



City of New York

OFFICE OF THE COMPTROLLER

Scott M. Stringer
COMPTROLLER



AUDITS AND SPECIAL REPORTS

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Deputy Comptroller for Audit

Audit Report on the Department of
Parks and Recreation's Oversight of
Construction Management Consultants

SE16-062A

June 15, 2018

<http://comptroller.nyc.gov>



THE CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
SCOTT M. STRINGER

June 15, 2018

To the Residents of the City of New York:

My office has audited the New York City Department of Parks and Recreation (DPR) to determine whether DPR adequately oversees construction management consultants (CMs) to ensure that capital project work is performed as planned and in a timely manner. Capital projects represent significant use of both financial and operational resources, therefore we audit agencies such as DPR to ensure that adequate oversight and controls are in place in accordance with applicable rules and regulations.

The audit found that DPR needs to improve its oversight of contracted CMs to ensure that their projects are completed appropriately and on time. Thirty-nine percent of DPR's CM-managed projects open at any time during our audit scope period were not completed within scheduled time frames. The affected projects, located throughout the five boroughs, included construction of a carousel, a bikeway, a golf course, and a pool bathhouse, as well as tree-planting projects. The delays ranged from nine days to three years and resulted in DPR's incurring \$4.9 million more in fees charged by its contracted CMs than the amounts originally budgeted—a cost overrun of 35 percent on the CM component of the projects alone. In particular, we found that DPR's oversight of its contracted CMs was performed without formal policies and procedures in the Capital Division; actions taken by DPR to monitor CMs were inadequate; and DPR failed to make optimal use of services available under CM agreements. The weaknesses we found over its CMs and its CM-managed construction projects were evidenced by missing and incomplete construction records, flawed designs, delays in obtaining required permits, and instances in which coordination with other agencies and utilities was neglected or ineffective. Also, we found record-keeping weaknesses in DPR's construction project management system, Unifier. Finally, DPR lacked adequate metrics to evaluate effectiveness of CM-managed projects.

The audit makes 25 recommendations, including that DPR should prepare written policies and procedures for DPR personnel that governs their oversight of CMs; optimize its use of CMs' services to help DPR identify and timely address key logistical, scheduling, and budgeting issues; require CMs to ensure that contractors complete close-outs within prescribed time frames; develop, implement, and enforce control procedures to ensure that complete and accurate data is timely entered and that required project documents are timely uploaded into the Unifier system; and develop and maintain performance metrics to evaluate effectiveness of CM-managed projects.

The results of the audit have been discussed with DPR officials, and their comments have been considered in preparing this report. Their complete written response is attached to this report. If you have any questions concerning this report, please e-mail my Audit Bureau at audit@comptroller.nyc.gov.

Sincerely,



Scott M. Stringer

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THE CITY OF NEW YORK OFFICE OF THE COMPTROLLER AUDITS AND SPECIAL REPORTS ENGINEERING AUDIT

Audit Report on the Department of Parks and Recreation's Oversight of Construction Management Consultants

SE16-062A

EXECUTIVE SUMMARY

The New York City Department of Parks and Recreation (DPR or the Department) oversees nearly 30,000 acres of land—some 14 percent of New York City—including more than 5,000 individual parks, public spaces and recreational amenities. The Department cares for 600,000 trees along streets and parkways, and 2 million additional trees in parks throughout the five boroughs. DPR's mission includes planning resilient and sustainable parks, public spaces, and recreational amenities, building a park system intended to serve present and future generations, and caring for parks and public spaces.

To meet its varied responsibilities, DPR plans and executes a range of capital projects, including landscaping and renovating parks and playgrounds, building recreational facilities, and constructing facilities for its own use. DPR's Capital Projects Division (Capital Division), constructs and restores the City's infrastructure by developing and improving parks, playgrounds, pools and recreational facilities, and its own operational facilities. At the same time, DPR's Forestry, Horticultural and Natural Resources Division (Forestry Division or FHNR Division), focuses on improving the environment and enhancing public health by planting new trees, constructing bioswales, removing invasive plant species and planting shrubs through its Street-Tree, Green Infrastructure and Reforestation programs.

Both the Capital and Forestry Divisions contract with private construction management firms (CMs) to oversee the work of construction and landscaping contractors hired by DPR to build and execute the capital construction projects. In-house staff of the Capital and Forestry Divisions are responsible for overseeing the CMs working on projects in their respective divisions.

DPR classifies its CM-managed capital projects (whether handled by the Capital or Forestry Divisions) by their estimated costs: (1) projects estimated to cost up to and including \$3 million; and (2) projects estimated to cost more than \$3 million. From 2010 through 2016, DPR entered into 12 contracts totaling \$96 million in contract capacity, with 8 CMs; 6 contracts for estimated

project costs of \$3 million or less, and 6 for estimated project costs of over \$3 million. Each of these 12 DPR-CM contracts had a three-year term with an option for DPR to extend the agreements for 2 additional one-year terms.

