Performance Audit Report

Maryland-National Capital Park and Planning Commission
Prince George's County

Evaluation of Capital Project Management Practices

January 2018

OFFICE OF LEGISLATIVE AUDITS
DEPARTMENT OF LEGISLATIVE SERVICES
MARYLAND GENERAL ASSEMBLY

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OFFICE OF LEGISLATIVE AUDITS
MARYLAND GENERAL ASSEMBLY

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January 10, 2018

Senator Craig J. Zucker, Co-Chair, Joint Audit Committee
Delegate C. William Frick, Co-Chair, Joint Audit Committee
Members of Joint Audit Committee
Annapolis, Maryland

Ladies and Gentlemen:

We conducted a performance audit to evaluate the project management practices relating to the capital program of the Maryland-National Capital Park and Planning Commission (M-NCPPC) in Prince George's County. The audit was authorized under Chapter 448 of the Laws of Maryland, 2015. M-NCPPC Prince George's County capital program expenditures, as administered by the Department of Parks and Recreation (DPR), totaled $31.6 million during fiscal year 2016. As of May 2016, DPR was managing in excess of 80 active projects.

Due to the lack of available records, we were unable to determine the extent to which DPR capital projects, on an overall basis, have experienced completion delays, or cost increases, which was the objective of the audit. In our opinion, the lack of formal project records necessary to document the status of individual capital projects, coupled with DPR not fully using the capabilities of its project management software system, resulted in the incomplete information about project timelines and activities. Nevertheless, our review of five projects found lengthy project timespans ranging from 7 to 12 years. Ultimately, of these projects, which cost approximately $39 million, four were completed within their financial budgets and expenditures for the fifth incomplete project was within budget as of May 2016.

In addition to the project documentation problems, we identified other conditions that precluded effective monitoring of project status and completion. Specifically, DPR's management of capital projects is hampered by the lack of formal policies and procedures governing project planning, construction, and related monitoring activities, such as project inspections. Also, DPR had not formally conveyed management's expectations regarding the use of its automated project management system. Consequently, project

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timelines were not created, project costs were not consistently recorded, and project documentation was not being routinely archived in electronic format. Furthermore, DPR's annual Capital Improvement Program (CIP) documents, which identify planned capital projects for a six-year period, did not contain certain project information to promote clarity and transparency regarding the scope and status of individual projects.

Although the duration of the five projects we reviewed (from 7 years to 12 years) appeared to be lengthy, we could not determine if the timespans met expectations because project time schedules were not established for any of these projects. Furthermore, incomplete project documentation precluded obtaining an understanding of project activities occurring at various times.

Based on our review of the available documentation for those five projects, there appeared to be a lack of effective project oversight. We noted instances in which construction inspection documentation was lacking, contractors had exceeded their contractually required timeframes, and change orders appeared to have been approved in an untimely manner and without evidence of reviews of the proposed costs and time extensions.

DPR acknowledged the need to take action to address the preceding issues, but represented that staffing limitations within its Park Planning and Development Division contributed to the aforementioned delays in starting and overseeing project work, especially during periods in which the size of the CIP increased dramatically. DPR, however, had not established workload standards to determine the staffing resources needed based on the nature and size of proposed projects. Although staff increases were obtained and certain organization and managerial changes were more recently initiated, DPR indicated those latest efforts have been hampered by turnover.

The response to this audit is included as an Appendix to this report. We wish to acknowledge the cooperation extended to us by the M-NCPPC during our audit.

Respectfully submitted,

Thomas J. Barnickel III, CPA
Legislative Auditor

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Background Information

Overview

The Maryland-National Capital Park and Planning Commission (M-NCPPC) is a bi-county agency serving both Montgomery and Prince George's Counties. It was established by State Law in 1927. It is empowered to acquire, develop, maintain, and administer a regional system of parks in the two counties. M-NCPPC also conducts the recreation program for Prince George's County. M-NCPPC's operations are governed by Division II (Titles 14 to 27) of the Land Use Article of the Annotated Code of Maryland. The governing board of M-NCPPC is the Commission, which meets monthly and consists of ten board members (five from each county that serve as their respective county's Planning Board). The Prince George's Planning Board members are appointed by the Prince George's County Executive and confirmed by the Prince George's County Council.

The major source of funding for M-NCPPC's services are property taxes levied in Montgomery and Prince George's Counties. Each fiscal year, the Commission is required to prepare capital and operating budgets for each county's operations, which are approved by the respective county executive and county council. During this annual process, the Prince George's County Council determines if an increase to the property tax rates is warranted and will propose any increases.

According to M-NCPPC's audited financial statements, fiscal year 2016 revenues for Prince George's County operations totaled $263 million and expenditures were $261 million, including $31.6 million for capital projects, which was the focus of our audit. See Table 1 on page 6 for capital project expenditures for fiscal years 2010 through 2016. Park maintenance and operation ($113 million) and the County's recreation program ($64 million) account for the majority of M-NCPPC - Prince George's County expenditures. Also, for fiscal year 2016 there were 1,360 positions budgeted for M-NCPPC Prince George's County.

Table 1 Prince George's County Capital Project Expenditures Fiscal Years 2010 to 2016			
Fiscal Year	**Park Acquisition**	**Park Development**	**Totals**
2010	$8,421,963	$17,842,377	$26,264,340
2011	3,549,184	26,213,628	29,762,812
2012	10,241,423	28,638,793	38,880,216
2013	4,683,059	21,563,971	26,247,030
2014	3,714,098	25,014,156	28,728,254
2015	3,718,374	37,942,868	41,661,242
2016	1,493,422	30,142,743	31,636,165
Total	$35,821,523	$187,358,536	$223,180,059

Source: M-NCPPC Audited Financial Statements

Organization

The Commission's central office staff provides support services for human resources, finance, internal audit, legal, and information technology to both counties. Prince George's County and Montgomery County operate relatively independent of each other, with their own staff, preparing separate Capital Improvement Programs (CIP), operating budgets, and managing their own capital projects.

M-NCPPC – Prince George's County Department of Parks and Recreation's (DPR) CIP is managed by its Park Planning and Development Division (PPD). PPD has approximately 54 employees and consists of six units as follows:

CIP Budget and Procurement

This unit is in charge of compiling and monitoring the annual CIP budget and assisting in the procurement of construction-related contracts.

Land Acquisition and Development Review

This unit is in charge of planning the acquisition of land as well as development of land already owned.

Planning

This unit plans future parks, recreational buildings (such as community centers), and upgrades to existing parks or buildings.

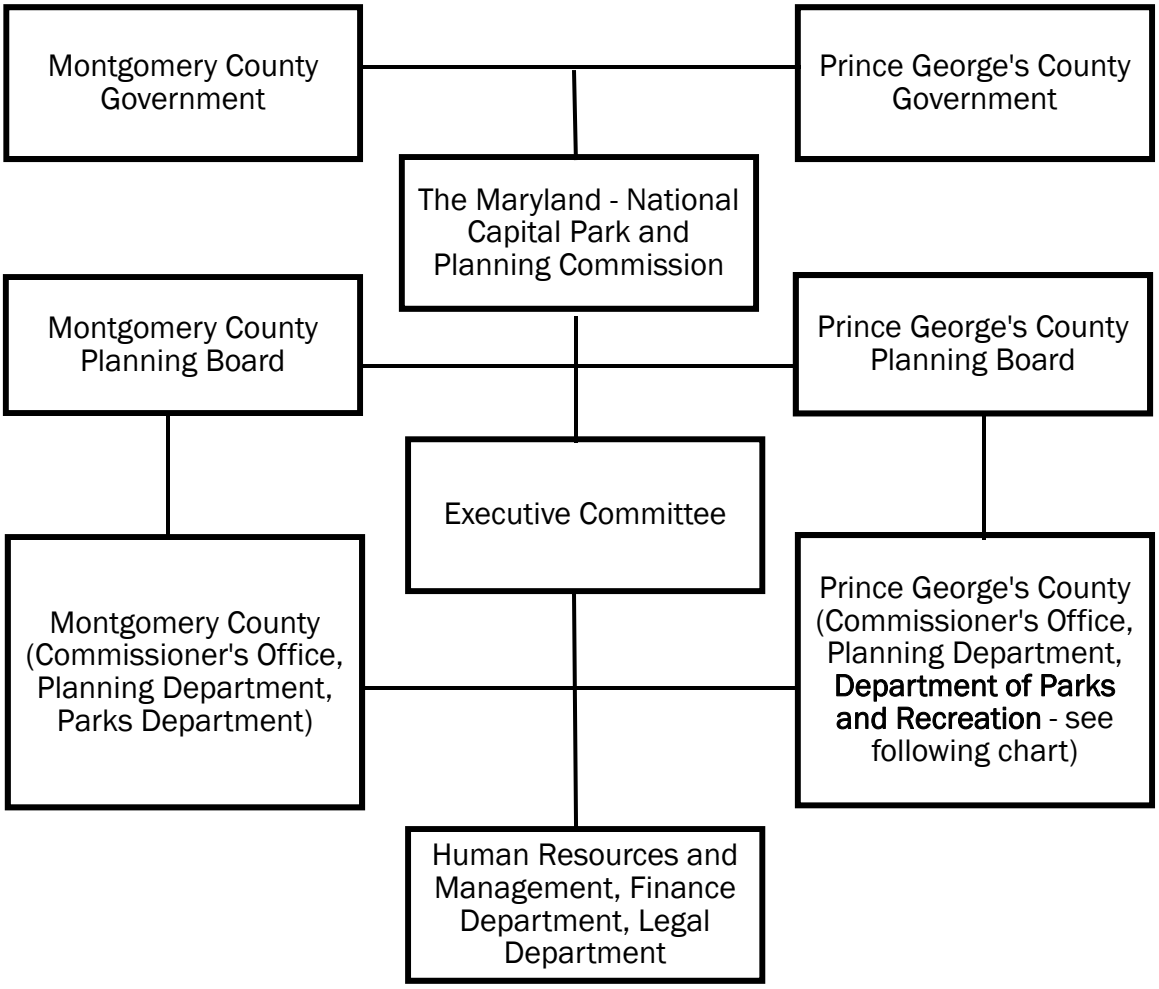
Architectural
This unit oversees the design and construction of CIP projects for park and recreation buildings, specifically the project management of contractors procured to design and construct projects.

