOT and DGS list studies for specific improvements that are either candidates for facility planning or for which facility planning is underway. The next table summarizes the status of these facility planning studies. Of note, seven out of the 30 standalone projects derived from facility planning studies were initially approved by the Council with only PDS costs included and no placeholder for construction or other costs. Four of these projects have shown significant cost increases since they were created. Department staff report that this practice hinders the County's ability to effectively plan for the future.

DOT has recognized that the 7–21-year timeframe for project completion may be unreasonable for some projects and that the investment in facility planning may either be unnecessary or inefficient for certain projects. The Transportation Feasibilities Study PDF was established to expedite assessment of project needs to determine if they can be implemented more quickly through level-of-effort projects, can advance more quickly as stand-alone projects, or require the detailed planning and evaluation provided by the Facility Planning process.

Transportation Infrastructure (DOT) and County Facility (DGS) Studies, FY15-FY24

Studies in the FY15-FY24 PDFs	DOT	DGS	Total
Total number of studies	**64**	**36**	**100**
Studies ended without becoming standalone projects	10	18	**28**
Studies currently underway or candidate studies	23	7	**30**
Previous candidate studies (not started)*	12	NA	**12**
Studies that became standalone projects	19	11	**30**
Studies that became standalone projects	***19***	***11***	***30***
Standalone projects delayed at least one year	*7*	*5*	***12***
Standalone projects with cost increases	*10*	*8*	***18***
Standalone projects initially funded only with PDS	*5*	*2*	***7***
Years from facility planning to actual/planned completion	**7-21 yrs**	**4-16 yrs**	**4-21 yrs**

* DOT distinguishes between studies that are started/underway and candidate studies, and DGS does not distinguish between these.

Finding #13. The County currently uses the Capital Budget Equity Tool (CBET) to identify projects with the most potential to reduce racial disparities and inequities. Data limitations have, thus far, prevented use of this tool in facility planning projects.

Facility planning is a key stage of project development when departments conduct planning and develop project scopes. It is easiest to incorporate changes to projects to respond to community needs during the facility planning stage. Both DOT and DGS solicit public input during the facility planning process. DOT staff report that they identify community needs, such as language needs, and develop plans to meet those needs in consultation with the Office of Racial Equity and Social Justice (ORESJ). Recent examples of innovative public engagement efforts by DOT include pop up events at grocery stores and online interactive maps where the public can submit comments.[1]

Starting with the FY23 CIP cycle, departments must work with the ORESJ and OMB to implement the Capital Budget Equity Tool (CBET). ORESJ works with OMB to select CIP projects for which departments must implement the CBET, based on which projects are most likely to have racial equity and social justice impacts.

ORESJ staff report they have not yet been able to implement the CBET for facility planning projects due to a lack of sufficient information about the studies of specific improvements the departments

[1] See this interactive online map with comment function (Tuckerman Lane Sidewalk/Bikeway)

complete during facility planning. Unfortunately, this prevents ORESJ from assessing racial equity during facility planning on a systematic basis.

Chapter 3: Planning, Design, and Supervision Costs

Finding #14. DOT and DGS charge personnel costs for staff who work on CIP projects to individual projects across numerous funding sources. At times, this process can be complex to ensure that a stable number of staff are funded across changing projects and funding.

To ensure they have enough funding to cover staff costs, DOT and DGS create formulas to distribute the costs across current projects. The issue for the two departments is that while staff (project managers) remain constant, the projects change from year-to-year – especially the projects' expenditures and associated funding. This requires constant adjustments to staff charges across projects as the departments look for project funding capacity for staff. This practice may lead to inaccurate project costs (i.e., multiple project manager charges against projects that have capacity – even if a project manager is not directly related to the project).

An alternative to the staff costs' allocation is how they are charged for Montgomery County Public Schools' (MCPS) Department of Facilities Management and the Division of Construction. MCPS places all of their staff expenditures in a dedicated project, "Design and Construction Management," funded at $4.9M per year using General Obligation bonds.

Finding #15. Planning, design, and supervision (PDS) expenditures examined for DOT- and DGS-administered projects from FY16-23, including a separate analysis for facility planning projects, revealed information on PDS components, staff vs. contractor costs, types of contract services and top vendors used.

	DOT-Administered Projects	DGS-Administered Projects
Percentage of PDS among cost elements	21%	17%
Within PDS, the largest component among Planning, Design, and Construction Management (Supervision)	Design, at $23.0M or 68% of all PDS components per year.	Design, at $5.3M or 49% of all PDS components per year.
Contract Services vs. Department Staff within PDS	Contract services accounted for 62% of all PDS costs, followed by DOT staff (31%) and all other remaining operating expenses (7%).	DGS staff accounted for 49% of all PDS costs, followed by contract services (47%), and all other remaining operating expenses (4%).
Types of contract services primarily used	Engineering and architectural services	Building design

	DOT-Administered Projects	DGS-Administered Projects
Top vendors or entities used for contract services	Rummel, Klepper, & Kahl; Stantec Consulting Services; SC/BA, Wheaton Office; and Gannett Fleming & Greenman-Pederson, a Joint Venture	Housing Opportunities Commission; Gale Associates; Hughes Group Architects; EDG2; and Grimm and Parker, BKV.
Minority, Female, and Disabled Businesses used for PDS	Three Minority, Female, and Disabled Businesses (MFD). These vendors represented 8% of the top vendors used (those with expenditures over $705K). Among the 37 top vendors used, 21 had MFD subcontractor participation (57%).	Four Minority, Female, and Disabled Businesses (MFD). These vendors represented 17% of the top vendors used (those with expenditures over $500K). Among the 24 top vendors used, 16 had MFD subcontractor participation (67%).
Facility Planning Projects - PDS component percentages	Within DOT's facility planning projects (excluding bridges), planning averaged $2.5M (53%) per year, followed by design at $2.2M (46%), and construction management at $37.8K (1%).	Within DGS's one facility planning project, planning averaged $157.6K (82%) per year, followed by construction management at $17.6K (9%), and design at $16.8K (9%).
Facility Planning Projects - Contract Services vs. Department Staff within PDS	Contract services accounted for 77% of all PDS costs, followed by DOT staff (21%), and all other remaining operating expenses (1%).	Contract services accounted for 51% of all PDS costs, followed by DGS staff (45%), and all other remaining operating expenses (4%).

Chapter 4: Innovative Capital Processes

Finding #16. In addition to the County's Capital Budget Tool (implemented by the Office of Racial Equity and Social Justice), other jurisdictions use additional methods for including/rating equity. Two examples are the Baltimore Department of Public Works' (BDPW) Project Selection Tool and the Baltimore Department of Planning's (BDP) CIP Distribution Analysis.

The BDPW has a distinctive "quadruple bottom approach" to apply an equity *and* performance lens to four categories: environmental, social, economic, and project implementation. Projects are first rated through 17 criteria within the four categories that they evaluated through three lenses:

Lens	Description and How it is Scored
Impact	• Intended to communicate the overall performance impact across the four performance areas. • Measured through a set of criteria under each category and based on responses to a project questionnaire, data, and attributes associated with the project. • Considers the direct area and population of a project but does not analyze specific disadvantaged populations.
Equity	• Intended to evaluate the equity dimensions of each of the impact lens criterion and measure two questions with an emphasis on minority, disadvantaged, and vulnerable population groups: 1. *Who benefits from the project?* 2. *Does the project satisfy the project area's special needs?*
Combined Impact & Equity	• Combines the numeric values from the impact and equity lens criterion to create a hybrid measuring the overall performance for both.

With the results from the three lens evaluation, projects can be analyzed and a decision could be made if a project needs to be redesigned to meet higher impact or equity outcomes.

The Baltimore Department of Planning's CIP Distribution Analysis examines the full proposed CIP *after* it has been completed. BDP calculates the following metrics:

- **The percentage of dollars mapped by agency** – many projects do not have geographic information available and cannot be mapped because they fund urgent needs or other needs that do not have specific locations planned at the time the budget is proposed or passed;
- **Per capita investment by Community Statistical Area (CSA)** – BDP uses Geographical Information Systems (GIS) technology to map projects in order to determine which CSA(s) their budgeted dollars are associated, and does separate analyses for BDPW projects and for all other projects;[2]
- **Investments by race and income** – BDP calculates the percentages of BDPW and non-BDPW budgeted expenditures within CSAs with specified percentage ranges of Black or African American residents and median household income levels.

[2] BDPW, which manages water, wastewater and stormwater utility projects, is responsible for the largest and most expensive CIP projects; non-BDPW projects including transportation infrastructure, housing, city facilities, and community development projects.

Finding #17. Including communities who have been historically excluded or underserved in the project planning phase can help make the process more equitable and inclusive.