The project-specific contracting process for CM services begins when DPR issues a Request for Proposals (RFP) for each project it intends to have supervised by an outside CM firm. The RFP describes the scope of CM services that will be needed for that project. Interested CM firms then submit proposals that describe their proposed technical approaches to the work and their total estimated construction-supervision fees for the project. DPR reviews the proposals, awards a work-specific contract to a CM firm based on “best value to the City, including relevant experience and proposed fee,” and issues a work order for the project. CMs are compensated based on an hourly rate, which includes overhead and profit. If additional time is needed to complete the project (including due to increased scope) and so additional funds beyond the amount estimated are needed, DPR authorizes payment through supplemental work orders.

Both of DPR’s divisions maintain all construction project-related information, documentation and records of associated payments to CMs in hard copy files. In addition, both divisions use a computerized construction project management system, known as “Unifier,” to track project information for monitoring, cost-control and accounting purposes.

This audit focused on 69 Capital and Forestry Division capital projects supervised by CMs during Fiscal Years 2014 and 2015. Those projects had total construction costs of \$317 million (exclusive of costs for design and for special inspections) and an additional \$18 million for associated project management services performed by CMs, not counting costs for DPR’s in-house oversight staff.

The objective of this audit was to determine whether DPR adequately oversees CM consultants to ensure that capital project work is performed as planned and in a timely manner.

Audit Findings and Conclusion

The audit found that DPR needs to improve its oversight of contracted CMs to ensure that their projects are completed appropriately and on time. Thirty-nine percent of DPR’s CM-managed projects open at any time during our audit scope period were not completed within scheduled timeframes. The affected projects, located throughout the five boroughs, included construction of a carousel, a bikeway, a golf course, and a pool bathhouse, as well as tree-planting projects. The delays ranged from nine days to three years and resulted in DPR’s incurring \$4.9 million more in fees charged by its contracted CMs than the amounts originally budgeted—a cost overrun of 35 percent on the CM component of the projects alone.

In particular, we found that:

- The Department’s oversight of its contracted CMs was performed without formal policies and procedures in the Capital Division and without sufficient direction, consistency and clarity in its contracts with those CMs;
- Actions taken by the Department to monitor CMs were inadequate; and
- The Department failed to make optimal use of services available under CM agreements.

The weaknesses we found in DPR’s controls over its CMs and its CM-managed construction projects were evidenced by missing and incomplete construction records, flawed designs, delays in obtaining required permits, and instances in which coordination with other agencies and utilities was neglected or ineffective.

Finally, we determined that DPR lacked adequate metrics for tracking the progress of its CM-managed projects that could assist the Department to reduce delays and cost overruns. At the exit conference, DPR stated that it uses a capital dashboard based on the Unifier data to monitor the progress of individual projects and to assist it in developing strategies to address any project delays. In addition, DPR informed us that it also relies on the metrics it annually reports about its capital projects performance in the Mayor's Management Report (MMR). However, the project tracking efforts described by DPR are unlikely to be effective because as we found in the audit, the data in the Unifier system is incomplete and inaccurate, as are the hard copy records DPR maintains. Accordingly, the Unifier data would not be sufficient to enable DPR to reliably track and assess the performance of CMs and CM-managed projects and to be alerted to contract management issues.

Given these deficiencies, DPR cannot consistently ensure that CMs are fulfilling their contractual responsibilities to properly monitor construction contractors' activities and communicate results to DPR. Nor can the Department ensure that project management deficiencies are addressed effectively. We found that DPR needs better planning, execution and accountability to improve its oversight of its contracted CMs and the performance of CMs and construction contractors on DPR's capital projects.

Audit Recommendations

This report makes a total of 25 recommendations, including that DPR should:

- Prepare written policies and procedures for DPR personnel that governs their oversight of CMs that:
 - Specify DPR staffs' duties, responsibilities and performance standards; and
 - Establish:
 - The level of authority of the DPR oversight personnel in relation to the CMs and the projects for which they are responsible, and
 - Standards for assessing CMs' performance and dealing with those who fail to perform adequately.
- Issue a construction supervision manual for the CMs that specifies, in writing, the duties, responsibilities, and performance standards that apply to CMs.
- Develop written standard operating procedures (SOPs) with checklists to ensure that construction management issues are timely identified and that all necessary approvals, permits, surveys, design documents, and coordination with regulatory agencies and other entities are in place prior to directing a contractor to start construction.
- Optimize its use of CMs' services to help DPR identify and timely address key logistical, scheduling and budgeting issues.
- Effectively utilize CM contracts for pre-construction CM services in DPR's capital projects including contract-document reviews and other tasks to anticipate, identify and address project challenges to prevent and minimize delays and cost-escalation in completing the projects.
- Require CMs to ensure that contractors complete close-outs within prescribed timeframes.