Landscape Architectural
This unit oversees the design and construction of parks, playgrounds, and landscape projects, specifically the project management of contractors procured to design and construct projects. For many projects, this unit will provide the landscape architectural design work.

Engineering and Construction Inspection
This unit typically handles the construction portion of a project, including performing site inspections and monitoring construction contractors. The inspections performed by this unit are inspections of contractor performance. They are not regulatory code-compliance inspections, which are performed by a third-party inspector.

Refer to the Maryland-National Capital Park and Planning Commission Organization Charts on pages 8 and 9.

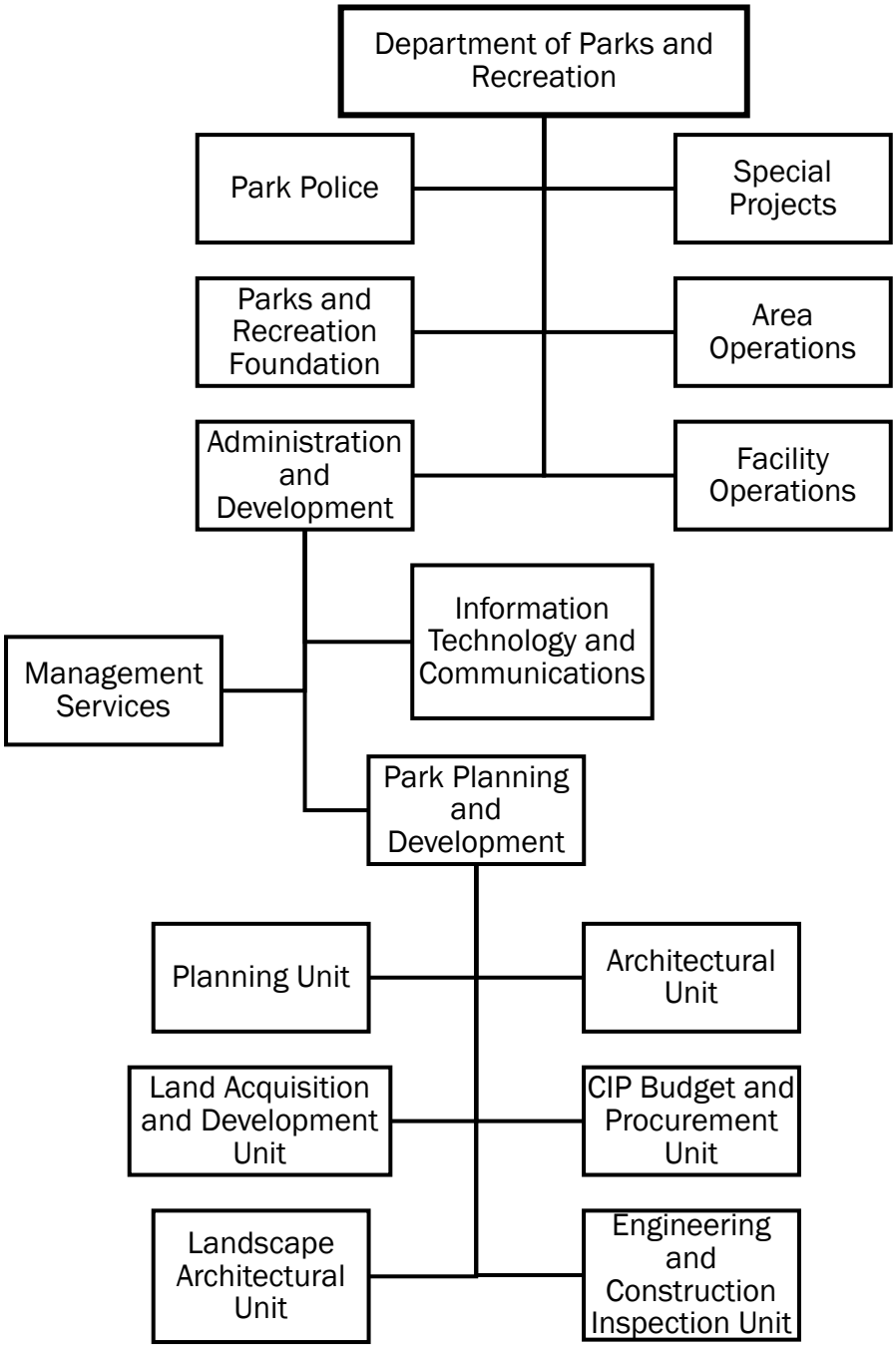
The Maryland–National Capital Park and Planning Commission Organization Chart



Note: The County Council and County Executive are part of the Prince George's County Government.

Source: M-NCPPC fiscal year 2015 Consolidated Annual Financial Report

The Maryland–National Capital Park and Planning Commission
Prince George's County
Department of Parks and Recreation Organization Chart



Note: Administration and Development and Park Planning and Development are the only areas expanded since it is where the CIP and capital projects are handled.

Source: Fiscal year 2018 Proposed Budget, Department of Parks and Recreation

Capital Improvement Program (CIP)

Section 18-112 of the Land Use Article of the Annotated Code of Maryland requires the Commission to prepare an annual six-year CIP for the Prince George's County Executive and County Council. The first year of the CIP is the capital budget year, while the five outer years are planned CIP projects with preliminary estimates of funding. According to Section 18-113 of the same Article, the CIP is required to include:

- a statement of the objectives of the capital program;
- recommended capital projects and a construction schedule;
- an estimate of cost and a statement of all funding sources; and
- all programmed parkland acquisitions, all major park improvement and development projects, and major acquisitions of equipment.

PPD prepares the CIP, which is effectively a rolling six-year plan, so the development process begins with the previous CIP. The PPD staff will update and modify the plan based on multiple factors. PPD evaluates the capital budget needs for previously approved projects that are underway, previously approved projects that are intended to begin in the next year, and any new capital needs. The new capital needs are solicited from the operating divisions of DPR as well as from public and community groups.

The CIP contains background information related to M-NCPPC – Prince George's County, the facilities they run, an assessment of the communities' needs, the basis for determining needs, highlights of the CIP (major projects), an overall funding summary, a list of new projects, projects deleted from the prior CIP, and any renaming of projects. The CIP also describes the funding sources, which primarily includes State funding (Program Open Space), county operating funds, and M-NCPPC issued bonds.

Included in the CIP are Project Description Forms (PDFs), which Prince George's County uses in the CIPs of all county agencies. Each PDF typically includes cumulative funding and expenditure data for all of the ongoing projects located at one site or facility, and thus one PDF can include information for multiple projects. The PDF includes identifying information about the site/facility, brief descriptions of the projects, a schedule of planned future spending based upon current budget projections, expenditures (and encumbrances) to date on projects, and the expected funding sources. The M-NCPPC – Prince George's County CIP for fiscal year 2016 included 168 PDFs of which 26 had funding allocated for fiscal year 2016.

After the CIP is prepared by PPD, it is presented to the Prince George's County Planning Board for approval to be included in the Proposed Budget. After approval, the CIP is included in the M-NCPPC's Proposed Budget for Prince George's County and subsequently, the CIP is submitted to the Prince George's County Government for its review and subsequent approval. Through the budget hearing and deliberation process, the Proposed CIP may be amended by the County Council and the County Executive. By June 1st of each year, the budget is adopted by County Council. At which point, the CIP becomes the authorized CIP by the County Council and the approved work program for DPR. The PDF form is used as the approval of funding for the current budgetary year once the CIP is adopted by the Prince George's County Council.

Planning for a project typically begins after it is approved in the CIP and is substantially funded. Planning may not begin until the projects are substantially funded (unless money was allocated for planning purposes) since projects may require multiple year funding. For some projects, PPD may have already begun planning and have a reasonable estimate of funding needs, however more often the final project scope and funding are not known at the time the project is first approved in the CIP.

Approved funding sources and uses of funds for fiscal year 2016 are shown in the following table:

Table 2
Use and Source of Funds
Fiscal Year 2016

Use of Funds	Fiscal Year 2016
Land Acquisition	$4,740,000
Construction	14,215,000
Total Use of Funds	**$18,955,000**
Source of Funds	**Fiscal Year 2016**
State Program Open Space	$2,740,000
M-NCPPC Bond Proceeds	8,320,000
Operating Fund Transfer	6,270,000
Other	1,625,000
Total Funding Sources	**$18,955,000**

Source: FY2016-2021 CIP M-NCPPC- Prince George's County

The General Progress of a Project from Planning to Completion

Once project planning is initiated for an approved project:

- PPD management assigns a project to a PPD employee, either in the Architectural Unit or in the Landscape Architectural Unit depending on the type and the size of the project. The employee will be an architect, landscape architect, or a project manager within the unit (for our example below we used an architect).