The City of Philadelphia created a "Participatory Budgeting" approach to broaden participation from historically marginalized communities, create more equitable and effective spending, and create stronger relationships. In this approach, community members brainstorm ideas, develop proposals (with city assistance), and vote on how to spend $1 million on capital projects. The successful projects are funded and implemented.

Every two years, the City of Oakland, California makes it a point to reach out to communities who were unrepresented in previous capital budget outreach. Before departments submit projects, the city engages in the following efforts:

- Hosts targeted meetings intentionally in districts with higher BIPOC proportions, families with low-incomes, and speakers who are non-English.
- A considerable number of community centers, nonprofits, churches, and community-based organizations are contacted to share locations of the meeting or are asked if the city can present at one of the organization's meetings.
- The meeting organizers make it clear how feedback will be used and how the impacts of the feedback would be communicated back to the public.
- The public information distributed is translated into Spanish, Mandarin Chinese, and Vietnamese (reflecting the largest language groups in Oakland).

Finding #18. Creating a fiscally unrestricted capital plan can keep track of unfunded projects in a transparent manner and can illustrate the gap between capital needs and available funding.

A fiscally unrestricted capital plan is one where all long-term capital needs (investments with description, timeframe, and cost estimate) are identified first, regardless of funding. From those needs, projects can be funded in a shorter-term capital improvement plan and removed from the capital plan. Thus, a transparent list of needs remains in the capital plan and can be drawn from when funding is available. The San Francisco Municipal Transportation Agency and New Jersey Transit use versions of an unrestricted capital plan.

Finding #19. Using digital tools can help constituents engage/understand detailed budget documents/confusing processes and help stakeholders make decisions from project creation to project completion.

The City of Oakland, California, encourages residents to submit capital project ideas through an online portal that the city tracks. Requests are individually responded to, are recorded, and are considered alongside or integrated into capital proposals. Similarly, the City of Baltimore uses ArcGIS to provide the public an interactive map showing the results of its CIP distribution analysis. Residents can view specific projects, CIP allocations for individual projects, and per-capita CIP allocations.

B. Discussion Items for Council Consideration

These discussion items are aimed at improving the Capital Improvements Plan's processes, transparency, and inclusiveness.

Discussion Item # 1. Consider altering how personnel costs are charged across DOT- and DGS-administered projects.

Both DOT and DGS report that charging staff among projects is a complicated process, requiring the creation of formulas to apply staff costs across current projects. Relatively constant staff costs from year to year combined with project expenditures and funding that change from year to year necessitates constant adjustments to staff charges across projects and may lead to inaccurate project costs (i.e., project manager charges against projects that have capacity – even if a project manager is not directly related to the project). Department staff report that this process is very time-consuming.

An alternative the Council should consider it to put all staffing costs into one project (one for DOT and one for DGS) – with flexibility to charge staff costs directly to a standalone project, if needed (e.g., due to funding source requirements or limitations). This would delineate the personnel costs from the projects and be significantly easier to manage, allowing staff to focus their efforts elsewhere.

Discussion Item # 2. Discuss whether DGS should have a preliminary review of capital projects with the Council, similar to DOT.

OLO found that DGS and DOT project lifecycles differ in that DOT consults with the Council in the middle of the facility planning process, while DGS-administered facility planning studies receive Council feedback only after facility planning is completed. The Council may wish to discuss with Executive Branch representatives the potential benefits of earlier consultation for DGS-administered facility planning studies that are in progress.

Discussion Item # 3. Discuss whether to require that budgeted project expenditures in the CIP include estimates or placeholders for future construction costs, rather than funding some projects with planning, design, and supervision costs only and adding funding for construction at a later date.

In its review of facility planning studies that led to standalone projects, OLO identified five transportation and two MCG standalone projects with initial cost estimates that only included PDS costs and did not include estimates or placeholders for construction costs. As discussed in Chapter 2, the cost estimates for three of these projects have increased significantly since the projects were created. Executive Branch staff report that the practice of including only PDS costs for projects that will eventually require additional funding for construction and other cost elements limits the County's ability to effectively plan and budget for the future.

Discussion Item # 4. Discuss with Executive Branch staff whether innovative process changes could increase equity, transparency, and resident input in capital projects.

OLO examined numerous strategies used in other jurisdictions to help prioritize capital projects, to expand engagement with BIPOC community members, and to categorize projects based on considerations beyond funding. Pending resources and funding, the County could add multiple methods to increase equity, transparency, and resident input in capital projects. Examples from other jurisdictions include:

- Developing a comprehensive project selection tool to rate and prioritize projects that incorporates performance and equity components;
- Analyzing data for implemented projects to examine investments and project impacts by race, income, and geography to inform future project development and/or selection;
- Allowing community members to brainstorm potential capital projects, develop proposals, and then vote to allocate some amount of capital funding toward these projects;
- Expanded efforts to target outreach to underrepresented communities in the planning and design phases for capital projects;
- Creating a fiscally unrestricted capital plan that identifies all desired projects (including those that haven't become standalone projects) to understand the gap between capital needs and available funding; and
- Expanding use of digital tools to provide options for easier constituent participation in the capital budgeting and programing processes.

Chapter 6. Agency Comments

The Office of Legislative Oversight (OLO) shared the draft of this report with staff from Montgomery County Government. OLO appreciates the time taken by County Government staff to review the draft report and to provide technical feedback. This final report incorporates technical corrections and feedback received from County Government staff.

The written comments memorandum received from the Montgomery County Chief Administrative Officer is attached in its entirety on the following pages.

OFFICE OF THE COUNTY EXECUTIVE

Marc Elrich
County Executive

Richard S. Madaleno
Chief Administrative Officer

MEMORANDUM

February 21, 2024

TO: Chris Cihlar, Director
Office of Legislative Oversight

FROM: Richard S. Madaleno, Chief Administrative Officer

SUBJECT: Draft OLO Report 2024-5: Planning, Design, and Supervision in the MCG Capital Improvements Program

Thank you for the opportunity to comment on the Office of Legislative Oversight's (OLO) Draft Report 2024-5: Planning, Design, and Supervision in the MCG Capital Improvements Program.

We appreciate the comprehensive analysis performed by OLO staff. Every year Montgomery County government, schools and other agencies make considerable investment in the development of public buildings and transportation infrastructure. This is accomplished by dedicated staff who I also want to acknowledge and appreciate their input to help OLO produce this report.

The draft report includes the following discussion items.

Discussion Item #1: **Consider altering how personnel costs are charged across DOT- and DGS-administered projects.**

CAO Response: The County's policy of allocating personnel costs to individual projects represents best practice from an accounting and tax-exempt debt issuance perspective. Departments that charge salary costs to capital projects will need to be provided training on the importance of proper allocation of costs, and on actions to take in response to project budget capacity issues.

Discussion Item #2: **Consider whether the Department of General Services should have a preliminary review of capital projects with the Council, similar to the Department of Transportation.**

CAO Response: As part of the current process, the facility planning studies receive Council feedback before, during and after facility planning up to finalizing of the Program of Requirements (POR). Council reviews projects in the Facilities Planning CIP each year as part of the budget process. In accordance with regulations, and in conjunction with facility planning, site selection and other activities, Executive staff is required to complete an affordable housing feasibility study for each project and transmit the results of said study to Council. Council reviews the feasibility study which includes the scope of the project generally. Prior to the inclusion of a facility planning project as a standalone CIP project, Council reviews the scope of the project at that time as well. Approval of the POR is a process that considers public input, as well as that of the using department and OMB.

Discussion Item #3: **Should the Council ensure that budgeted project expenditures in the CIP include estimates or placeholders for construction costs that will be required, rather than funding some projects with PDS costs only and adding funding for construction at a later date?**

CAO Response: As demonstrated in the OLO analysis, it is the County's practice to include construction funding when creating a standalone project to ensure that capacity is held to implement the work. Over the ten-year period and 30 projects examined by this report, just seven were added without funding to support construction. Of those seven, one was added by the County Council and two are Bus Rapid Transit projects that require extensive planning, coordination, and compliance with federal grant funding requirements to implement.

However, placeholder allocations for construction often underestimate actual construction costs due to the time that elapses between when a project is added to the CIP and completion. As noted on page 35 of the report, OLO states that the "total span of MCG projects from the start of facility planning to the estimated completion ranged from four to 16 or more years." If a project schedule is uncertain PDS cost is the only estimate that can be reliably made.

In addition, it is difficult to provide reliable construction cost estimates early in project planning. As the report states, DOT develops a project cost estimate at 35% design under its Phase 2 of facility planning. DGS estimates are based on the completion of the POR under Facility Planning and are earlier in the process than DOT's 35% design. DGS develops initial estimates of cost based on past projects and industry analysis. For more reliable estimating, following the inclusion of placeholder funds, DGS could finish the design to 50% and establish an estimate for the construction that would be more accurate than estimates at the planning stage. This will require analysis by OMB and add time to the project schedule.