- Undertake an immediate review of all of its CM services agreements for any conflicts and inconsistencies and address any found, including but not limited to, the conflict between Part I, Article 2 and Part II, Article 3, subsection 3 described in this report.
- Develop a standard record-keeping system for its capital projects to define and ensure that essential documents are obtained, maintained, and are readily retrievable.
- Ensure that the CMs prepare, maintain and provide to DPR all project documents that their contracts require, to enable DPR to determine whether the projects' files are complete.
- Ensure that all required performance evaluations for all CMs are conducted as required and are submitted into VENDEX (now PASSPort) as required.¹
- Require CMs to include a summary breakdown of total payment requests by individual project, in requests where multiple projects are covered by one work order. The breakdown should identify initial CM staffing budgets, expenditures to date, remaining CM staffing dollars and the construction completion percentage for each project.
- Ensure that each project file contains a copy of the relevant summary breakdown, for each payment request so that DPR project managers can track or monitor the costs of CM services on the projects for which they are responsible.
- Develop, implement and enforce control procedures to ensure that complete and accurate data is timely entered and that required project documents are timely uploaded into the Unifier system.
- Utilize the Unifier system to accurately assess the performance of CMs and effectively manage the CM-managed construction projects based on factors such as: whether project schedules and cost targets were met; whether the records for which the CM is responsible were timely and accurately completed and filed; and the CMs' have met their key responsibilities; and retain the completed evaluations for each project in Unifier.
- Develop and maintain performance metrics to evaluate effectiveness of CM managed projects.
- Conduct post-completion evaluations of major projects to determine whether project objectives were met, identify problems, such as delays and cost overruns and determine their causes, and develop measures to mitigate the risks of such problems in future projects.
- Ensure that periodic inspections are conducted during the two-year guarantee period to ensure that contractors are performing routine watering and maintenance, as required by their contracts.

Agency Response

In its response, DPR states that it “disagrees with the Report's accuracy and many of its findings and conclusions, and also believes the Report does not provide a timely, useful analysis toward the enhancement of program operations.” DPR further states that the sampled CM-managed projects accounted for only 6 percent of Capital Division's completed projects during the audit

¹ VENDEX stands for the Vendor Information Exchange System, a database of information relating to vendors who do business with the City. It was maintained by the Mayor's Office of Contract Services and was the primary source used by agencies in making a responsibility determination. As of August 2017, the Procurement and Sourcing Solutions Portal (PASSPort) is the City's new, online procurement portal, where vendors and Agencies exchange information to create and manage vendor accounts, submit disclosure information, and complete performance evaluations.

period. In doing so, DPR ignores the fact that its \$335 million in *expenditures* on its 69 CM-managed capital projects constituted *40 percent* of its total reported capital expenditures of \$810 million during the audit scope period. DPR also states that “several of the Report’s recommendations are based on outlier projects with circumstances which are (1) not representative of the broader Capital project portfolio - but provide a narrow, specific narrative—and (2) from a time period which predates the current administration. Thus, the Report does not provide Parks with many insights and alternatives it can usefully apply as Parks has continually worked to improve its Capital project processes. In fact, 14 of the 19 Capital recommendations have been implemented since Fiscal 2014, or were already in place prior to Fiscal 2014.”

With the exception of Recommendation 21, DPR did not directly state whether it agreed or disagreed with the audit’s recommendations. However, after a careful review of its response, it appears that DPR agreed to implement 2 of the recommendations (Recommendations 15 and 21); effectively agreed in whole or in part with an additional 14 recommendations by virtue of claiming to have recently adopted them or that the recommended measures had long been the agency’s practice (Recommendations 3, 6, 7, 8, 9, 10, 12, 14, 16, 18, 19, 22, 23, and 24); disagreed with five of the recommendations (Recommendations 1, 2, 4, 5, and 20); and failed to provide any responsive information related to four recommendations (Recommendations 11, 13, 17, and 25).

We have carefully reviewed DPR’s responses and find no basis to alter any of the audit’s findings.

INTRODUCTION

Background

DPR oversees nearly 30,000 acres of land—some 14 percent of New York City—including more than 5,000 individual parks, public spaces and recreational amenities. The Department cares for 600,000 trees along streets and parkways, and 2 million additional trees in parks throughout the five boroughs. DPR's mission includes planning resilient and sustainable parks, public spaces, and recreational amenities, building a park system intended to serve present and future generations, and caring for parks and public spaces.