- The PPD architect and planner will hold meetings with the community where the project is located to gather their input on the community's desires for the project. For example, the community may have input as to the size of a proposed parking lot or types of lighting needed. With the assistance of the CIP Budget and Procurement Unit, and after considering community input and the project's proposed budget, a request for proposal (RFP) for architectural services will be created and an architectural firm will be selected.

- After the architectural contract is awarded, the PPD architect is responsible for communicating with the architectural firm and monitoring the contract.

- After the architectural firm finishes the plans, they are presented to the community for their input. If there are multiple options, community input is again sought to help ensure the project meets the community's needs. Once the plans are finalized the PPD architect, the PPD CIP Budget and Procurement Unit, and a representative from the PPD Engineering and Construction Inspection Unit meet to prepare requests for the competitive construction contract bids.

- After the construction contractor is awarded, a construction schedule is established, a notice to proceed issued, and work begins. The contractor is monitored by the PPD architect and by a construction manager from the PPD Engineering and Construction Inspection Unit.

- The PPD construction manager is responsible for conducting site visits, informing management of the project's progress, reviewing and processing change orders, and ensuring the construction contractor has performed the required work and the work meets standards specified in the contract. For certain larger projects, a construction management firm will be hired to assist with monitoring the construction contractor (site visits), reviewing

change orders, reviewing invoices, and ensuring the construction contractor is performing according to the contract.

- CIP projects are subject to customary construction and regulatory permitting by various agencies such as the Department of Public Works and Transportation, Department of Permitting, Inspections, and Enforcement, Washington Suburban Sanitary Commission, and Maryland Department of Environment.

Project Management and Financial Systems

There are two main information systems used by M-NCPPC – Prince George's County. The first is a project management system (unique to the Prince George's County operations) that is available to record and oversee project activities and costs. The second is a financial system maintained by the Commission for the benefit of the two counties' operations.

The project management system is a flexible-interface, cloud-based, enterprise construction management program for capital projects that provides performance data across the project life cycle. Currently, each project has a separate record within the system to record information including the name and description of the project, related PDF number, and those employees involved in the project at DPR. The record can include notes related to planning work, notes for site visit details from the PPD employee(s) overseeing the project, construction management firm (if used), and contract documents (including change orders). This system has the capability to track costs of the project and budget changes, and create standardized project inspection forms, daily inspection forms, and project and construction schedules. The system also allows users remote access capability, thus allowing updates during site visits.

The M-NCPPC's financial system is used to record expenditures and revenues for budgeting and financial reporting purposes. For CIP expenditures, there are accounting codes assigned to each PDF. Each year any additional funds that are approved in the CIP are added into the related PDF accounting code. When contracts are entered into for a project, they are encumbered against the related PDF. Additionally, an expenditure or contract that exceeds the approved funding amount will not be processed in the system. This system also has the capabilities to record expenditures by project rather than by PDF so that individual project budgets and expenditures can be tracked.

Audit Scope, Objective, and Methodology

Audit Scope

We conducted a performance audit to evaluate the project management practices of the Maryland-National Capital Park and Planning Commission's (M-NCPPC) capital program in Prince George's County. The audit was authorized by Chapter 448 of the Laws of Maryland, 2015, effective October 1, 2015. In accordance with the law, the audit scope and objectives were approved by the Joint Audit Committee of the Maryland General Assembly.

Our audit focused primarily on the activities of the Architectural, Landscape Architectural, and Engineering and Construction Inspection Units of the Park, Planning, and Development Division of the M-NCPPC – Prince George's County Department of Parks and Recreation (DPR). It also focused on selected projects completed after January 1, 2013 or in-progress (construction/post construction) as of June 10, 2016.

Our audit was performed in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Objective and Methodology

Our audit objective was to determine the extent to which capital projects undertaken by DPR have experienced completion delays or cost overruns and identify the contributing factors, including those relating to project planning, management, and monitoring. Due to unanticipated factors, including DPR's failure to use and maintain a robust comprehensive project management and recordkeeping system, it was necessary to alter our approach. Instead of an overall analysis of project timeliness, delays, and cost overruns, it was necessary to focus on individual projects due to the lack of centralized and consistently maintained records. As part of the objective, we reviewed applicable policies and procedures to obtain an understanding of processes and project activity.

We obtained an understanding of M-NCPPC Prince George's County DPR project planning and management policies and practices by interviewing the Prince George's County Planning Board Chair and M-NCPPC employees in

Prince George's County DPR, and by reviewing available written policies and procedures. We also reviewed M-NCPPC – Prince George's County DPR's annual Capital Improvement Programs (CIPs) and obtained available reports of expenditures on projects we selected for testing.

To obtain an understanding of project management best practices, we interviewed M-NCPPC employees in Montgomery County and reviewed publications on project management prepared by various national organizations. We also reviewed the Montgomery County M-NCPPC's 'Project Assignment and Implementation Business Process' and its CIP.

Due to the lack of reporting capabilities and other factors, we were unable to obtain a report from DPR of individual projects showing their cumulative budget and costs, and timelines. Therefore, we were required to alter our approach by focusing on individual projects. Accordingly, we selected five projects to test from a list of projects completed from January 1, 2013 through March 16, 2016 and a list of currently ongoing projects. According to M-NCPPC records, there were 83 Project Description Forms (PDF) with capital expenditures during fiscal year 2016.

We selected one project involved in litigation, two projects that a member of the General Assembly had raised concerns about, and two projects for which DPR available records indicated there were substantial delays. Generally, to test these five projects, we reviewed capital construction contract project files that included documents such as contracts, inspection reports, change orders, and invoices. We also discussed project details with available DPR staff.

Given our targeted approach for selecting these five projects for testing, we subsequently performed a limited review of five additional projects. To select the five additional projects we requested DPR management to identify five projects that it felt were well managed. In response to that request, DPR identified five projects that it believed provided good results, see Table 4. To determine if some of the same issues in the five projects we tested (see Table 3) also existed on the additional five projects, we limited our review to certain project phases, as well as on issues related to change orders and monitoring of the main contractors.

Determining Project Duration and Circumstances Contributing to Lengthy Timeframes

We reviewed available documentation to create timelines from the date the project was substantially funded to when a temporary use and occupancy certificate was issued (or June 10, 2016, if the project was not yet

completed). We then used this information to prepare timelines for the planning, design, and construction phases (which are further described on page 30) and to determine the reasons for, or circumstances contributing to, lengthy timeframes.

This information was obtained primarily by reviewing available contracts, change orders, and contract monitoring documentation for various phases within the projects, as well as discussions with relevant DPR staff. For the first two projects we selected, we reviewed most of the contracts related to the project (projects generally involve multiple contractors). However, due to the lack of centralized documentation for contracts and contract monitoring, this approach was deemed impractical because of the inordinate amount of audit time required, and for each of the remaining three projects we reviewed activity only for the two main contractors (architectural/engineering firm and construction contractor).

To determine when the individual projects selected for testing were substantially funded (and therefore eligible for planning, which would begin the project timeline), we used the funding schedules in the PDFs for each applicable project within the CIP to determine when the majority of the funding was identified (or planning funds were allocated) and deemed July 1 of that CIP's fiscal year as the substantially funded date. The CIP shows the current year funding as well as the five subsequent years, due to the size of many capital projects, the funding is spread out over multiple years. With the additional years in the CIP, DPR has an estimate of the amount of future funds a project will receive. DPR may be able to start project planning, contingent of available staffing. If we were unable to determine when the projects were substantially funded due to other project activity in the PDF, we calculated total project time from the date of first action (planning began or the first request for proposal was issued).

Determining Cost Overruns

To determine any cost overruns for the five projects included in Table 3, we obtained expenditure reports from M-NCPPC's financial system for the PDFs related to the initial five projects tested. We performed certain data filtering procedures in an attempt to isolate, among all PDF activity, expenditures for the particular projects selected. This process provided an approximate expenditure amount for each project. We then reviewed the CIP for multiple years to determine the funding levels for the PDFs related to the projects tested. For each, we were able to estimate the funding related to the specific project based on activity within the PDF. To determine any overall cost overrun, we compared the total approved funding to the total expenditures for the project.

Projects Tested and Reviewed

The five projects subjected to our detailed testing had expenditures totaling $39 million as of June 10, 2016, see Table 3. The additional five projects selected by DPR and subjected to our limited review had expenditures totaling $22.4 million, see Table 4.

TABLE 3
Projects Tested in Detail by Office of Legislative Audits

Location	Project Description	Project Expenditures (Through 6/10/2016)	Date of Temporary Use and Occupancy Certificate
Foxhill Park	Design and location of a prefabricated restroom building, parking, and electrical and lighting improvements.	$420,596	4/7/2016
Fairwood Park	Development of a new 30-acre park to include athletic fields, playground, picnic shelter, restroom building, amphitheater, loop trail, and parking.	$2,444,292	6/26/2012
Southern Regional Technology and Recreation Complex	Development of a new technical and recreation center complex that includes a 36,000 square foot building. Building systems include a commissioned geothermal well field and state-of-the-art telecommunications and security systems. Site amenities include sidewalks, parking, regulation soccer/football fields, and provisions for a future track.	$17,291,128	4/5/2013
Kentland Community Center	Development of a new community center. Originally, the project was a renovation, but after a review by an architectural and engineering firm, a new building was constructed since the firm determined that it would have been more expensive to bring the original building up to code.	$12,292,490	Temporary Use and Occupancy Certificate was not issued as of 6/10/2016
Palmer Park Community Center	Renovate the existing gymnasium including a classroom and fitness room. Add new space that includes storage, offices, restrooms, and a gym.	$6,571,932	9/28/2015
	Total Expenditures	$39,020,438	

Source: M-NCPPC – Prince George's County Records

TABLE 4
Additional Projects Selected by DPR and Subject to Limited Review
Office of Legislative Audits Review

Location	Project Description	Expenditures (Through 6/10/2016)	Final Invoice Date*
College Park Airport	College Park Airport Operations building, a two-story 12,815 square foot expansion.	$5,198,919	Not approved as of 6/10/2016
Wells-Linson	Replace the ice rink roof and other additional work to the building as well as renovations to the existing building and pool.	$5,056,403	4/9/2015
Lincoln Vista Park	New park-recreation building.	$1,386,176	Not approved as of 6/10/2016
Walker Mill Regional Park	Splash pad, parking lot lighting, playground, and skate park.	$8,981,762	8/26/2015
Watkins Regional Park - Wizard of Oz Playground	Wizard of Oz themed playground at Watkins Regional Park.	$1,781,302	6/30/2015
	Total Expenditures	$22,404,562	
* Final Invoice Date represents when a construction contract is closed.			