Discussion Item #4: **The County can consider innovative changes to increase equity and transparency.**

CAO Response: We agree with this recommendation.

We look forward to discussing these items at the Council work session.

RM/dd,ml

cc: Fariba Kassiri, Deputy Chief Administrative Officer, Office of the County Executive
Ken Hartman-Espada, Director of Strategic Partnerships, Office of the County Executive
Jennifer Bryant, Director, Office of Management and Budget
Christopher Conklin, Director, Department of Transportation
David Dise, Director, Department of General Services

Appendix A. CIP Projects by 2022 Council District

District 1

Council District	Project	Code	FY24 6-Year ($000s)	Total Project Cost as of FY24 ($000s)
1	**Total**		**$112,220**	**$541,961**
1	2nd District Police Station	P471200	$0	$5,884
1	Bethesda Bikeway and Pedestrian Facilities	P500119	$4,218	$12,448
1	Bethesda CBD Streetscape	P500102	$0	$416
1	Bethesda Lot 31 Parking Garage	P500932	$0	$54,145
1	Bethesda Metro Station South Entrance	P500929	$28,144	$118,602
1	Bethesda Transportation Infrastructure Development	P501802	$0	$200
1	Bradley Boulevard (MD 191) Improvements	P501733	$15,719	$16,465
1	Chevy Chase Library and Redevelopment	P712301	$674	$5,829
1	Elmhirst Parkway Bridge (Bridge No. M-0353)	P501420	$0	$2,141
1	Facility Planning Parking: Bethesda Parking Lot District	P501313	$630	$1,440
1	Facility Planning Parking: Bethesda PLD	P501313	$630	$1,080
1	Falls Road Bikeway and Pedestrian Facility	P500905	$3,259	$27,111
1	Farm Women's Market Parking Garage	P502316	$10,293	$10,293
1	Glen Echo Fire Station Renovation	P450702	$202	$202
1	Glen Road Bridge	P502102	$4,385	$4,585
1	Goldsboro Road Sidewalk and Bikeway	P501917	$2,396	$21,096
1	Greentree Road Sidewalk	P500506	$0	$3,856
1	MacArthur Blvd. Bikeway Improvements	P500718	$11,334	$21,208
1	Marriott International Headquarters and Hotel Project	P361703	$0	$22,000
1	MD355 Crossing (BRAC)	P501209	$0	$108,980
1	Montgomery Mall Transit Center	P500714	$0	$1,342
1	Parking: Bethesda Facility Renovations	P508255	$27,912	$50,525
1	Pennyfield Lock Road Bridge	P501624	$0	$1,110
1	Piney Meetinghouse Road Bridge	P501522	$0	$3,755
1	Potomac Adaptive Sports Court	P721403	$0	$250
1	Seven Locks Bikeway and Safety Improvements	P501303	$0	$26,760
1	Tuckerman Lane Sidewalk	P502302	$2,424	$16,635
1	Valley Road Bridge	P501521	$0	$1,140
1	Wapakoneta Road Improvements	P501101	$0	$2,463

District 2

Council District	Project	Code	FY24 6-Year ($000s)	Total Project Cost as of FY24 ($000s)
2	**Total**		**$108,587**	**$353,233**
2	Boyds Transit Center	P501915	$3,851	$5,650
2	Century Boulevard	P501115	$0	$12,061
2	Clarksburg Fire Station	P450300	$15,830	$34,564
2	Clarksburg Library	P710500	$15,363	$15,363
2	Clarksburg Transportation Connections	P501315	$0	$10,600
2	Dickerson Radio Tower	P342302	$0	$2,000
2	Dorsey Mill Road Bridge	P501906	$625	$34,020
2	Father Hurley Blvd. Extended	P500516	$0	$20,053
2	Frederick Road Bike Path	P501118	$0	$7,402
2	MD355 Sidewalk (Hyattstown)	P501104	$0	$2,180
2	MD355-Clarksburg Shared Use Path	P501744	$5,300	$6,464
2	Montgomery County Correctional Facility Refresh	P422302	$4,000	$4,000
2	Montgomery County Correctional Facility Sewer	P422303	$500	$500
2	Mouth of Monocacy Road Bridge	P502103	$3,160	$3,160
2	North County Maintenance Depot	P500522	$0	$15,995
2	North Potomac Community Recreation Center	P720102	$0	$35,012
2	Observation Drive Extended	P501507	$59,958	$115,593
2	Outdoor Firearms Training Center	P470701	$0	$5,641
2	Stringtown Road	P501208	$0	$8,000
2	Stringtown Road Extended	P500403	$0	$8,810
2	Western County Outdoor Pool Renovation and Modernization	P721501	$0	$3,680
2	Whites Ferry Road Bridges No.M-0187B and M-0189B	P501301	$0	$2,485

District 3

Council District	Project	Code	FY24 6-Year ($000s)	Total Project Cost as of FY24 ($000s)
3	**Total**		**$211,744**	**$748,901**
3	260 East Jefferson Street Acquisition	P362201	$0	$3,600
3	6th District Police Station	P470301	$35,072	$37,848
3	Appellate Court Judges Chambers	P362202	$879	$909
3	Avery Road Treatment Center	P601502	$0	$10,016
3	Council Office Building Garage Renovation	P011601	$0	$6,749
3	Council Office Building Renovations	P010100	$3,153	$49,744
3	County Service Park Infrastructure Improvements	P501317	$0	$1,489
3	Criminal Justice Complex	P421100	$62,392	$78,661
3	DLC Liquor Warehouse	P850900	$0	$53,119
3	East Gude Drive Roadway Improvements	P501309	$0	$6,027
3	EOB & Judicial Center Traffic Circle Repair	P361200	$0	$5,024
3	EOB HVAC Renovation	P361103	$3,972	$4,372
3	Falls Road East Side Hiker/Biker Path	P500905	$3,259	$24,830
3	Fire/Rescue Maintenance Depot Equipment (Southlawn)	P450801	$0	$2,700
3	Full Upgrade of Existing Recycling Center Complex	P802201	$15,730	$27,630
3	Great Seneca Science Corridor Transit Improvements	P502202	$23,170	$25,945
3	Judicial Center Annex	P100300	$0	$140,628
3	Life Sciences Center Loop Trail	P501742	$11,471	$12,901
3	Lincoln HS	P362302	$1,500	$1,500
3	Maryland/Dawson Road Extended	P501405	$0	$2,760
3	Detention Center Partial Demolition and Renovation	P422102	$1,014	$3,791
3	Montgomery County Radio Shop Relocation	P360902	$0	$61
3	PSTA Academic Building Complex	P479909	$0	$5,344
3	Public Safety Communications Center	P471802	$0	$17,559
3	PS Comms Ctr, Phase II, Electrical Distribution & HVAC Upgrade	P472102	$20,240	$20,735
3	Public Safety Headquarters	P470906	$0	$109,156
3	Red Brick Courthouse Structural Repairs	P500727	$10,023	$10,613
3	Restoration Center	P602301	$18,688	$18,688
3	Rockville Core	P361702	$0	$25,519
3	Rockville Fire Station 3 Renovation	P450105	$500	$500
3	Seven Locks Technical Center Phase II	P509927	$0	$13,095
3	Teachers Way Extended	P501916	$0	$1,565
3	Transfer Station Fire Detection and Suppression System	P802101	$681	$5,823
3	Universities at Shady Grove Expansion	P151201	$0	$20,000

District 4 (cont. on next page)