To meet its varied responsibilities, DPR plans and executes a range of capital projects, including landscaping and renovating parks and playgrounds, building recreational facilities, and constructing facilities for its own use. The Department has three divisions that manage those capital projects. This audit focuses on two of them: the Capital Division and the Forestry Division.² DPR's Capital Division, constructs and restores the City's infrastructure by developing and improving parks, playgrounds, pools and recreational facilities, and its own operational facilities. DPR's Forestry Division, focuses on improving the environment and enhancing public health by planting new trees, constructing bioswales, removing invasive plant species and planting shrubs through its Street-Tree, Green Infrastructure and Reforestation programs.³

Both the Capital and Forestry Divisions contract with private construction management firms (CMs) to oversee the work of construction and landscaping contractors hired by DPR to build and execute capital construction projects.⁴ The Capital Division retains CMs to supervise large, complex projects and to supplement its in-house construction supervision capacity. The Forestry Division uses CMs to supervise the planting of street trees, the installation of tree guards and the construction of Greenstreets projects citywide.⁵ According to DPR, CMs have the same responsibilities as DPR's internal Resident Engineers. CMs also provide pre-construction phase services prior to the start of actual construction.⁶ In-house staff of the Capital and Forestry Divisions are responsible for overseeing the CMs working on projects in their respective divisions.

DPR classifies its CM-managed capital projects (whether handled by the Capital or Forestry Divisions) by their estimated value: (1) projects estimated to cost up to and including \$3 million; and (2) projects estimated to cost more than \$3 million. From 2010 through 2016, DPR entered into 12 contracts totaling \$96 million in contract capacity, with 8 CMs; 6 of these contracts were for projects with estimated costs of \$3 million or less, and 6 were for projects with estimated costs above \$3 million. Of the 8 CMs responsible for the 12 contracts, 2 of the CMs managed only projects of \$3 million or less, 2 CMs managed only projects of more than \$3 million, and remaining

² Some of DPR's capital projects are outsourced to the Department of Design and Construction (DDC) and the NYC Economic Development Corporation. At the exit conference, DPR informed us that within DPR, there is an additional division known as "Five Boroughs" that also manages capital projects. This group was not part of the audit.

³ Bioswales consist of small gardens on the sidewalk that include specifically designed soil, stones, and plants that are able to absorb large amounts of water, reducing the amount of water that flows through catch basins and sewers into wastewater treatment facilities and local waterways. The plants used in green infrastructure arrangements also help with citywide air quality and provide small areas of green space on the city's streets. DPR builds bioswales according to the design provided by DEP. Invasive species are non-native plant species that can damage, hinder or completely replace native vegetation.

⁴ Throughout the report, "CM" is used to refer to either construction management firms or individual consultants employed by such firms.

⁵ Greenstreets projects are improvements that convert paved, vacant traffic islands and medians into green spaces in an effort to capture storm water, as specified in the NYC Greenstreets Program.

⁶ Pre-construction services include review of contract documents prior to start of construction to identify any errors, omissions, discrepancies and coordination problems, such as failing to file and obtain permit approvals prior to start of construction.

4 CMs managed projects of both levels. Each of these 12 DPR-CM contracts had a three-year term with an option for DPR to extend the agreements for 2 additional one-year terms.

The project-specific contracting process for CM services begins when DPR issues a RFP for each project it intends to have supervised by an outside CM firm. The RFP describes the scope of CM services that will be needed for that project. Interested CM firms will then submit proposals that describes their proposed technical approaches to the work and their total estimated construction-supervision fees for the project. The proposed fees are delineated on a chart listing the number of consultants in various titles to be deployed on the project, and the proposal includes the names, resumes, and titles of critical staff, the proposed hours to be worked and the hourly rates of pay. DPR reviews the proposals, awards a work-specific contract to a CM firm based on “best value to the City, including relevant experience and proposed fee,” and issues a work order for the project. The funds for the work order are drawn from 1 of the 12 pre-established CM contracts. CMs are compensated based on an hourly rate, which includes overhead and profit. They are held to those rates for the estimated hours provided in their awarded contracts. If additional time is needed to complete the project (including due to increased scope) and so additional funds beyond the amount estimated are needed, DPR authorizes payment through supplemental work orders.

DPR’s construction contracts for the projects managed by CMs are bid and awarded separately from its project-specific contracts with the CMs.⁷ DPR pays its construction contractors directly after each contractor’s payment request is reviewed by both the assigned CM and DPR.

Both of DPR’s capital divisions (Capital and Forestry) maintain all construction project-related information, documentation and records of associated payments to CMs in hard copy files. In addition, both divisions use a computerized construction project management system, known as “Unifier,” to track project information for monitoring, cost-control and accounting purposes. That information includes initial and amended budgets, initial and amended time schedules, change orders; specific contract information and payments to construction contractors. In addition, digital copies of critical project documents including contractor performance evaluations are maintained in the Unifier system. DPR generally does not maintain CM-related information in the Unifier system other than the names of the assigned CMs as a part of the basic project information.

This audit focuses on 69 Capital and Forestry Division capital projects supervised by CMs during Fiscal Years 2014 and 2015, as reported by DPR. Those projects had total construction costs of \$317 million (exclusive of costs for design and for special inspections) and an additional \$18 million for associated project management services performed by CMs, not counting costs for DPR’s in-house oversight staff.