Source: M-NCPPC – Prince George's County Records

Fieldwork and Agency Response

We conducted our fieldwork from March 2016 to November 2016. M-NCPPC Prince George's County DPR's response to our findings and recommendations is included as an appendix to this audit report. As prescribed in the State Government Article, Section 2-1224 of the Annotated Code of Maryland, we will advise M-NCPPC Prince George's County DPR regarding the results of our review of its response.

Conclusions

Due to the lack of complete project documentation, we were unable to determine the extent to which Maryland-National Capital Park and Planning Commission (M-NCPPC) – Prince George's County Department of Parks and Recreation's (DPR) capital projects, on an overall basis, have experienced completion delays or cost increases, which was the objective of the audit. Our audit did find lengthy timeframes between project initiation and completion for five projects tested in detail, although the costs for those projects were within their budgets.

In addition to the project documentation problems, we did identify other deficiencies in DPR's administration of its capital program that precluded effective monitoring of project status and completion. Specifically, there was a lack of formal policies and procedures governing DPR's capital planning and project management operations. Furthermore, DPR's Capital Improvement Program (CIP) documents did not contain certain project information to promote clarity and transparency regarding the scope and status of individual projects. Finally, DPR did not fully use its project management system to monitor project activities and costs or to retain critical project and contract documents. Consequently, documentation was not consistently maintained to demonstrate that projects were being actively overseen and monitored from initial planning to construction completion.

Our review of available documentation for five projects, with costs totaling approximately $39 million, of which two were selected based on legislative interest, found project timespans ranging from 7 to 12 years, which appeared to be long. We could not determine if these lengthy timespans met expectations because project time schedules were not established for any of these projects. Furthermore, project documentation was sometimes sparse, which precluded obtaining an understanding of the actual project management activities occurring at various times throughout the project's life cycle. Ultimately, four of these projects were completed within each's financial budget and expenditures for the fifth incomplete project was within budget as of May 2016.

Unlike M-NCPPC – Montgomery County operations, DPR had not established formal policies governing project planning, construction, and related monitoring activities. For example, DPR had not formalized the

- planning processes for collecting and maintaining relevant project background information and community input, defining project scope, preparing project schedules, and preparing cost estimates;

- project design and construction management policies and procedures for reviewing design plans and construction schedules, performing construction site inspections, evaluating change orders, and documenting project management activities; and

- management oversight of project status.

Project management activities for individual projects could not be effectively monitored because DPR did not fully use its project management system nor were any comparable manual processes in place. DPR had not established guidance stating management's expectations for project management documentation in general or how the system and its available functionality should be used to document project monitoring activities and retain important project and contract documents. The system was not used to develop project timelines nor routinely archive project documentation, such as contract and inspection documents. Consequently, the system's reporting features, which could provide project life-cycle information and cost data, was not used for monitoring and oversight purposes by DPR management and the Prince George's County Planning Board.

DPR represented that staffing limitations contributed to delays in starting and overseeing project work, especially during the period the aforementioned five projects were active, when the size of the CIP increased dramatically. DPR, however, had not established workload standards to determine the staffing resources needed based on the nature and size of proposed projects. Although staff increases were obtained and certain organizational and managerial changes were more recently initiated, DPR indicated those latest efforts have been hampered by employee turnover.

Our review of site inspections performed for the five projects tested disclosed the inspection results for four projects were not routinely recorded in the project management system. For one of those four projects, inspection documentation was also not consistently prepared during the entire construction phase. The need to centrally record inspection results was particularly evident in one case in which the inspection reports were lost because the project manager's computer had failed.

Many contractor proposed change orders did not appear to have been approved timely and documentation was not consistently prepared to

evidence that proposed change order cost increases or time of performance extensions were verified. We noted that for 66 of 74 change orders identified for the 5 projects tested, with cost increases totaling $4.6 million, the final approval was secured an average of 46 days after the initial approval of the DPR project manager. Final approval for 31 change orders occurred after the time of performance of the contract had expired; yet work continued after that date.

We also found that contractors frequently did not complete their work within the timeframes specified in the contracts and DPR's actions to hold contractors accountable, such as pursuing liquidated damages as provided for in contracts, were not always evident. Each primary construction contractor for the five projects tested had exceeded its contractually stipulated time of performance for periods ranging from 5 to 27 months (even after considering time extensions for approved change orders). DPR took certain actions against three of these contactors, but not the other two contractors.

Given our targeted approach for selecting the five projects for testing, we also reviewed selected activities for five other projects with costs totaling $22.4 million that were selected by DPR management. We found similar issues related to project length, contractors exceeding times of performance, and DPR delays in approving change orders.

Findings and Recommendations

Capital Planning and Project Management

Finding 1
Prince George's County Department of Parks and Recreation (DPR) lacked formal written policies and procedures for capital project management.

Analysis

DPR had not developed formal written policies and procedures governing its capital planning and project management operations. Some informal guidance was developed; nevertheless, staff were not provided with comprehensive formal guidance for (1) planning projects, including establishing project schedules and budgets; (2) monitoring construction, including inspection of work; and (3) documenting project oversight activities. As identified in our findings pertaining to the projects we reviewed, information about key project activities, such as the frequency and thoroughness of inspections (see Finding 5) and the reasons for lengthy project completion (see Finding 4), was either lacking or was inconsistently maintained.

Project Planning

DPR did not have capital project planning policies and procedures in place to formalize the processes of collecting and reviewing relevant background information and community input, defining project scope, preparing project schedules (including the related construction), and preparing final cost estimates. Further, for each of the five projects tested, we found that DPR did not create an overall project schedule with timelines and milestones for expected project progress.

Without an overall project schedule, including milestones, which is a critical planning outcome, DPR's ability to effectively monitor the timeliness of project work, readily identify delays, and quickly remediate the related problems to avoid adverse situations, such as incurring additional costs, was significantly impaired. It can also be difficult to proactively monitor and hold contractors accountable for untimely completion of work.

Due to the lack of a schedule for each project, we were unable to determine the extent to which projects met or exceeded expected milestones and completion dates, which was integral to our audit objective. Nevertheless, 7 of the 10 projects we tested and reviewed took from 4.8 to 12 years from when they were substantially funded to when construction was completed (or

June 10, 2016, if the project was not yet completed). For the remaining three projects we were unable to determine when they were substantially funded. We calculated the total project time for these three projects from the date of the first documented action (when planning began or when the first request for proposal was issued) until construction was complete, which was seven months to almost eight years.

Monitoring of Design and Construction

DPR did not develop project design and construction management policies and procedures to formalize the processes of reviewing design plans and the initial construction schedule, performing construction site inspections, performing site visits by the construction manager and other key personnel, and conducting ongoing progress meetings. DPR lacks procedures to guide architects, construction managers, inspectors, and other personnel in performing and documenting their monitoring of a project. Additionally, since there is no standard inspection form; this causes inconsistencies in the amount and type of information reported by those performing inspections. While DPR has procedures related to change orders, they do not detail how to review and approve contractor-proposed change orders for appropriateness, reasonableness of added costs, and extensions of completion deadlines.

Reporting

Project management best practices state that during a project, progress should be checked and relevant stakeholders notified of the status and any issues on a regular basis. However, DPR does not have formal periodic reporting of project status to upper management and the Prince George's County Planning Board. The lack of a formal reporting process makes it difficult for management to identify issues affecting project timeliness and costs, and ensure those responsible for resolving problems have taken appropriate and timely mitigation actions. A contributing factor to the lack of reporting was DPR's failure to fully utilize its project management system (Finding 3).

Post-Completion Analysis

An important aspect to capital project administration, according to project management best practices, is conducting a review to identify any issues encountered during the project's progression from planning to completion, from which the entity can learn. For example, such reviews could evaluate the timeliness of project completion and identify the contributing factors, so that delays can be avoided for future projects. Due to the lack of such a process, DPR management was unable to provide project specific explanations and documents regarding the specific circumstances contributing to long completion timeframes for most of the 10 projects we tested or reviewed.

We found that M-NCPPC – Montgomery County had established written policies and procedures addressing various aspects of a project (including those noted above) and the related key steps, identifying who should perform the step, what the step entails, how it is to be completed, who makes related decisions, how the step is tracked/monitored, and the period in which it should be completed. Also, the *Government Finance Officers Association's Best Practices* recommends that policies and processes for capital project monitoring and reporting be established.