Council District	Project	Code	FY24 6-Year ($000s)	Total Project Cost as of FY24 ($000s)
4	**Total**		**$200,307**	**$939,724**
4	Beach Drive Bridge	P501903	$0	$4,202
4	Bicycle-Pedestrian Priority Area Improvements - Purple Line	P502004	$11,445	$12,617
4	Brookville Service Park	P509928	$0	$16,629
4	Chapman Avenue Extended	P500719	$0	$21,063
4	Citadel Avenue Extended	P500310	$0	$5,407
4	Conference Center Garage	P781401	$0	$21,000
4	Dale Drive Shared Use Path and Safety Improvements	P502109	$8,862	$10,215
4	Emergency Homeless Shelter	P602103	$125	$17,102
4	Facility Planning Parking: Silver Spring Parking Lot District	P501314	$789	$1,440
4	Fenton Street Cycletrack	P502001	$9,791	$11,561
4	Flower Avenue Sidewalk	P501206	$0	$200
4	Franklin Avenue Sidewalk	P501734	$1,734	$3,300
4	IAQ Improvements Brookville Bldgs. D & E	P361102	$0	$91
4	Kennedy Shriver Aquatic Cent. Building Envelope Impr.	P721503	$31,299	$32,644
4	KID Museum	P721903	$0	$3
4	Long Branch Town Center Redevelopment	P150700	$0	$300
4	Lyttonsville Bridge	P501421	$0	$400
4	Martha B. Gudelsky Child Development Center Sewer Impr.	P602202	$0	$355
4	Metropolitan Branch Trail	P501110	$10,220	$20,662
4	Montrose Parkway West	P500311	$0	$80,867
4	Montrose Road Extended (Land Acquisition)	P500528	$0	$2,716
4	Nebel Street Extended	P500401	$0	$10,610
4	Nebel Street Shelter - Phase 2	P602302	$500	$500
4	North Bethesda Community Recreation Center	P720100	$0	$1,536
4	North Bethesda Metro Station Access Improvements	P502106	$2,268	$3,570
4	North Bethesda Metro Station Area Redevelopment Infrastructure	P502315	$16,000	$16,000
4	North Bethesda Metro Station Northern Entrance	P501914	$8,115	$8,115
4	Noyes Library for Young Children Rehabilitation and Renovation	P711704	$3,941	$4,621
4	Old Blair Auditorium Reuse	P361113	$0	$591
4	Park Valley Road Bridge	P501523	$0	$4,850
4	Parking Lot Districts Service Facility	P501551	$0	$4,770
4	Parking: Silver Spring Facility Renovations	P508250	$18,566	$34,605
4	Platt Ridge Drive Extended	P501200	$0	$4,207
4	Pre-Release Center Dietary Facilities Improvements	P420900	$0	$7,005

Council District	Project	Code	FY24 6-Year ($000s)	Total Project Cost as of FY24 ($000s)
4	Progress Place	P602102	$0	$1,000
4	Progress Place Relocation and Personal Living Quarters	P601401	$0	$472
4	Reacquisition of Larchmont Elementary School Property	P362107	$0	$7,600
4	Ripley Street	P501403	$0	$200
4	Seminary Road Intersection Improvement	P501307	$0	$7,258
4	Silver Spring Green Trail	P509975	$164	$1,975
4	Silver Spring Library	P710302	$0	$72,322
4	Silver Spring Lot 3 Parking Garage	P501111	$0	$1
4	Silver Spring Transit Center	P509974	$0	$149,091
4	South County Regional Recreation and Aquatic Center	P721701	$5,773	$72,072
4	Summit Avenue Extension	P502311	$13,263	$27,110
4	Wall Park Garage and Park Improvements	P721801	$5,506	$6,612
4	White Flint District East: Transportation	P501204	$0	$29,690
4	White Flint District West: Transportation	P501116	$0	$71,095
4	White Flint Fire Station 23	P451502	$33,364	$38,227
4	White Flint Metro Station Access Improvements	P502106	$2,268	$2,900
4	White Flint Metro Station Northern Entrance	P501914	$8,115	$8,700
4	White Flint Redevelopment Program	P151200	$0	$3,636
4	White Flint Traffic Analysis and Mitigation	P501202	$486	$1,895
4	White Flint West Workaround	P501506	$7,713	$74,114

District 5

Council District	Project	Code	FY24 6-Year ($000s)	Total Project Cost as of FY24 ($000s)
5	**Total**		**$81,859**	**$320,973**
5	3rd District Police Station	P470302	$0	$23,089
5	Burtonsville Access Road	P500500	$8,254	$9,481
5	Burtonsville Community Revitalization	P760900	$0	$2,692
5	Burtonsville Crossing Shopping Center	P362311	$7,000	$7,000
5	Burtonsville Park and Ride Improvements	P502203	$5,500	$6,000
5	Bus Rapid Transit: US 29	P501912	$0	$31,550
5	Bus Rapid Transit: US 29-Phase 2	P502201	$9,500	$9,750
5	Cherry Hill Road Bike Facility	P502314	$4,000	$4,000
5	Colesville Depot	P500709	$0	$10,414
5	Colesville/New Hampshire Ave. Community Revitalization	P761501	$0	$720
5	Good Hope Neighborhood Recreation Center	P720918	$0	$10,745
5	Good Hope Road Shared Use Path	P501902	$3,523	$5,720
5	Good Hope Road Sidewalk	P501902	$3,523	$4,065
5	Kensington (Aspen Hill) FS 25 Addition	P450903	$0	$17,169
5	Martin Luther King, Jr. Indoor Swim Center Renovation	P721902	$4,019	$13,472
5	MD 198 Sidewalk Improvements	P502406	$1,000	$1,000
5	Norwood Road Shared Use Path	P502313	$4,000	$4,000
5	Rainbow Drive - Thompson Road Connection	P501511	$0	$540
5	Thompson Road Connection	P500912	$0	$240
5	US 29 Pedestrian and Bicycle Improvements	P502304	$5,500	$5,500
5	US 29 Streetlighting	P502407	$2,840	$2,840
5	White Oak Local Area Transportation Improvement Prog.	P501540	$1,250	$101,550
5	White Oak Science Gateway Redevelopment Project	P361701	$21,950	$46,960
5	White Oak Transit Center	P500602	$0	$2,476

District 6

Council District	Project	Code	FY24 6-Year ($000s)	Total Project Cost as of FY24 ($000s)
6	**Total**		**$103,923**	**$441,366**
6	Bicycle-Pedestrian Pri. Area Improvements - Veirs Mill/Randolph	P502003	$2,670	$3,501
6	Bicycle-Pedestrian Pri. Area Improvements - Wheaton CBD	P502002	$8,838	$9,995
6	Dennis Ave Bridge M-0194 Replacement	P501701	$9,119	$9,370
6	Dennis Avenue Health Center	P641106	$0	$35,350
6	Facility Planning Parking: Wheaton Parking Lot District	P501312	$478	$720
6	Forest Glen Passageway	P501911	$39,300	$40,552
6	Forest Glen Pedestrian Bridge	P509976	$0	$7,394
6	Garrett Park Road Bridge M-0352	P502105	$8,406	$8,406
6	Glenmont FS 18 Replacement	P450900	$0	$14,778
6	Holiday Park Net Zero Initiative	P722301	$3,079	$3,079
6	Montrose Parkway East	P500717	$0	$11,723
6	Parking: Wheaton Facility Renovations	P509709	$1,179	$1,710
6	Twinbrook Connector Trail	P502405	$1,500	$1,500
6	Wheaton Arts and Cultural Center	P722106	$25,575	$40,325
6	Wheaton Library and Community Recreation Center	P361202	$0	$68,859
6	Wheaton Redevelopment Program	P150401	$0	$179,328
6	Wheaton Regional Dam Flooding Mitigation	P801710	$3,779	$4,776

District 7

Council District	Project	Code	FY24 6-Year ($000s)	Total Project Cost as of FY24 ($000s)
7	**Total**		**$78,814**	**$817,546**
7	Animal Services and Adoption Center	P470400	$0	$26,018
7	Bowie Mill Road Bikeway	P502108	$16,580	$20,706
7	Brighton Dam Road Bridge No. M-0229	P501907	$1,578	$2,250
7	Brink Road Bridge M-0064	P502104	$5,551	$5,551
7	Davis Mill Road Emergency Stabilization	P502006	$0	$2,333
7	Equipment Maintenance and Operations Center (EMOC)	P500933	$0	$140,764
7	Gold Mine Road Bridge M-0096	P501302	$0	$6,467
7	Goshen Road South	P501107	$0	$168,036
7	Gude Landfill Remediation	P801801	$40,891	$61,746
7	MCFRS Gude Drive Community Services Building	P452202	$400	$500
7	MCPS & M-NCPPC Maintenance Facilities Relocation	P361109	$0	$69,039
7	MCPS Bus Depot and Maintenance Relocation	P360903	$250	$2,010
7	MCPS Food Distribution Facility Relocation	P361111	$0	$35,155
7	Men's Emergency Homeless Shelter Addition	P602001	$0	$1,140
7	Needwood Road Bikepath	P501304	$0	$5,765
7	North High Street Extended	P502310	$2,169	$2,169
7	Oak Drive/MD 27 Sidewalk	P501908	$11,095	$12,511
7	Olney Satellite Police Station and Community Facility	P472401	$100	$100
7	PSTA & Multi Agency Service Park - Site Dev.	P470907	$0	$105,066
7	Public Safety Training Academy (PSTA) Relocation	P471102	$0	$63,126
7	Redland Rd. from Crabbs Branch Way - Baederwood La.	P500010	$0	$6,143
7	Ross Boddy Neighborhood Recreation Center	P720919	$0	$15,760
7	Salt Storage Facility	P361902	$0	$3,267
7	Sandy Spring Bikeway	P502306	$200	$200
7	Snouffer School Road	P501109	$0	$26,760
7	Snouffer School Road North (Webb Tract)	P501119	$0	$15,047
7	Watkins Mill Road Extended	P500724	$0	$6,075
7	Woodfield Road Extended	P500151	$0	$13,842