Objective

The objective of this audit is to determine whether DPR adequately oversees CM consultants to ensure that capital project work is performed as planned and in a timely manner.

Scope and Methodology Statement

We conducted this performance audit 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

⁷ Throughout the report “construction” is used to refer to the execution of capital projects that encompass traditional building work and the horticultural work overseen by DPR’s Forestry Division.

audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. This audit was conducted in accordance with the audit responsibilities of the City Comptroller as set forth in Chapter 5, §93, of the New York City Charter. Please refer to the Detailed Scope and Methodology at the end of this report for the specific procedures and tests that were conducted.

The scope of this audit covers a total of 69 capital projects supervised by CMs (CM-managed projects), which were either completed or active (in progress) in Fiscal Years 2014 and 2015, as reported by DPR, with a total construction costs of \$317 million (exclusive of costs for design and for special inspections) and \$18 million, for the associated construction project management services performed by CMs (exclusive of costs for in-house oversight staff).

Discussion of Audit Results

The matters covered in this report were discussed with DPR officials during and at the conclusion of this audit. A preliminary draft report was sent to DPR on January 30, 2018 and was discussed at an exit conference held on February 23, 2018. Following the exit conference, DPR provided auditors with additional supporting documentation related to some of the preliminary findings discussed in the preliminary report. The additional information provided by DPR was carefully reviewed and considered, and where appropriate, findings were revised. A draft report was submitted to DPR with a request for written comments on April 19, 2018. We received written comments from DPR on May 3, 2018.

In its response, DPR states that it “disagrees with the Report’s accuracy and many of its findings and conclusions.” However, DPR failed to state with any specificity what particular content of the report it contends is inaccurate. At the same time, notwithstanding the supposed inaccuracy of the report, DPR also states that “14 of the 19 Capital recommendations have been implemented since Fiscal 2014, or were already in place prior to Fiscal 2014.” DPR further states that because the audit scope covered projects completed or active in Fiscal Years 2014 and 2015, “the Report does not provide a timely, useful analysis toward the enhancement of program operations.” However, as described in more detail below, the audit found that DPR’s policies and procedures that were either in place throughout the audit period or were implemented during that period were insufficient to address the weaknesses identified in this report. Further, with regard to the 14 recommendations that DPR asserts were previously implemented, DPR provided no documentation to support its assertion, despite our requests for it both during the audit and again at the exit conference. Moreover, no supporting documentation was submitted with DPR’s current written response.

DPR attempts to minimize the materiality of the audit findings by stating that the audit focused on capital projects that represented “only 6% of [DPR’s] total 98 completed Capital projects” for the audit period. However, that claim ignores the fact that DPR’s expenditures on the 69 CM-managed capital projects—the focus of the audit—totaled \$335 million, which constituted *40 percent* of the approximately \$810 million in total capital expenditures reported by DPR during the period in question. Moreover, the sampled projects we examined accounted for 50 percent of DPR’s total costs for CMs’ services on its CM-managed projects during that period. Thus, the audit covered a significant portion of DPR’s CM-managed projects measured *by spending*.

After carefully reviewing the DPR’s responses, we find no basis to alter any of the audit’s findings. We urge DPR to implement the audit recommendations in full and substantially increase its efforts to improve its controls.

As noted, with the exception of Recommendation 21, DPR did not directly state whether it agreed or disagreed with the audit's recommendations. However, through a careful review of DPR's response, it appears that DPR agreed to implement 2 of the recommendations (Recommendations 15 and 21); effectively agreed in whole or in part with 14 recommendations by virtue of claiming to have recently adopted them or claiming that they had long been the agency's practice (Recommendations 3, 6, 7, 8, 9, 10, 12, 14, 16, 18, 19, 22, 23, and 24); disagreed with 5 of the recommendations (Recommendations 1, 2, 4, 5, and 20); and did not respond to 4 recommendations (Recommendations 11, 13, 17, and 25). After a careful review of DPR's response, we find no basis to alter any of the audit's findings.

The full text of DPR's response is included as an addendum to this report.

FINDINGS AND RECOMMENDATIONS

The audit found that DPR needs to improve its oversight of contracted CMs to ensure that their projects are completed appropriately and on time. Thirty-nine percent of DPR's CM-managed projects throughout the five boroughs were not completed within scheduled timeframes. The affected projects included construction of a carousel, a bikeway, a golf course, and a pool bathhouse, among other public facilities as well as tree-planting projects.⁸ The delays ranged from nine days to three years and resulted in DPR's incurring \$4.9 million more in fees charged by its contracted CMs than the amount originally budgeted—a cost overrun of 35 percent on the CM component of the project alone.⁹

In particular, we found that:

- The Department's oversight of its contracted CMs was performed *without* formal policies and procedures in the Capital Division;
- Actions taken by the Department to monitor CMs were inadequate; and
- The Department failed to make optimal use of services available under CM agreements.