The failure to have written procedures in the areas mentioned above reduces the assurance that projects will be completed properly and without undo delays. The lack of written procedures can also result in inconsistent performance by architects and construction managers, which can increase project risk, and the failure to prepare and retain project documents that may be needed for any actions against contractors.

Further, the absence of formal policies, periodic reporting of project activities, and the failure to fully utilize the project management system (see finding 3) are fundamental organizational issues that collectively preclude effective oversight of the capital planning and project management operations by Prince George's County Planning Board and DPR executive management. Consequently, those in authority may not be aware of performance issues or circumstances contributing to project length.

Based on our observations, the Planning Board appears to rely on DPR executive management to monitor capital project progression, since there is no routine and formal mechanism to report project activities to the Board. We were advised by the Board Chair that the Board received periodic informal reports on CIP projects from DPR executive management, and the Chair separately received project updates as part of certain management meetings.

However, there was no indication that the DPR executive management, who are appointed by the Planning Board, was formally monitoring projects. DPR executive management advised that it had received verbal and other types of reports on CIP projects when requested. Routine monitoring of those who are directly responsible for managing and directing the DPR capital program (that is the Park Planning and Development group) is necessary to assess performance and to hold them accountable.

Recommendation 1

We recommend that DPR, in consultation with the Prince George's County Planning Board,

a. develop and implement formal written policies and procedures for capital planning and project management, including roles and responsibilities for those involved with planning, construction management, project monitoring, and construction closeout; and
b. establish performance expectations and reporting mechanisms to monitor the effectiveness of the capital planning and project management operations.

Finding 2

The annual Capital Improvement Program (CIP) documents did not contain certain project information to promote clarity and transparency, and may not have met a certain statutory requirement.

Analysis

Prince George's County DPR's CIP documents did not contain certain project-specific information to promote clarity and transparency, and the CIP may not have met a statutory provision that requires the inclusion of construction schedules. Consequently, within the CIP, it was difficult to distinguish certain individual projects and related funding and to ascertain the extent of the project work and the construction timeline.

Information for Individual Projects Was Combined

Individual project information was not presented in the CIP in a manner that enabled the easy identification of funding for specific projects or the effective monitoring of project costs and status. Although Project Description Forms (PDFs), which Prince George's County requires all applicable County agencies to use when a CIP is involved, were prepared, these were typically created for each of DPR's various sites or facilities that could and frequently did have several ongoing projects.

In our opinion, DPR should have provided supplemental documents to distinguish individual projects, since the combining of various project activity under one PDF makes it difficult to determine the amount of funding requested or approved for each specific project at a single location, or when the funding was approved for the specific projects. Funding information for individual projects, as well as individual project progress and costs to date, are obscured when multiple projects are simultaneously active under the same PDF. Regarding the matching of costs and funding, there is a fluidity in the authorized funding (or budgets) of projects since if one project within the

PDF is going over available funding DPR can reduce the funding of another project within the same PDF.

For example, the PDFs related to the 10 projects we tested or reviewed included an additional 22 projects within the same PDFs. We were unable to determine the approved funding amounts and initial funding dates for 2 of the 10 projects we reviewed, as those 2 related PDFs included 11 of the 22 projects. For the remaining 8 projects, we were able to estimate the funding amounts since those were the only actively funded projects at that time for those PDFs, but for one of these, we could not determine the initial funding date. Despite these issues, we are reasonably assured that overall expenditures of approximately $39 million for the 5 projects we originally selected for testing did not exceed the approved funding levels of approximately $41.5 million as of June 10, 2016.

Project Descriptions Were Vague

Each PDF contains an area for descriptions of the project(s) included; however, they were brief and lacked details regarding the scope and size of the planned work. Descriptions that are more complete could help promote, among stakeholders, a common understanding and consensus on the planned work, and aid in evaluating funding levels and project duration during the CIP approval process.

For example, although 4 of the 5 initial projects we tested involved building expansion or construction, the anticipated size of those facilities was not included in the related PDFs. Similarly, for 3 projects, the anticipated size of proposed parking lots was not mentioned. The CIP for other Prince George's County government agencies generally provided more detailed information about their individual projects. For example, PDFs for the school system identified the size of planned facilities.

Required Construction Schedule Was Absent

DPR did not incorporate construction schedules within the CIP for each PDF. The Land Use Article, Section 18-113 of the Annotated Code of Maryland, requires the M-NCPPC – Prince George's County annual CIP to include a construction schedule. DPR advised that it has long-used the expenditure schedule in the PDF as the estimated construction schedule. Therefore, DPR believes it is in full compliance with the law. Nevertheless, DPR agreed that adding supplemental information on the estimated schedule would provide clarification and increased understanding of the status of each project. In our opinion, it is unclear if such expenditure information in the present form (which includes unexpended contract obligations, but not project timelines or key project dates) meets the requirements of the law. The lack of clarity

suggests that the Office of the Attorney General should be consulted on this matter.

The *Government Finance Officers Association Best Practices* document provides guidance for capital project monitoring and reporting. These practices include clearly documenting the status of projects and basing projects on detailed project descriptions and accurate expenditure information. We noted that the CIP for M-NCPPC – Montgomery County included separate PDFs for each project, which generally included more information about the project scope than was contained in M-NCPPC – Prince George's County's CIP.

Recommendation 2
We recommend M-NCPPC - Prince George's County ensure that its CIP includes

a. **supplementary information, as necessary, to identify individual projects and related funding;**
b. **detailed project descriptions to provide more information on project scope and size; and**
c. **construction schedules that meet the requirements of State law, in accordance with advice from the Office of the Attorney General.**

Finding 3
DPR had not established a comprehensive approach to documenting project activities and costs, including the retention of necessary project and contract documents.

Analysis
DPR had not developed formal guidance for staff regarding its expectations for maintaining key project information, including the use of its project management system. Consequently, staff did not fully use the system to effectively monitor project activities and costs, and to electronically retain important project and contract documents. Instead, we found that staff used different approaches with varying degrees of completeness to document project activities.

This situation precluded the use of the system's reporting features, which could provide project life-cycle information, for monitoring and oversight purposes by DPR management and the Prince George's County Planning Board. The general lack of a comprehensive approach to maintaining project information was also the primary reason we were unable to determine the extent to which capital projects undertaken by DPR have experienced

completion delays or cost increases. It also made it difficult to reliably determine the reason(s) for individual project delays (see finding 4).

We identified four capabilities of the system that were not used, or were underutilized by DPR, that individually or collectively could significantly improve project monitoring effectiveness.

Project Timelines

DPR was not using the project management software to create project timelines, which allows users to track the project life cycle. The various tasks for each project from planning to construction closeout can be scheduled into a 'snap shot' of each project. The system organizes the schedule based on tasks that can be determined by the user. When the timeline feature is utilized consistently across projects, it allows management to create reports to determine the current status of projects as well as focus on an individual project timeline.

The lack of project timelines precluded us from determining the extent to which project timeframes (planning, design, and construction) exceeded expectations.

Project Costs

The system contains cost management tools to track, at the project level, certain financial data such as funding sources, budget changes, commitment changes, and expenditures incurred. This information can be captured at various levels (for example, by contract or vendor). However, financial data was not consistently recorded in the system. For example, expenditure data was only recorded, on a limited basis, in the system for one of the five projects we initially selected for testing. DPR's failure to maintain complete financial data precluded effective monitoring of expenditures for individual projects relative to work completed and project timelines.

We also noted that M-NCPPC - Montgomery County was using the Commission's financial accounting system to track its individual project expenditures, but that DPR had not made use of that capability.

Document Retention

DPR did not use the project management system to routinely store project and construction documents. For example, the system can be used to archive project documents such as plans and maps, permits, material tests results, and inspection reports. Similarly, vendor contracts, change orders, vendor invoices and other contract documents can be retained electronically in an organized manner.

When gathering information for our review of the 10 projects we had to obtain documents and information from multiple sources, which varied between projects. Project information, such as contract details, inspections, and change orders was maintained mostly in paper files and frequently in multiple locations; therefore, it was not easily accessible. Each DPR architect and construction manager decided how the files would be organized and maintained, which contributed to inconsistencies in methods and incomplete records. In some cases, documentation and information attributable to projects managed by former employees could not be located.

Standardized Forms

DPR was not using the system's form building feature that allows users to create customizable forms that would be useful for standardizing project inspection activities and results. There was no standardized form or checklist created that specified the information to be gathered during project inspections. Therefore, inspectors decided the content of inspection reports, which created inconsistencies in the inspection documentation (Finding 5).

The *Government Finance Officers Association Best Practices* document states that capital projects' financial and project activity should be regularly monitored. It also states that systems should be planned and designed to collect, store, and analyze project data to report results that should include appropriate technological solutions for project accounting, scheduling, and reporting as well as a process for controlling and managing project changes. It also states that agencies should strive for consistency and standardized language when compiling information from various sources.

Recommendation 3

We recommend that DPR

a. **fully utilize the project management software system to establish timelines and monitor individual project progress and costs, and to electronically retain important project and contract documents;**
b. **develop a system user manual containing management's expectations of how the system and its available capabilities and functionality should be used; and**
c. **use the system's form building capabilities to standardize information gathering for critical functions, such as inspections.**

Analysis of Selected Project Activities and Related Issues

Background

We reviewed available documentation for five projects to identify timeframes for three phases of each project (that is, project planning, design, and construction) to try to determine the reasons for, or circumstances contributing to, project timeframes that appeared to be lengthy. For five additional projects selected for us by DPR, we only reviewed the timeframes for a portion of the planning and construction phases.