Appendix B. Bridge Studies Listed in the FY15-FY24 CIPs as Candidates

Study (Bridges)	Started	Years FP	FY24 Status
Studies that Became Standalone Projects			
Whites Ferry Road Bridge #M-0187	FY07	8	Closed
Whites Ferry Road Bridge #M-0189	FY07	8	Closed
Piney Meetinghouse Road Bridge #M-0021	FY07	10	Pending closeout
Elmhirst Parkway Bridge #MPK-13	FY09	8	Closeout
Park Valley Road Bridge #MPK-O3	FY09	10	Pending closeout
Valley Road Bridge #M-0111	FY11	7	Closed out FY20
Gold Mine Road Bridge #M-0096	FY11	9	Pending closeout
Brink Road Bridge #M-0064	FY13	12	Prelim Design
Garrett Park Road Bridge #M-0352	FY13	12	Prelim Design
Beach Drive Bridge #MPK-24	FY13	12	Final Design
Glen Road Bridge #M-0148	FY16	9	Final Design
Mouth of Monocacy Bridge #M-0043	FY17	8	Prelim Design
Schaeffer Road Bridge #M-0137	FY21	4	Prelim Design
Studies Ended and Did Not Lead to Standalone Projects			
Cedar Lane Bridge #M-0074	FY17	5	NA
Montevideo Road Bridge #M-0030	FY19	2	*
Current Candidate Studies			
Glen Road Bridge #M-0015	FY17	8	FP Underway
Zion Road Bridge #M-0121	FY19	6	FP Underway
Parklawn Entrance Bridge #MPK-17	FY21	4	FP Underway
Baltimore Road Bridge #M-0201	FY21	4	FP Underway
Brighton Dam Road Bridge #M-0108	FY21	4	FP Underway
Redland Road Bridge #M-0057	FY21	4	FP Underway
Brookeville Road Bridge #M-Road0083	FY21	4	FP Underway
Greentree Road Bridge #M-0180	FY21	4	FP Underway
Whites Ferry Road Bridge #M-0186	FY21	4	FP Underway
Glen Road Bridge #M-0013	FY21	4	FP Underway
Barnes Road Bridge #M-0008	FY21	4	FP Underway
Barnesville Road Bridge #M-0045	FY21	4	FP Underway
Randolph Road Bridge #M-0080-3	FY21	4	FP Underway
Shady Grove Road Bridge #M-0191-3	FY21	4	FP Underway
Beach Drive Bridge #MPK-05	FY21	4	FP Underway
Beach Drive Bridge #MPK-08	FY21	4	FP Underway
Bel Pre Road Bridge #M-0092	FY21	4	FP Underway
Little Falls Parkway Bridge #MPK-01-2	FY21	4	FP Underway

Study (Bridges)	Started	Years FP	FY24 Status
Cattail Road Bridge #M-0155	FY21	4	FP Underway
Harris Road Bridge #M-0046	FY21	4	FP Underway
Valleywood Drive Bridge #M-0254	FY21	4	FP Underway
Midcounty Highway Bridge #M-0219	FY21	4	FP Underway
Southlawn Rd Bridge #M-0050	FY23	2	FP Underway
Martinsburg Rd Bridge #M-0042	FY23	2	FP Underway
Burnt Hill Rd Bridge #M-0157	FY23	2	FP Underway
Gregg Rd Bridge #M-0119.	FY23	2	FP Underway

* The Montevideo Road Bridge was addressed through the Bridge Renovation Project.

Appendix C. FY24 Approved Montgomery County Capital Projects

Projects with expenditures from FY23 and earlier were used for the expenditure analysis. Therefore, new FY24 projects, such as the Capital Assessment Management System, were not included. Projects with an asterisk represent those who are closed out (project is finished; payments/invoices are complete) or are in pending closeout.

A. Department of Transportation-Administered Projects

Category	Subcategory	Project #	Project Name
General Government	Economic Development	P502315	N. Bethesda Metro Station Area Redev. Infrastructure
General Government	Economic Development	P150401	Wheaton Redevelopment Program *
Transportation	Bridges	P501903	Beach Drive Bridge *
Transportation	Bridges	P509132	Bridge Design
Transportation	Bridges	P500313	Bridge Preservation Program
Transportation	Bridges	P509753	Bridge Renovation
Transportation	Bridges	P501907	Brighton Dam Road Bridge No. M-0229
Transportation	Bridges	P502104	Brink Road Bridge M-0064
Transportation	Bridges	P501701	Dennis Ave Bridge M-0194 Replacement
Transportation	Bridges	P501906	Dorsey Mill Road Bridge
Transportation	Bridges	P501420	Elmhirst Parkway Bridge (Bridge No. M-0353) *
Transportation	Bridges	P502105	Garrett Park Road Bridge M-0352
Transportation	Bridges	P502102	Glen Road Bridge
Transportation	Bridges	P501302	Gold Mine Road Bridge M-0096 *
Transportation	Bridges	P502103	Mouth of Monocacy Road Bridge
Transportation	Bridges	P501523	Park Valley Road Bridge *
Transportation	Bridges	P501522	Piney Meetinghouse Road Bridge *
Transportation	Bridges	P502403	Randolph Road Grade Crossing
Transportation	Highway Maintenance	P501106	Permanent Patching: Residential/Rural Roads
Transportation	Highway Maintenance	P500914	Residential and Rural Road Rehabilitation
Transportation	Highway Maintenance	P500720	Resurfacing: Park Roads and Bridge Improvements
Transportation	Highway Maintenance	P508527	Resurfacing: Primary/Arterial
Transportation	Highway Maintenance	P500511	Resurfacing: Residential/Rural Roads
Transportation	Highway Maintenance	P508182	Sidewalk and Curb Replacement
Transportation	Highway Maintenance	P500700	Street Tree Preservation
Transportation	Mass Transit (MCG)	P500929	Bethesda Metro Station South Entrance
Transportation	Mass Transit (MCG)	P501915	Boyds Transit Center
Transportation	Mass Transit (MCG)	P502203	Burtonsville Park and Ride Improvements
Transportation	Mass Transit (MCG)	P502204	Bus Priority Program - Minor Projects
Transportation	Mass Transit (MCG)	P502005	Bus Rapid Transit: MD355 Central
Transportation	Mass Transit (MCG)	P502309	Bus Rapid Transit: MD355 South/North
Transportation	Mass Transit (MCG)	P501318	Bus Rapid Transit: System Development
Transportation	Mass Transit (MCG)	P501912	Bus Rapid Transit: US 29 *