The weaknesses we found in DPR's controls over its CMs and its CM-managed construction projects were evidenced by missing and incomplete construction records, flawed designs, delays in obtaining required permits, and instances in which coordination with other agencies and utilities was neglected or ineffective. (Similar issues were found in an audit of DPR's oversight of capital projects that the Comptroller's Office conducted five years ago.)¹⁰

Finally, we determined that DPR lacked adequate metrics for tracking the progress of its CM-managed projects that could assist the Department to reduce delays and cost overruns. At the exit conference, DPR stated that it uses a capital dashboard based on the Unifier data to monitor the progress of individual projects and to assist it in developing strategies to address any project delays. In addition, DPR informed us that it also relies on the metrics it annually reports about its capital projects performance in the MMR. However, the project tracking efforts described by DPR are unlikely to be effective, because the data in the Unifier system is incomplete and inaccurate, as are DPR's hard copy records, as is described in this report. Accordingly, the Unifier data would not be sufficient to enable DPR to reliably track and assess the performance of CMs and CM-managed projects and to be alerted to contract management issues.

Given these deficiencies, DPR cannot consistently ensure that CMs are fulfilling their contractual responsibilities to properly monitor construction contractors' activities and communicate results to DPR. Nor can the Department ensure that project management deficiencies are addressed effectively. We found that DPR needs better planning, execution and accountability to improve its oversight of its contracted CMs and the performance of CMs and construction contractors on DPR's capital projects.

These matters are discussed in greater detail in the following sections of this report.

⁸ We generally found the quality of completed construction work to be adequate. In projects where deficiencies were noted, they were the results of either incomplete work or inadequate maintenance.

⁹ Depending on the causes of delay, in-house oversight staff costs would also necessarily increase and other costs for items such as additional design or design changes, construction and special inspections are likely to increase.

¹⁰ *Audit Report on the Department of Parks and Recreation's Oversight of Capital Projects* (Audit #7E12-067A), issued on January 11, 2013.

Weak Oversight of CMs by DPR Impedes Efforts to Monitor Costs and Performance

39 Percent of CM-Managed Projects Were Delayed, at a Cost of \$4.9 Million in Additional Fees

Our analyses of DPR's data relating to 69 CM-managed projects showed that construction of 42 projects (61 percent) was completed within their planned schedules. But 27 projects (39 percent) were not completed on schedule, and those delays resulted in DPR's incurring at least \$4.9 million in additional costs, consisting of fees its CMs charged for their services on those projects.

Based on the data we reviewed, of the 69 projects:

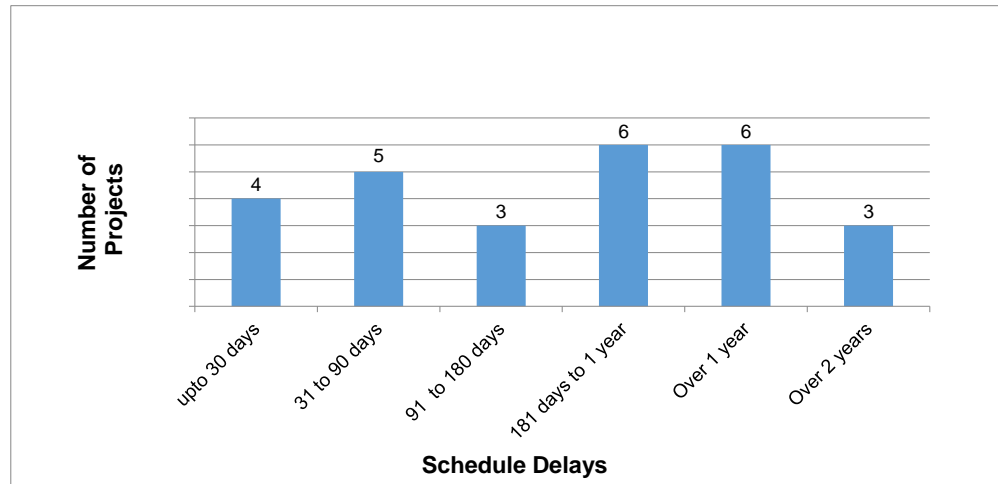
- 16 were Capital Division projects, and 53 were Forestry Division projects.
 - Of the 16 Capital Division projects, 12 incurred construction delays and associated cost increases of \$4 million (75 percent) for CM services.
 - Of the 53 Forestry projects, 15 were delayed, resulting in cost increases of almost \$900,000 (9 percent) for CM services.
- 41 projects were completed and 28 were still in-progress as of October 22, 2015.
 - Of the 41 completed projects, 18 (41 percent) had been delayed for periods of between 9 and 962 days.
 - Of the 28 active projects, 9 (36 percent) had been delayed for periods of between 58 and 1,199 days.