For the purposes of our review of individual projects, we defined the various project phases as follows:

Project Planning – the timeframe from the date the project was substantially funded to the date the architectural/engineering (A/E) firm was given the notice to proceed (NTP) on design. During this period, DPR gathers and prepares necessary information, such as a concept design, to issue a request for proposal for A/E firm services, selects an A/E firm to design the project, and instructs the firm to begin work.

Design – the timeframe between the date the selected A/E firm was issued a NTP for design work to the date the construction NTP was issued. During this phase, various permits are obtained, the A/E plans and specifications are accepted so that an invitation for bids can be issued and a construction contractor can be selected.

Construction – the timeframe between the date the construction NTP was issued to the selected construction contractor to the date the temporary use and occupancy certificate was issued by the local government indicating substantial completion.

For many of these projects, there were multiple A/E firms and contractors. Our analysis of project timeframes typically focused on the A/E firm primarily responsible for project design and the main construction contractor.

Finding 4
The duration of the five projects initially tested was long, ranging from 7 years to 12 years. According to DPR, there were lengthy periods where Park Planning and Development (PPD) staff levels did not keep pace with increases in its CIP; however, DPR had not developed workload standards to identify staff resource needs, especially during fluctuations in project activity.

Analysis

The duration of the five projects we tested appeared to be long, with time periods from the dates of substantial funding to completion ranging from 6.8 years to 12 years for four of the projects.[1] The extent to which the projects' durations exceeded expectations could not be determined since schedules were not established when projects were initiated. Furthermore, project documentation was sometimes sparse, which precluded obtaining a full understanding of project activities occurring at various times over those extended periods (see Finding 3).

As discussed later in this finding, DPR represented that PPD staffing limitations contributed to delays in starting and overseeing project work. Also, we noted instances in which contractors exceeded their contractually required timeframes for design (engineering) or construction work, and DPR did not timely supply information to contractors. For two large projects, project duration also appeared to be affected by dramatic scope changes and the need to secure additional funding over multiple years after the initial approvals in the CIP.

After reviewing the available project documentation, we offer the following observations in an attempt to provide some insight on the planning, design, and construction timeframes.

Project Planning

The planning phase for 4 of 5 projects ranged from 30 months (2.5 years) to 6 years as measured from the date the projects were substantially funded (as described in the Audit Scope, Objective, and Methodology section) until the design NTP was given to the architectural/engineering (A/E) firms. We were unable to determine the length of the planning phase for the fifth project since documentation to substantiate when funding was available could not be located (see finding 2). For this project, we noted that the A/E firm's NTP was issued almost 8 months after the RFP for A/E services was issued.

[1] A listing of the five projects, with descriptions, costs, and Office of Legislative Audits determined timelines can be found in Exhibit 1 "Timeline of Project Milestones." For one of the five projects, total project duration could not be calculated, since we were unable to determine from the available records the date when the project was substantially funded.

For 3 of the 4 projects, we could not determine when DPR had actually started work on the projects, such as developing concept plans and obtaining any community input, and therefore, the actual duration of the initial portion of the planning phases was unknown. The earliest documentation available for each of these projects was the date the request for proposals (RFP) was issued for A/E firms, which occurs later in the planning process. From the dates of substantial funding until RFP issuance, it took between 2.5 to 5.3 years for these 3 projects. For the fourth project, available documentation suggests that DPR started project planning within two months after substantial funding was obtained. Nevertheless, it took 2.5 years to issue an RFP for A/E services, with lengthy periods of no apparent significant activity between events, such as completion of the concept plan, holding two community meetings, and certain site work.

Design

The design phase for the 5 projects ranged from 2 years to 8 years as measured from the dates the A/E firms were given NTP with design until the dates construction contractors were given NTP. For two projects with design phases lasting 2 years and 2.5 years, available documentation indicated that certain A/E firms on the projects exceeded their contractually required design delivery timeframes. For one of these projects, two A/E firms exceeded certain timeframes by 5 months and 16 months, although some portion of these timeframes were attributable to DPR delays in delivering certain project information. For the other project, an A/E firm submitted design plans 6 months late. Additional delays were attributable to having to select a second construction contractor because the original contractor removed itself from the project because the NTP was not issued by DPR within 90 days of the contract award.

For three projects, the design phases lasted 2.8 years, 5.5 years, and 7.8 years, respectively, during which numerous A/E change orders related to design work were being processed. We could not determine for these three projects whether design delivery timeframes had been established and exceeded; nevertheless, the timeframes for the design phases for two of these projects appear lengthy. For example, although one project was initially planned as a facility renovation, the A/E firm determined that due to the excessive costs to address current building codes a new community center should be built instead. This decision was finalized 15 months after the NTP. After the change order for the new design was executed, eight other A/E change orders were processed over 4.25 years primarily relating to additional project design changes, which all contributed to the 7.5 years design phase.

Construction

For the five projects tested, with combined construction contractor payments totaling $30.3 million, we noted that contractors exceeded their contractually required time of performance (TOP), considering the original contract term and any change orders. As of June 2016, four of the five projects tested were deemed completed since temporary use and occupancy certificates were issued. The duration of the construction phases for these projects (from contractor NTP to issuance of temporary use and occupancy certificates) ranged from 16 months to 37 months. The fifth project was still in progress two years after the construction NTP was issued.

The construction related time overruns identified for each project ranged from 3.9 months to 21.8 months.[2] We were unable to identify the cause(s) for delays on two projects (based on the existing project records) and the delay on a third project appeared to relate to contractor performance issues. The delays on the two remaining projects appeared to be attributable to change orders that did not expand the TOP. For example, the primary contractor for one project, with payments totaling $12.2 million, exceeded its TOP (14.8 months) by 21.8 months. While some change orders were approved by DPR after the TOP period elapsed, those change orders generally did not include additional TOP days. Further, many change orders proposed by the contractor for additional costs were not adequately reviewed by DPR (see Finding 6).

Review of an Additional Five Projects Selected by DPR

Our review of certain aspects of the five projects selected by DPR identified issues regarding certain planning and construction activities, similar to those found from our initial test of five projects. Regarding planning, we attempted to determine how long it took DPR to begin its planning (marked by the issuance of the request for proposals or RFP) after substantial funding was obtained and found, similar to the initial five projects, substantial gaps between the two events for two projects. From the estimated dates of substantial funding until RFP issuance, it took 12 and 28 months, respectively, for these two projects with collective budgets of $7.7 million.

For the construction phase, we determined whether the main construction contractors met TOP requirements. For three of the five projects, we noted that construction contractors exceeded their contractually required TOP, considering the original contract term and any change orders. As of June 2016, the contractors for these projects, with costs to date of $6.4 million, exceeded their TOP by 9.2, 11.2, and 15.9 months. Further, two of these

[2] In most cases, these delays are shorter than the actual overrun time since contractors may need to perform additional work after temporary use and occupancy certificates are issued.

three projects had not been completed at that time; therefore, the excess time could be higher if subsequent change orders have not increased the TOP.

DPR Attributed Lengthy Active Project Periods to Staffing Issues

DPR believes that insufficient staffing levels in PPD have contributed to past project delays; however, since DPR has not developed workload standards to determine the staffing resources needed based on the nature and size of proposed projects, we were unable to assess the reasonableness of this assertion. The lack of workload standards, coupled with the lack of project schedules, makes it difficult to manage projects to ensure timely completion, especially when there are fluctuations in project activity.

DPR indicated staff resources did not keep pace with the significant increases in its capital budget. We were advised that from fiscal years 2003 to 2010, DPR's capital budget appropriation increased from $12 million to $99 million. During that period, additional PPD staff positions were received, primarily during fiscal year 2009 when 9 positions were added; however, DPR indicated that while helpful, that staffing was not fully adequate. DPR also indicated that certain organizational and managerial changes were initiated in fiscal year 2015, but those efforts have been hampered by turnover.

Finally, in the last few years, DPR has contracted for project management services to help manage larger projects as well as hired contractual staff to manage projects. We were advised these actions have been beneficial but supervision of contractors and its staff remains a concern, since there are limits to the number of projects the supervisors can effectively oversee.

Recommendation 4

We recommend that DPR develop staffing workload standards to determine the necessary resources for properly administering and overseeing projects and that this information be used for strategic planning of project work and deploying staff resources.

Finding 5

Site inspection results were not routinely recorded in the project management system and, for one project, the inspection documentation was not consistently prepared during the entire construction phase.

Analysis

The results of site inspections for four projects tested were not routinely recorded in the project management system, and for one of the four projects,

inspection documentation was not consistently prepared. For the fifth project tested, inspection documentation was consistently prepared and recorded in the system. As previously mentioned, DPR had not established formal policies and procedures for project recordkeeping, including conducting and documenting inspections, and reviewing the results by supervisors.

Recording of all inspection results in the project management system not only would provide a central repository for this essential project documentation, but can also enhance document security. For one project, inspection documentation, which for the majority of the documentation was only maintained on the construction manager's computer, was lost when this computer failed. Two other projects that had site inspections performed by a third party, the reports were prepared using standardized paper forms, but were not recorded in the system.

For the remaining project there were no documented site visits until October 2015 although the construction NTP was issued in December 2014. During that time, there were certain contractor performance issues, including the improper installation of a sewer line for a restroom, which was identified in March 2015, but not corrected until 7 months later. From October 2015 through June 2016, there were 14 documented site visits for this project. The frequency or timing of these visits may not have been sufficient as additional installation problems were identified that PPD required the contractor to rectify, thus extending the project completion date. Although the inspection results for these 14 site visits were documented in the project management system, the information recorded varied in detail. Some notes only provided a brief description of work completed, while others included more informative details (such as weather, number of or identity of the workers on site, completed items, and items in progress). Finally, there was no indication that the project manager's supervisor monitored the performance of the inspection activity.