Category	Subcategory	Project #	Project Name
Transportation	Mass Transit (MCG)	P502201	Bus Rapid Transit: US 29-Phase 2
Transportation	Mass Transit (MCG)	P501913	Bus Rapid Transit: Veirs Mill Road
Transportation	Mass Transit (MCG)	P507658	Bus Stop Improvements
Transportation	Mass Transit (MCG)	P502308	Facility Planning: Mass Transit
Transportation	Mass Transit (MCG)	P502202	Great Seneca Science Corridor Transit Improvements
Transportation	Mass Transit (MCG)	P501801	Intelligent Transit System
Transportation	Mass Transit (MCG)	P502110	Master Leases: Transit Radio System Replacement *
Transportation	Mass Transit (MCG)	P502402	New Transit Maintenance Depot
Transportation	Mass Transit (MCG)	P502106	North Bethesda Metro Station Access Improvements
Transportation	Mass Transit (MCG)	P501914	North Bethesda Metro Station Northern Entrance
Transportation	Mass Transit (MCG)	P501603	Purple Line
Transportation	Mass Transit (MCG)	P500821	Ride On Bus Fleet
Transportation	Mass Transit (MCG)	P502107	Ride On Bus Route Restructuring Study *
Transportation	Mass Transit (MCG)	P502404	Ride On Fare Equipment Replacement
Transportation	Mass Transit (MCG)	P500534	Transit Park and Ride Lot Renovations *
Transportation	Parking	P501313	Facility Planning Parking: Bethesda Parking Lot Dist.
Transportation	Parking	P501314	Facility Planning Parking: Silver Spring Parking Lot Dist.
Transportation	Parking	P501312	Facility Planning Parking: Wheaton Parking Lot Dist.
Transportation	Parking	P502401	Farm Women's Market Garage
Transportation	Parking	P502316	Farm Women's Market Parking Garage
Transportation	Parking	P508255	Parking Bethesda Facility Renovations
Transportation	Parking	P501551	Parking Lot Districts Service Facility *
Transportation	Parking	P508250	Parking Silver Spring Facility Renovations
Transportation	Parking	P509709	Parking Wheaton Facility Renovations
Transportation	Parking	P501111	Silver Spring Lot 3 Parking Garage *
Transportation	Pedestrian Facilities/Bikeways	P509325	ADA Compliance: Transportation
Transportation	Pedest. Facilities/Bikeways	P500119	Bethesda Bikeway and Pedestrian Facilities
Transportation	Pedest. Facilities/Bikeways	P501532	Bicycle-Pedestrian Priority Area Improvements (BPPAI)
Transportation	Pedest. Facilities/Bikeways	P502004	BPPAI - Purple Line
Transportation	Pedest. Facilities/Bikeways	P502003	BPPAI - Veirs Mill/Randolph
Transportation	Pedest. Facilities/Bikeways	P502002	BPPAI - Wheaton CBD
Transportation	Pedest. Facilities/Bikeways	P507596	Bikeway Program Minor Projects
Transportation	Pedest. Facilities/Bikeways	P502108	Bowie Mill Road Bikeway
Transportation	Pedest. Facilities/Bikeways	P501733	Bradley Boulevard (MD 191) Improvements
Transportation	Pedest. Facilities/Bikeways	P501316	Capital Crescent Trail
Transportation	Pedest. Facilities/Bikeways	P502314	Cherry Hill Road Bike Facility
Transportation	Pedest. Facilities/Bikeways	P502109	Dale Drive Shared Use Path and Safety Improvements
Transportation	Pedest. Facilities/Bikeways	P502312	Facility Planning - Pedestrian Facilities and Bikeways
Transportation	Pedest. Facilities/Bikeways	P500905	Falls Road Bikeway and Pedestrian Facility
Transportation	Pedest. Facilities/Bikeways	P502001	Fenton Street Cycletrack
Transportation	Pedest. Facilities/Bikeways	P501911	Forest Glen Passageway
Transportation	Pedest. Facilities/Bikeways	P501734	Franklin Avenue Sidewalk
Transportation	Pedest. Facilities/Bikeways	P501118	Frederick Road Bike Path *

Transportation	Pedest. Facilities/Bikeways	P501917	Goldsboro Road Sidewalk and Bikeway
Category	**Subcategory**	**Project #**	**Project Name**
Transportation	Pedest. Facilities/Bikeways	P501902	Good Hope Road Shared Use Path
Transportation	Pedest. Facilities/Bikeways	P501742	Life Sciences Center Loop Trail
Transportation	Pedest. Facilities/Bikeways	P500718	MacArthur Blvd Bikeway Improvements
Transportation	Pedest. Facilities/Bikeways	P502406	MD198 Sidewalk Improvements
Transportation	Pedest. Facilities/Bikeways	P501209	MD355 Crossing (BRAC) *
Transportation	Pedest. Facilities/Bikeways	P501744	MD355-Clarksburg Shared Use Path
Transportation	Pedest. Facilities/Bikeways	P501110	Metropolitan Branch Trail
Transportation	Pedest. Facilities/Bikeways	P502313	Norwood Road Shared Use Path
Transportation	Pedest. Facilities/Bikeways	P501908	Oak Drive/MD27 Sidewalk
Transportation	Pedest. Facilities/Bikeways	P502306	Sandy Spring Bikeway
Transportation	Pedest. Facilities/Bikeways	P501303	Seven Locks Bikeway and Safety Improvements
Transportation	Pedest. Facilities/Bikeways	P506747	Sidewalk Program Minor Projects
Transportation	Pedest. Facilities/Bikeways	P509975	Silver Spring Green Trail
Transportation	Pedest. Facilities/Bikeways	P509036	Transportation Improvements for Schools
Transportation	Pedest. Facilities/Bikeways	P502302	Tuckerman Lane Sidewalk
Transportation	Pedest. Facilities/Bikeways	P502405	Twinbrook Connector Trail
Transportation	Pedest. Facilities/Bikeways	P502304	US 29 Pedestrian and Bicycle Improvements
Transportation	Roads	P500112	Advance Reforestation
Transportation	Roads	P500500	Burtonsville Access Road
Transportation	Roads	P501315	Clarksburg Transportation Connections *
Transportation	Roads	P502006	Davis Mill Road Emergency Stabilization *
Transportation	Roads	P501117	Dedicated but Unmaintained County Roads
Transportation	Roads	P501309	East Gude Drive Roadway Improvements *
Transportation	Roads	P509337	Facility Planning-Roads
Transportation	Roads	P501107	Goshen Road South
Transportation	Roads	P500338	Highway Noise Abatement
Transportation	Roads	P501405	Maryland/Dawson Extended *
Transportation	Roads	P501404	MCG Reconciliation PDF
Transportation	Roads	P500717	Montrose Parkway East *
Transportation	Roads	P502310	North High Street Extended
Transportation	Roads	P501507	Observation Drive Extended
Transportation	Roads	P501200	Platt Ridge Drive Extended *
Transportation	Roads	P507310	Public Facilities Roads
Transportation	Roads	P501307	Seminary Road Intersection Improvement *
Transportation	Roads	P501109	Snouffer School Road *
Transportation	Roads	P501119	Snouffer School Road North (Webb Tract) *
Transportation	Roads	P500722	State Transportation Participation *
Transportation	Roads	P508000	Subdivision Roads Participation
Transportation	Roads	P502311	Summit Avenue Extension
Transportation	Roads	P502303	Transportation Feasibility Studies
Transportation	Roads	P500724	Watkins Mill Road Extended *
Transportation	Roads	P501204	White Flint District East: Transportation
Transportation	Roads	P501116	White Flint District West: Transportation

Transportation	Roads	P501506	White Flint West Workaround
Transportation	Traffic Improvements	P509399	Advanced Transportation Management System
Category	**Subcategory**	**Project #**	**Project Name**
Transportation	Traffic Improvements	P501802	Bethesda Trans. Infrastructure Development *
Transportation	Traffic Improvements	P508113	Guardrail Projects
Transportation	Traffic Improvements	P507017	Intersection and Spot Improvements
Transportation	Traffic Improvements	P509523	Neighborhood Traffic Calming
Transportation	Traffic Improvements	P500333	Pedestrian Safety Program
Transportation	Traffic Improvements	P500512	Streetlight Enhancements-CBD/Town Center
Transportation	Traffic Improvements	P507055	Streetlighting
Transportation	Traffic Improvements	P500704	Traffic Signal System Modernization
Transportation	Traffic Improvements	P507154	Traffic Signals
Transportation	Traffic Improvements	P502407	US 29 Streetlighting
Transportation	Traffic Improvements	P501202	White Flint Traffic Analysis and Mitigation
Transportation	Traffic Improvements	P501540	White Oak Local Area Trans. Improvement Program
Conservation of Natural Resources	Storm Drains	P508180	Facility Planning: Storm Drains
Conservation of Natural Resources	Storm Drains	P509948	Outfall Repairs
Conservation of Natural Resources	Storm Drains	P501470	Storm Drain Culvert Replacement
Conservation of Natural Resources	Storm Drains	P500320	Storm Drain General

B. Department of General Services-Administered Projects

Category	Subcategory	Project #	Project Name
General Government	County Offices and Other Improvements	P362106	AltaGas-WGL Merger Fund
General Government	County Offices and Other Improvements	P361107	Americans with Disabilities Act (ADA): Compliance
General Government	County Offices and Other Improvements	P508728	Asbestos Abatement: MCG
General Government	County Offices and Other Improvements	P361501	Building Envelope Repair
General Government	County Offices and Other Improvements	P362307	Capital Asset Management System
General Government	County Offices and Other Improvements	P011601	Council Office Building Garage Renovation *
General Government	County Offices and Other Improvements	P010100	Council Office Building Renovations
General Government	County Offices and Other Improvements	P509923	Elevator Modernization
General Government	County Offices and Other Improvements	P507834	Energy Conservation: MCG
General Government	County Offices and Other Improvements	P361302	Energy Systems Modernization
General Government	County Offices and Other Improvements	P500918	Environmental Compliance: MCG
General Government	County Offices and Other Improvements	P361103	EOB HVAC Renovation
General Government	County Offices and Other Improvements	P362105	Exelon-Pepco Merger Fund
General Government	County Offices and Other Improvements	P500152	Facilities Site Selection: MCG
General Government	County Offices and Other Improvements	P508768	Facility Planning: MCG
General Government	County Offices and Other Improvements	P508941	HVAC/Elec Replacement: MCG
General Government	County Offices and Other Improvements	P362310	Lactation Rooms in County Buildings
General Government	County Offices and Other Improvements	P509970	Life Safety Systems: MCG
General Government	County Offices and Other Improvements	P362302	Lincoln HS
General Government	County Offices and Other Improvements	P360903	MCPS Bus Depot and Maintenance Relocation