For a list of projects with schedule delays, see Appendix I.

Most of the 27 projects that were not completed within planned schedules had sizable delays (see Chart 1).¹¹ The median delay on those projects was 8 months, added to the median planned schedule of 12 months.

Chart 1

Assessment of 27 Projects
Not Completed
Within Planned Schedules



Our audit determined that DPR's failure to complete construction within initial schedules for 27 (or 39 percent) of the 69 CM-managed projects administered by DPR's Capital Division and Forestry Division led to additional costs totaling \$4,894,050, an increase of 35 percent, payable to DPR's contracted CMs above the initial budgeted amount.¹² Because DPR's contracted CMs are compensated on an hourly-rate basis, delays and schedule extensions in the construction projects they oversee generally increase their compensation and the City's costs—including instances in which the delays are attributable to a CM's poor performance or DPR's inadequate oversight of a project.

We selected a sample of 11 of the 69 CM-managed projects administered by either DPR's Capital Division or its Forestry Division and performed a detailed analysis of those projects. Through our analysis, we found weaknesses in DPR's project-management controls that primarily concerned tasks that were or should have been completed prior to the start of construction.¹³ The total additional CM-related costs that DPR incurred for the 11 sampled projects was \$2,726,347, a 41 percent increase above the initial budgeted costs.¹⁴ Our review of the delays in each of the 11 sampled projects revealed that, although some were due to unforeseen added work, others resulted from deficiencies in the performance of project-related responsibilities by DPR and/or its contracted CMs that might have been avoided had proper controls been in place, including particularly, the establishment of standards and guidance that clearly identified matters that were

¹¹ For reporting project performance for timeliness in the MMR, DPR considers a project late if it is completed more than 30 days after the scheduled completion date.

¹² The total initial budgeted amount for the CM costs was \$13,864,393, and the revised costs as a result of project delays was \$18,758,443.

¹³ See Appendix II for a list of the 11 sampled projects with associated costs overruns and schedule delays.

¹⁴ For the 11 sampled projects, the initial cost for CM services, \$6,601,275, rose to \$9,327,622; an increase of \$2,726,347 (41 percent).

the responsibility of DPR staff and those that were the responsibility of the CMs. The causes of delay we found included poor coordination with other City agencies and private entities, design errors and omissions, unresolved change orders, and failure to properly file applications with and obtain approvals from oversight agencies and other entities. Overall, these problems reflected weaknesses in DPR's project-management procedures and controls.¹⁵ The causes of the delays were similar to those noted in our previous audit, issued in January 2013, *Audit Report on the Department of Parks and Recreation's Oversight of Capital Projects (Audit #7E12-067A)*. Subsequently, on November 1, 2013, in its implementation plan letter, DPR stated that "Parks [DPR] continues to work on mitigating project delays." However, it appears that the causes of delays that are within DPR's direct control continue to hinder the timely completion of its capital projects.

The following table (Table I) quantifies the delay days and the reasons for them on the 7 of the 11 sampled projects where we found the delays to have been caused by matters that were in the control of DPR.¹⁶

Table I
Reasons for Delays
on Select Sampled Projects

Division	Project	Days Delayed (DPR)	Reason for Delay
Capital	Fort Washington Park & Inwood Hill Park ADA Ramp Connection Construction	244	Design issues
	Louis Armstrong Center HVAC Reconstruction	137	Revised DOB filing
	The Battery Park Carousel Construction	148 654	Coordination with the Battery Park Conservancy Design issues and a delay in Direction to Proceed
	The Battery Park Bikeway Construction	385	Design issues, and issues with coordination with other agencies and private entities
Forestry	Brooklyn & Queens Greenstreet Construction	443	DEP required design changes to its initial designs
	Brooklyn Street Tree Planting Community Boards 6, 7, 10, & 12	71	DPR delay in supplying trees to the contractor
	Greenstreets Stormwater Capture Phase 2	354	Lack of approved design documents and pre-construction coordination with the local utility company

¹⁵ In making our assessment, we relied in large part on delay analyses that are prepared by the CMs to document and identify the reasons for delay and associated delay days.

¹⁶ Of the four remaining sampled projects out of the 11, one was completed on time, two were delayed due to scope increases, and for one project we could not measure and determine the reasons for the delays due to a lack of documentation in DPR's files.

The following two examples illustrate the kinds of conditions that (1) are attributable to DPR, (2) caused project delays, and (3) increased DPR's costs for contracted-CM services resulting from schedule overruns and the assignment of additional work to CMs:

Battery Park Carousel Project – Delays Cause a 208 Percent Rise in Costs, to \$1,374,975

DPR's failure to complete construction of the Battery Park Carousel (project #M205-208M/M005-110M) within its planned schedule led to an escalation of the agency's cost for CM services payable to the LiRo Group, its CM on the project, from \$446,400, the sum initially budgeted, to \$1,374,975—an increase of \$928,575, or 208 percent, through July 31, 2016.¹⁷ Moreover, given that the project had not been closed-out when we conducted our site inspection on September 26, 2016, it is likely that DPR incurred additional costs for CM services on the project.