Maintaining consistent and thorough documentation of site visits is an important method of recording progress for management as well as a tool to document any issues related to contractor performance in terms of quality, costs, and timeframes. Such reports can also be used by management to help ensure inspectors are performing their duties timely and appropriately, and are making good project management decisions.

Recommendation 5

We recommend that DPR specify in its policies and procedures

a. the desired frequency of site inspections;

b. the information to be recorded for each inspection;

c. the method for retaining inspection results, such as within the project management system; and
d. the process for supervisory review of inspection results.

Finding 6
Many contract change orders did not appear to have been approved in a timely manner. DPR also did not consistently prepare documentation of its assessment of contractor proposed change order cost increases or extensions of time for work performance.

Analysis

Many DPR change orders for the five projects we tested did not appear to have been approved in a timely manner. Also, DPR did not consistently prepare documentation to evidence its verification of contractor proposed cost increases or extensions of time for work performance. As previously mentioned in Finding 1, DPR had not established comprehensive policies and procedures for processing change orders, such as delineating the requirements for reviewing, documenting assessments of, and approving change orders, including the targeted timeframe for the entire process.

For the five projects we selected for testing, DPR had processed 74 change orders from March 2008 through June 2016 totaling $4.8 million, including 32 change orders totaling $3.7 million that increased the time or contract amount by 20 percent or more or were greater than $75,000. Our review of these 74 change orders for general timeliness of approval and the 32 that we specifically reviewed in detail disclosed the following:

- The processing of change orders from initial approval by the DPR architect or the engineering and construction manager to final approval by the M-NCPPC Executive Director in many cases took longer than 14 days[3]. Only 8 of the 74 change orders (valued at $250,000) were approved within 14 days. For the remaining 66 change orders valued at $4.6 million, it took an average of 46 days to obtain all approvals. Final approval for most (48) of these change orders took longer than one month, including three instances that took 3.5, 3.5, and 9.6 months to obtain all DPR and M-NCPPC approvals.

[3] Since there was no DPR time standard for the approval of change orders, nor any identified industry standard, we judgmentally used the 14 day period for assessing timeliness. The actual time to process change orders was likely much longer than the periods we identify in this finding since they do not include the period from when contractor's change order proposal was submitted, a date that was not consistently recorded or tracked by DPR, until it was initially approved by the DPR architect or construction manager.

According to DPR staff, a contributing factor for the extensive time in processing change orders is the multiple levels of approvals (up to 14) needed for every change order. We were unable to determine the impact of the length of time taken to approve change orders or whether work began prior to approval or after approval due to the lack of available records. However, untimely processing of change orders could lead to delays in project progress and issues during payment if the related change order is not approved or is revised during the approval process.

- Final approval for change orders occurred after the TOP of the contract had expired; yet work continued after that date. Specifically, 31 of the 74 change orders included in our review were approved after the TOP for the contract had expired (averaging 11 months after the approved completion date).

- The DPR architects and the engineering and construction managers did not always document their efforts to assess whether change orders proposed by A/E firms or construction contractors to increase TOP or costs were appropriate or consistent with industry practices. Those DPR employees' review of change orders typically only included a statement stating that it was reviewed for merit and pricing and found to be in accordance with standard industry pricing, without support showing how they had arrived at these conclusions. In contrast, we noted that a third party construction manager hired by DPR to oversee one project had prepared documentation regarding the review of proposed change orders and cost negotiations with the contractor.

  We determined that for 16 of the 32 change orders reviewed in detail, there was no documentation that DPR formally assessed the reasonableness of the days added to either the A/E firms' or contractors' TOP. The 16 change orders related to all 5 projects and resulted in the collective addition of 148.9 months, an average of 9.3 months per change order. Twelve of these 16 change orders were executed with A/E firms and were primarily associated with changes in project design work. Unreasonable TOP periods can unnecessarily extend the project schedule.

  In addition, the DPR architects and the engineering and construction managers did not maintain evidence that proposed change order costs for 20 change orders totaling $1.3 million were verified. For example, DPR did not document its assessment as to the reasonableness of additional hours A/E firms had proposed to perform additional work. For the one project reviewed (unrelated to the 20 change orders) in which DPR contracted with a third party construction manager, we noted that this

individual provided DPR with its detailed research in verifying increases in construction change order prices and TOP.

- Of the five projects selected by DPR for our review, we found similar issues regarding the timeliness of processing change orders. For 11 of 15 change orders processed for four of these projects totaling $957,000 (no change orders were processed on the other project), the approvals occurred after 14 days, including 9 change orders that took longer than 30 days to approve. The average approval time for the 11 change orders was 66 days. Also, change orders were often approved after the date specified for completion of the work that was the subject of the change order. Specifically, 10 of the 15 change orders included in our review were approved after the original budgeted time for the contract had expired (averaging 8 months after expiration).

Recommendation 6
We recommend that DPR
a. describe in its change order policies and procedures the steps to be taken for reviewing change order proposals for reasonableness and the documentation to be maintained to demonstrate that changes to TOP and contract costs were deemed appropriate, and
b. determine the targeted timeframe for obtaining final change order approvals that also considers the necessity of all currently required levels of approval and helps ensure that approvals occur before the original TOP subject to the change order ends.

Finding 7
Contractors frequently did not complete their work within the timeframes specified in their contracts and DPR actions to hold contractors accountable were not always evident.

Analysis
Contractors frequently did not complete their work within the timeframes specified in the contracts and DPR's actions to hold contractors accountable, such as pursuing liquidated damages as provided for in contracts, were not always evident. DPR had not formally developed guidelines regarding the progressive steps to be taken to address untimely contractor work performance.

Specifically, there was no indication that actions were taken with respect to untimely performance for two construction contractors or three A/E firms commented upon in Finding 4 with design excess time ranging from 5 months

to 23 months. The expenditures for these five contractors totaled $12.7 million as of June 2016. We did note, based on available documentation, that DPR took legal actions regarding the performance of the other 3 construction contractors identified in Finding 4 for which TOP was exceeded by 4 contractors for periods ranging from 5 months to 22 months. The legal action included assessing liquidated damages against 3 of the contractors with delays for poor and late performance.

The contract documents for A/E and construction work provide the number of calendar days from the notice to proceed date until the final completion of work date. The contract documents further state that M-NCPPC may deduct from the final payment any liquidated damages, but not as a penalty, for each calendar day delay after the final completion date of the work.

Untimely project work can ultimately delay the delivery of the final project, add unnecessary costs, affect overall workload, and deprive the public of facilities for longer than necessary. Holding contractors accountable for significant untimely performance would help ensure more timely completion of work on current and future projects, and the assessment of liquidated damages provides DPR the ability to recover costs/losses attributable to untimely performance.

Recommendation 7

We recommend that DPR

a. develop formal guidelines regarding the progressive steps to be taken to address untimely contractor work performance, and
b. assess liquidated damages for untimely or non-performance or document why assessment of liquidated damages is not appropriate.

Exhibit 1
Timeline of Project Milestones

Project and Description	Total Project Expenditures (through 6/10/2016)	Date Project Substantially Funded	Date Architectural/ Engineering (A/E) Notice to Proceed (NTP) Issued	Months Between Funding and Planning	Notes Related to the Lapse of Time	Construction NTP issued	Months Between A/E and Construction	Notes Related to Lapse of Time	Temporary Use and Occupancy (U & O) Issued	Months Between Construction NTP and Temporary U & O	Notes Related to the Lapse of Time	Total Time to Complete the Project (Substantially funded to Temporary U & O)
Foxhill Park- Restroom building, electrical and lighting improvements	$ 420,596	7/1/2009	4/12/2012	33.9	.	11/21/2014	31.8	Two A/E firms exceeded their contractually required design delivery timeframes by 5 and 27 months.	4/7/2016	16.8	Primary contractor exceeded its TOP by 9.2 months, during this time there were several contractor performance issues, which required attention.	6.8 Years
Fairwood Park - New park development	$ 2,444,292	7/1/2005	9/28/2008	39.5	During this time available documentation indicated that almost 10 months elapsed between the completion of the concept plan drawing and a community meeting. There was another delay of 9 months between a community meeting and issuance of the A/E RFP.	9/20/2010	24	An A/E firm submitted design plans 6 months late	6/26/2012	21.5	Primary construction contractor exceeded its TOP by 4.9 months. Due to a lack of documentation, the circumstances attributing to the delay were not available.	7 Years
Southern Regional Tech/Rec Complex - New complex	$ 17,291,128	7/1/2001	6/11/2007	72.4		4/5/2010	34.3		4/5/2013	36.5	Primary construction contractor exceeded its TOP by 21.8 months. While some change orders were approved by DPR after the TOP period elapsed, those changes orders generally did not include additional TOP days.	11.8 Years
Kentland Community Center - New community center	$ 12,292,490	7/1/2004	12/23/2006	30.2		7/14/2014	92		*	23.2	This project was still under construction as of June 10, 2016, as of that date the contractor had exceeded their TOP by 3.9 months.	12 Years
Palmer Park Community Center - Code compliance/ renovation	$ 6,571,392	We were unable to determine when the project was initially funded (finding 2).	8/2/2007	n/a		3/26/2013	68.8		9/28/2015	30.5	Primary construction contractor exceeded its TOP by 18.4 months.	Unable to determine when project was substantially funded.