Appendix C

Category	Subcategory	Project #	Project Name
General Government	County Offices and Other Improvements	P509514	Planned Lifecycle Asset Replacement: MCG
General Government	County Offices and Other Improvements	P500727	Red Brick Courthouse Structural Repairs
General Government	County Offices and Other Improvements	P509914	Resurfacing Parking Lots: MCG
General Government	County Offices and Other Improvements	P361702	Rockville Core *
General Government	County Offices and Other Improvements	P508331	Roof Replacement: MCG
General Government	Economic Development	P362311	Burtonsville Crossing Shopping Center
General Government	Economic Development	P361701	White Oak Science Gateway Redevelopment Project
General Government	Other General Government	P362201	260 East Jefferson Street Acquisition *
General Government	Other General Government	P361901	Heavy Equipment Replacement *
General Government	Other General Government	P362308	Montgomery County Lynching Memorial
General Government	Other General Government	P362309	State Aid for MCPS Playgrounds
Public Safety	Correction and Rehabilitation	P421100	Criminal Justice Complex
Public Safety	Correction and Rehabilitation	P422302	Montgomery County Correctional Facility Refresh
Public Safety	Correction and Rehabilitation	P422303	Montgomery County Correctional Facility Sewer
Public Safety	Correction and Rehabilitation	P422102	MC Detention Center Partial Demolition and Renovation
Public Safety	Correction and Rehabilitation	P420900	Pre-Release Center Dietary Facilities Improvements *
Public Safety	Fire/Rescue Service	P450300	Clarksburg Fire Station
Public Safety	Fire/Rescue Service	P450305	Female Facility Upgrade
Public Safety	Fire/Rescue Service	P450302	Fire Stations: Life Safety Systems
Public Safety	Fire/Rescue Service	P450700	FS Emergency Power System Upgrade *
Public Safety	Fire/Rescue Service	P450702	Glen Echo Fire Station Renovation
Public Safety	Fire/Rescue Service	P458756	HVAC/Elec Replacement: Fire Stns
Public Safety	Fire/Rescue Service	P452202	MCFRS Gude Drive Community Services Building
Public Safety	Fire/Rescue Service	P458429	Resurfacing: Fire Stations
Public Safety	Fire/Rescue Service	P450105	Rockville Fire Station 3 Renovation
Public Safety	Fire/Rescue Service	P458629	Roof Replacement: Fire Stations
Public Safety	Fire/Rescue Service	P451502	White Flint Fire Station 23
Public Safety	Other Public Safety	P362202	Appellate Court Judges Chambers *
Public Safety	Other Public Safety	P100300	Judicial Center Annex *
Public Safety	Police	P471200	2nd District Police Station *
Public Safety	Police	P470301	6th District Police Station
Public Safety	Police	P472401	Olney Satellite Police Station and Community Facility
Public Safety	Police	P472101	Outdoor Firearms Training Center
Public Safety	Police	P479909	PSTA Academic Building Complex *
Public Safety	Police	P471802	Public Safety Communications Center (PSCC) *
Public Safety	Police	P472102	PSCC, Phase II, Electrical Distribution and HVAC Upgrade
Transportation	Mass Transit (MCG)	P500933	Equipment Maintenance and Operations Center (EMOC) *
Transportation	Mass Transit (MCG)	P361109	MCPS & M-NCPPC Maintenance Facilities Relocation *
Transportation	Mass Transit (MCG)	P509974	Silver Spring Transit Center *
Transportation	Roads	P501317	County Service Park Infrastructure Improvements *
HHS	Health and Human Services (HHS)	P602201	Affordable Living Quarters
HHS	Health and Human Services	P601502	Avery Road Treatment Center *
HHS	Health and Human Services	P649187	Child Care in Schools *
HHS	Health and Human Services	P601901	Child Care Renovations

Category	Subcategory	Project #	Project Name
HHS	Health and Human Services	P602103	Emergency Homeless Shelter
HHS	Health and Human Services	P640902	High School Wellness Center and Expanded Wellness Services
HHS	Health and Human Services	P602202	Martha B. Gudelsky Child Dev. Center Sewer Improvements *
HHS	Health and Human Services	P602302	Nebel Street Shelter - Phase 2
HHS	Health and Human Services	P602102	Progress Place *
HHS	Health and Human Services	P602301	Restoration Center
HHS	Health and Human Services	P640400	School Based Health and Linkages to Learning Centers
Culture and Recreation	Libraries	P711503	21st Century Library Enhancements Level Of Effort
Culture and Recreation	Libraries	P712301	Chevy Chase Library and Redevelopment
Culture and Recreation	Libraries	P710500	Clarksburg Library
Culture and Recreation	Libraries	P711502	Library Refurbishment Level of Effort
Culture and Recreation	Libraries	P361202	Wheaton Library and Community Recreation Center *
Culture and Recreation	Recreation	P720601	Cost Sharing: MCG
Culture and Recreation	Recreation	P722301	Holiday Park Net Zero Initiative
Culture and Recreation	Recreation	P721503	Kennedy Shriver Aquatic Ctr. Building Envelope Improvement
Culture and Recreation	Recreation	P721902	Martin Luther King, Jr. Indoor Swim Center Renovation
Culture and Recreation	Recreation	P720100	North Bethesda Community Recreation Center
Culture and Recreation	Recreation	P722401	Recreation Facilities Asset Replacement
Culture and Recreation	Recreation	P722402	Recreation Facilities Playground Replacement
Culture and Recreation	Recreation	P722105	Recreation Facilities Refurbishment
Culture and Recreation	Recreation	P722403	Recreation Facilities Security System Upgrade
Culture and Recreation	Recreation	P720917	Recreation Facility Modernization *
Culture and Recreation	Recreation	P721701	South County Regional Recreation and Aquatic Center
Culture and Recreation	Recreation	P722101	Swimming Pools Slide Replacement
Culture and Recreation	Recreation	P721801	Wall Park Garage and Park Improvements
Culture and Recreation	Recreation	P722106	Wheaton Arts and Cultural Center

C. Non-DOT and DGS Administered Projects

Category	SubCategory	Project #	Project Name
General Government	Economic Development	P151200	White Flint Redevelopment Program *
General Government	Other General Government	P316222	ALARF: MCG *
General Government	County Offices and Other Improvements	P340901	Public Safety System Modernization
General Government	Technology Services	P341700	Digital Equity - Montgomery Connects
General Government	Technology Services	P342001	Master Lease: Digital Evidence Data Storage *
General Government	Technology Services	P342102	County Radio Replacement and Related Equipment *
General Government	Technology Services	P342301	County Radio Life Cycle Replacement
General Government	County Offices and Other Improvements	P342302	Dickerson Radio Tower

General Government	Technology Services	P342303	Business Continuity Phase II
General Government	Technology Services	P342401	IJIS - CRIMS Upgrade
General Government	Technology Services	P342402	IJIS - CRIMS Upgrade
General Government	Other General Government	P361901	Heavy Equipment Replacement *
Public Safety	Correction and Rehabilitation	P422301	MC Correctional Facility and Community Corrections Wi-Fi project
Public Safety	Fire/Rescue Service	P451504	Apparatus Replacement Program
Public Safety	Fire/Rescue Service	P452201	Heart Monitor/Defibrillator Replacement
Public Safety	Police	P472104	Police Body Armor *
General Government	Technology Services	P509651	FiberNet
Culture and Recreation	Libraries	P711704	Noyes Library for Young Children Rehabilitation and Renovation
Culture and Recreation	Recreation	P722001	Shared Agency Booking System Replacement *
Culture and Recreation	Recreation	P729658	Public Arts Trust
Community Devel. and Housing	Housing (MCG)	P760100	Affordable Housing Acquisition and Preservation
Community Devel. and Housing	Community Development	P760900	Burtonsville Community Revitalization *
Community Devel. and Housing	Community Development	P761501	Colesville/New Hampshire Avenue Community Revitalization *
Community Devel. and Housing	Housing (MCG)	P762101	Affordable Housing Opportunity Fund
Community Devel. and Housing	Community Development	P762102	Countywide Facade Easement Program
Community Devel. and Housing	Housing (MCG)	P762201	Preservation of Naturally Occurring Affordable Housing Fund
Community Devel. and Housing	Community Development	P769375	Facility Planning: HCD
Conservation of Natural Resources	Ag Land Preservation	P788911	Ag Land Pres Easements
General Government	Economic Development	P789057	Life Sciences and Technology Centers *
Conserv. of Natural Resources	Stormwater Management	P800700	Stormwater Management Facility Major Structural Repair
Conserv. of Natural Resources	Stormwater Management	P801710	Wheaton Regional Dam Flooding Mitigation
Recycling and Resource Mgmt.	Recycling and Resource Mgmt	P801801	Gude Landfill Remediation
Recycling and Resource Mgmt.	Recycling and Resource Mgmt	P802101	Transfer Station Fire Detection and Suppression System *
Recycling and Resource Mgmt.	Recycling and Resource Mgmt	P802201	Full Upgrade of Existing Recycling Center Complex
Conserv. of Natural Resources	Stormwater Management	P802202	Flood Control Study
Conserv. of Natural Resources	Stormwater Management	P807359	Misc Stream Valley Improvements *
Conserv. of Natural Resources	Stormwater Management	P808726	Stormwater Management Retrofit: Countywide
Conserv. of Natural Resources	Stormwater Management	P809319	Facility Planning: Stormwater Management
General Government	Other General Government	P852101	ABS Retail Store Refresh
General Government	Other General Government	P852401	ABS Retail New Stores