APPENDIX

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
Department of Parks and Recreation, Prince George's County
6600 Kenilworth Avenue Riverdale, Maryland 20737

Director's Office - 301-699-2582; FAX 301-864-6941; TTY 301-699-2544

January 8, 2018

Thomas J. Barnickel III, CPA
Legislative Auditor
Department of Legislative Services
Office of Legislative Audits
301 West Preston Street
Room 1202
Baltimore, Maryland 21201

Dear Mr. Barnickel:

Enclosed please find the Maryland-National Capital Park and Planning Commission Department of Parks and Recreation, Prince George's County response to the draft performance audit report on M-NCPPC Prince George's County, Evaluation of Capital Project Management Practices dated December 2017. As requested, an electronic copy of this letter in MS word form has been transmitted to your office via e-mail address response@ola.state.md.us, (file name: M-NCPPC DPR Response to OLA Draft Report).

If there are any questions, please do not hesitate to contact me at 301-699-2505 or via e-mail at darin.conforti@pgparks.com.

Sincerely,

Darin Conforti, Acting Director
Department of Parks and Recreation

Enclosure

cc: The Honorable Elizabeth Hewlett, Chair, Prince George's County Planning Board
Ms. Patricia Colihan Barney, Executive Director, M-NCPPC
Mr. Adrian Gardner, General Counsel, M-NCPPC
Ms. Renee Kenney, Inspector General, M-NCPPC
Mr. Joseph Zimmerman, Secretary-Treasurer, M-NCPPC
Ms. Debbie Tyner, Deputy Director of Area Operations, M-NCPPC DPR
Ms. Roslyn Johnson, Deputy Director of Facility Operations, M-NCPPC DPR
Mr. Alvin McNeal, Acting Division Chief, M-NCPPC DPR-PPD

On behalf of the M-NCPPC Department of Parks and Recreation, Prince George's County (DPR), I thank you and your legislative audit team for the professionalism and thoroughness with which they conducted the evaluation of our capital projects management practices. The draft report contains insightful analyses and recommendations that will enhance DPR's management of the capital improvement program (CIP).

Overall, it is reassuring that the audit concluded that the capital projects tested were completed within budget. With a workload of 168 approved projects totaling more than $600 million in cumulative budget authority, DPR strives to manage each CIP project within budget. We are pleased to see that we achieved this.

At the same time, we recognize that the total time to complete some projects is lengthy, as identified in the audit. As the audit illustrates, most of the time spent on projects occurs before the construction phase begins. In our experience, the length of time to complete a project is influenced by many factors, which can be unique to each project. Throughout a project, DPR works closely with Prince George's County Councilmembers, State Delegates and Senators, and community groups to deliver CIP projects that meet the community's needs. Often the process evolves and shifts organically from gathering fluid community ideas, creating a concept, developing a design, securing sufficient budget appropriation, competitively bidding a contract, and eventually construction. Once, we have achieved final stakeholder consensus and funding for the design and construction, the time to complete a project is much shorter than the 7 to 12 years identified in the audit report.

For the five projects that received detailed testing, the average time from construction to completion was just over two years. Given the size and complexity of some of the projects tested, DPR does not find this construction duration to be unreasonable; but, we recognize that there are opportunities to improve and enhance the management of projects so that they are delivered as efficiently and effectively as resources allow, including the challenge of aligning the expectations of stakeholders with timely delivery.

Accordingly, the audit recommendations to enhance the management controls for the CIP will be instrumental in helping DPR manage a demand for CIP projects that exceeds its capacity to deliver. The size of the CIP reflects DPR's success as a nationally acclaimed agency that has been awarded the Gold Medal for Excellence in Parks and Recreation by the National Recreation and Parks Association six times, more than any other parks and recreation agency in the United States. This success is the direct result of the strong public support and demand for park and recreation services, which are supporting a high-quality of life for the residents of Prince George's County. Enhancing our policies and procedures to achieve better project planning, scheduling, monitoring, and reporting is a sound and prudent approach. Therefore, in conclusion, we agree with the seven findings and recommendations of the audit report. Below is the specific response and action plan for each one.

Finding 1
Prince George's County Department of Parks and Recreation (DPR) lacked formal written policies and procedures for capital project management.

Recommendation 1
We recommend that DPR, in consultation with the Prince George's County Planning Board,

a. **develop and implement formal written policies and procedures for capital planning and project management, including roles and responsibilities for those involved with planning, construction management, project monitoring, and construction closeout; and**
b. **establish performance expectations and reporting mechanisms to monitor the effectiveness of the capital planning and project management operations.**

DPR agrees.

a. DPR is currently developing policies and procedures.
b. Performance expectations and reporting requirements will be incorporated into the policies and procedures.

Full implementation of recommendation 1 is planned to take place within the next 12 to 18 months.

Finding 2
The annual Capital Improvement Program (CIP) documents did not contain certain project information to promote clarity and transparency, and may not have met a certain statutory requirement.

Recommendation 2
We recommend M-NCPPC - Prince George's County ensure that its CIP includes

a. **supplementary information, as necessary, to identify individual projects and related funding;**
b. **detailed project descriptions to provide more information on project scope and size; and**
c. **construction schedules that meet the requirements of State law, in accordance with advice from the Office of the Attorney General.**

DPR agrees.

a. DPR is currently developing supplemental information to increase understanding and documentation on individual projects.
b. The supplemental information being developed will include more detailed descriptions on scope and size of projects.
c. Project and construction schedule information will be enhanced and updated as necessary in the supplemental PDF information.

Full implementation of recommendation 2 is planned by the end of 2018.

Finding 3
DPR had not established a comprehensive approach to documenting project activities and costs, including the retention of necessary project and contract documents.

Recommendation 3
We recommend that DPR

a. fully utilize the project management software system to establish timelines and monitor individual project progress and costs, and to electronically retain important project and contract documents;
b. develop a system user manual containing management's expectations of how the system and its available capabilities and functionality should be used; and
c. use the system's form building capabilities to standardize information gathering for critical functions, such as inspections.

DPR agrees.

a. DPR utilizes a commercial software product for project management. We are currently establishing standard operating procedures to ensure the consistent use by project managers and management.
b. Standard operating procedures and a manual will be developed.
c. Once standard operating procedures are in place, DPR will focus on maximizing the functionality of a commercial software product to create efficiency and standardization.

DPR will be prioritizing the order of implementation of audit recommendations. Full implementation of recommendation 3 is planned within 18 months.

Finding 4
The duration of the five projects initially tested was long, ranging from 7 years to 12 years. According to DPR, there were lengthy periods where Park Planning and Development (PPD) staff levels did not keep pace with increases in its CIP; however, DPR had not developed workload standards to identify staff resource needs, especially during fluctuations in project activity.

Recommendation 4
We recommend that DPR develop staffing workload standards to determine the necessary resources for properly administering and overseeing projects and that this information be used for strategic planning of project work and deploying staff resources.

DPR agrees with the need to establish workload standards. Such standards will assist with managing the demands of project delivery. DPR is in the process of establishing a comprehensive work program for prior approved CIP projects and future planned projects. Full implementation of recommendation 4 is planned by the

end of 2018. However, the time to deliver a project is influenced by many factors, some out of the direct control of DPR, such as permitting. In addition, the time to deliver a project is influenced by the participatory process used where input is received from many stakeholders, and may change over time. Once project scope is finalized and the construction contract is bid, the time to complete a project averages about two years.

Finding 5
Site inspection results were not routinely recorded in the project management system and, for one project, the inspection documentation was not consistently prepared during the entire construction phase.

Recommendation 5
We recommend that DPR specify in its policies and procedures

a. **the desired frequency of site inspections;**
b. **the information to be recorded for each inspection;**
c. **the method for retaining inspection results, such as within the project management system; and**
d. **the process for supervisory review of inspection results.**

DPR agrees. The policies and procedures developed to implement recommendation 1 will specifically address recommendation 5 items (a), (b), (c), and (d).

Finding 6
Many contract change orders did not appear to have been approved in a timely manner. DPR also did not consistently prepare documentation of its assessment of contractor proposed change order cost increases or extensions of time for work performance.

Recommendation 6
We recommend that DPR

a. **describe in its change order policies and procedures the steps to be taken for reviewing change order proposals for reasonableness and the documentation to be maintained to demonstrate that changes to TOP and contract costs were deemed appropriate, and**
b. **determine the targeted timeframe for obtaining final change order approvals that also considers the necessity of all currently required levels of approval and helps ensure that approvals occur before the original TOP subject to the change order ends.**

DPR agrees.

a. The M-NCPPC Finance Department has a Purchasing Manual that includes general policies and procedures for change orders, which is followed by DPR. DPR has undertaken a review of its internal actions to process a change

order and is in the process of finalizing department policies specific to the processing of change orders for CIP projects.

b. Time standards to monitor the efficient processing of change orders will be developed.

Full implementation of recommendation 6 is planned by late 2018.

Finding 7
Contractors frequently did not complete their work within the timeframes specified in their contracts and DPR actions to hold contractors accountable were not always evident.

Recommendation 7
We recommend that DPR

a. develop formal guidelines regarding the progressive steps to be taken to address untimely contractor work performance, and

b. assess liquidated damages for untimely or non-performance or document why assessment of liquidated damages is not appropriate.

DPR agrees.

a. Project management guidelines will be developed to include procedures for the consistent escalation of contract compliance measures.

b. DPR does assess liquidated damages. However, opportunities exist to improve the documentation regarding the associated decision making process to assess. DPR will evaluate the current process to ensure appropriate action is being taken and documented.

Full implementation of recommendation 7 is planned by the end of 2018.

AUDIT TEAM

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