Appendix D. Review of Local Jurisdictions

To understand how Montgomery County's processes for planning, design and supervision (PDS) costs associated with capital projects compare to those used in other jurisdictions, OLO reviewed budget documents from Howard County, Prince George's County and Frederick County and interviewed staff from Howard County and Prince George's County. This chapter compares Montgomery County to these jurisdictions. It is organized as follows:

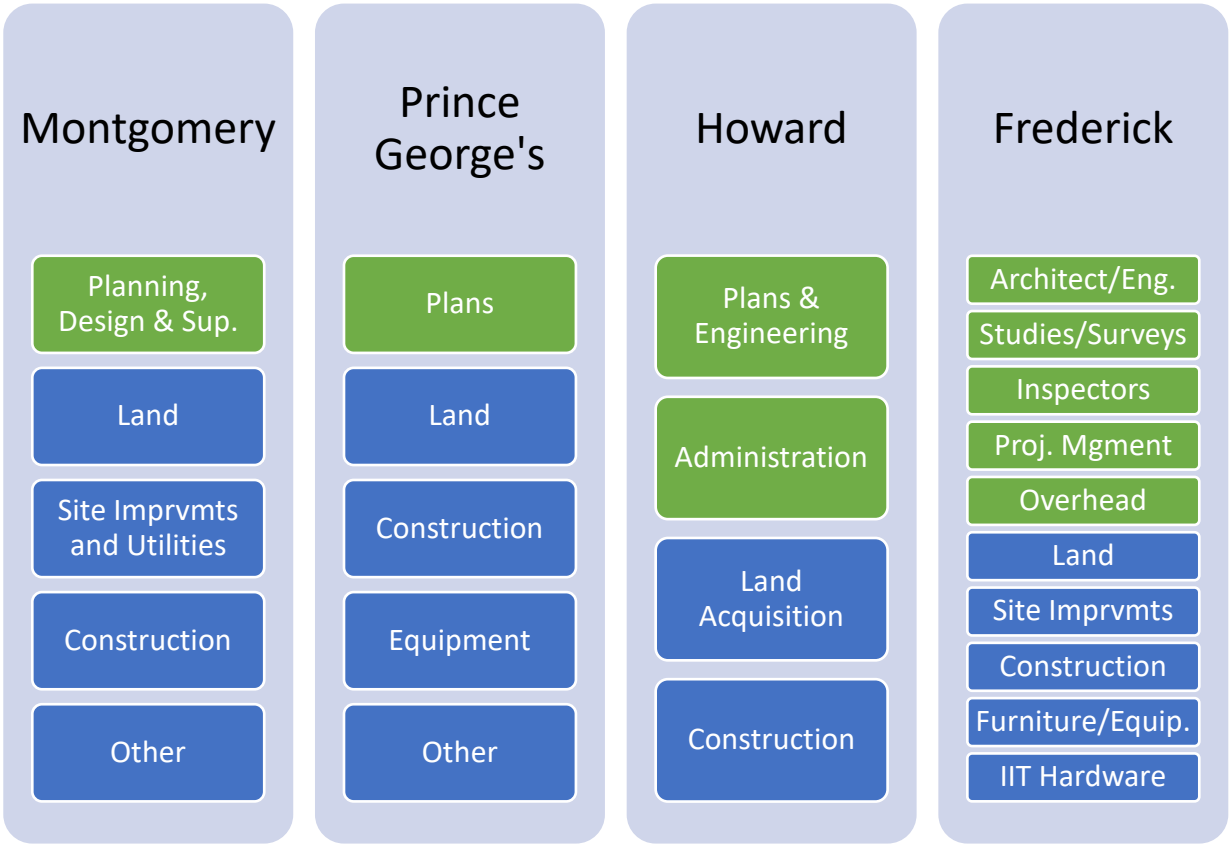
- **Section A** compares available data on budgeted PDS costs across jurisdictions; and
- **Section B** describes differences in processes between Montgomery County and other jurisdictions.

A. PDS Cost Comparisons

Comparing budgeted PDS costs across jurisdictions is challenging because: (1) other jurisdictions use different categories for the cost elements they report in their CIP documents; and (2) most jurisdictions (including Montgomery County) do not publish tables that display aggregate costs by cost element in their CIP documents. The following exhibit displays the cost elements reported by jurisdiction. Those cost elements in green align with the PDS cost element for Montgomery County. Overall:

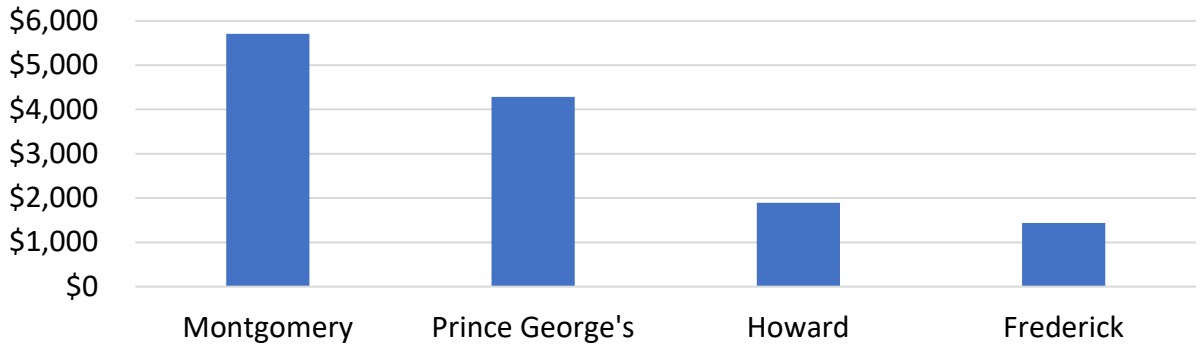
- Prince George's County's cost element categories are the most similar to Montgomery County's; and
- Frederick County's CIP includes the largest number of cost element categories, including subcategories within the categories listed in the exhibit.

CIP Cost Elements by Jurisdiction



The following chart displays six-year budgeted CIP expenditures across the above jurisdictions. It shows that Montgomery County has the largest CIP among the four jurisdictions.

Six-Year Budgeted CIP Expenditures, All Agencies ($ millions)



Among the four, Prince George's County is the only jurisdiction that publishes aggregate budgeted CIP costs broken down by cost element. Montgomery County does not publish this aggregated information but does publish spreadsheets that can be used to calculate the same information.

The following table compares the cost element breakdowns for Montgomery and Prince George's Counties. It shows that Montgomery County's CIP categorized 59% of costs under the "Construction" cost element and 15% of costs under the PDS cost element. In contrast, Prince George's County categorized 91% of costs as "Construction" costs and 3% of costs as "Plans". Much of this difference may reflect the fact that Prince George's County funds staff costs related to planning, design and supervision of capital projects through their operating budget (see Section B).

All Agency Six-Year Budgeted CIP Expenditures By Cost Element, FY24

Montgomery	%	Prince George's	%
Construction	59%	Construction	91%
PDS	15%	Plans	3%
Other	11%	Other	3%
Site Improvements and Utilities	8%	Land	2%
Land	7%	Equipment	1%

B. Planning, Design and Supervision Process Comparison

OLO interviewed staff from:

- Prince George's County's Office of Central Services; and
- Howard County's Department of Public Works.

Staff from both counties reported that they view Montgomery County as a model for their own processes for planning and design of capital projects. For example, the Prince George's County Office of Central Services based their design manual on Montgomery County's manual. From its interviews, OLO identified the following similarities and differences between Montgomery County and these two jurisdictions.

- Similar to Montgomery County, both Prince George's County and Howard County rely on consultants for much of their planning, design and construction supervision work;

- Unlike Montgomery County, Prince George's County charges staff time associated with capital projects to their operating budget, not their capital budget; and
- In Howard County, staff in some bureaus are charged to the operating budget while others are charged to the capital budget, with that time assigned by managers.