The CM's interim delay-analysis, dated January 28, 2014, which documents the project-delays through December 11, 2013, indicates that 802 (76 percent) of the 1,057 construction-delay days on the project as of that date were attributable to tasks that, based on our review of the relevant records, were within DPR's responsibility.

Among other reasons, the CM's analysis cites as causes of the project delays: a delay in obtaining a building permit; an incomplete design related to the carousel's lighting system; redesign of pavilion lighting; time needed to relocate a previously-unidentified Con Edison gas line; and redesign of the ride's fish figures and associated delays in obtaining Fire Department (FDNY) approval, including flame tests of the redesigned figures.¹⁸

Battery Park Bikeway Project – Delays Cause a 185 Percent Rise in Costs to \$1,254,192

Similarly, DPR's failure to complete construction of the Battery Park Bikeway (project #M005-111M) within the planned schedule also led to an escalation of the agency's cost for CM services payable to the LiRo Group, its CM on the project, from an initial budgeted amount of \$440,000 to \$1,254,192—an increase of \$814,192, or 185 percent through May 18, 2016. Moreover, given that the project had not been closed-out when we conducted our site inspection on September 26, 2016, it is likely that DPR incurred additional costs for CM services on the project.

The CM's interim delay analysis dated March 8, 2016, which documents the project-delays through May 15, 2015, indicates that 385 (61 percent) of the 635 days that the project was delayed were attributable to tasks that, based on our review of the relevant records, were within DPR's responsibility.

Some of the project delays attributable to DPR included: time allocated for digging test pits to confirm the depths of subway roofs, work that was required because DPR's design drawings had not been coordinated with the Metropolitan Transit Authority (MTA); redesign of the grading of the oval pathway lawn, which was initially designed below grade; delayed issuance of Department of Transportation (DOT) plans due to issues with coordination among DPR, other City agencies and Con Edison; and a 58-day delay in establishing a power supply for DOT/DPR lighting and a comfort station.¹⁹

¹⁷ The project was in progress during the audit scope.

¹⁸ According to DPR, the Carousel project design was supplied to DPR by the Battery Conservancy.

¹⁹ At the exit conference, DPR submitted minutes of meetings where other stakeholders, including Con Edison and DOT, were present suggesting that DPR made efforts to coordinate with both entities.

Projects Not “Closed-Out” Timely Resulted in DPR’s Incurring Increased Costs for CMs

DPR did not adequately monitor its contracted CMs to ensure that the construction projects they managed were properly and timely completed, or “closed out.” In this audit report, “close-out” refers to the phase of the project that occurs between “substantial” and “final” completion, during which construction contractors and CMs are required to satisfy two principal kinds of contractual obligations: (1) they must complete outstanding work items, known as “punch-list” items; and (2) they must obtain and submit to DPR various administrative approvals and documents related to completed project work. Once those “close-out” requirements are satisfied, a project is considered to have reached “final completion.” Following is a breakdown of the “close-out” status of the 11 sampled projects, at the time of our reviews and/or site inspections.

- 8 projects had been, or appeared to have been, closed-out, specifically:
 - 2 were closed-out within allowable time frames;
 - 2 were closed-out late (by 549 days and by 267 days, respectively); and
 - 4 *appeared* to have been closed out, based on (a) DPR’s claims and (b) our site inspections, but DPR did not provide documentation to establish whether they had been closed-out, with all required documents and approvals, within contractually-specified time frames.
- 3 projects remained open; of those:
 - 2 had already exceeded the permissible time for close-outs under the relevant contracts; and
 - 1 project was within its contractually-allowed period for final completion.

DPR’s standard CM contract specifies the maximum duration of the close-out period for each project.²⁰ Of the 11 projects we sampled, the maximum close-out durations for the 6 Forestry projects were listed as 60 days, and the 5 Capital Division projects varied from 45 to 180 days.

As indicated by our site inspections, however, as of September 26, 2016, neither the Battery Park Carousel nor the Battery Park Bikeway was closed-out within the time frames specified in their respective contracts. In fact, as of the date of our inspection, periods of respectively 459 days and 327 days had elapsed since the dates of “substantial completion” of the two projects, and “punch-list” work remained undone. Among other things, we observed the following:

- The Battery Park Bikeway project was deemed substantially complete on October 30, 2015, and pursuant to its contract, final completion should have occurred within 45 days, i.e., by December 14, 2015. However, 11 months later, on September 21, 2016, the project was denied final completion status when what was to have been a final inspection by DPR revealed an extensive list of outstanding punch-list items. At that time, the contractor was directed to complete the remaining punch list items by October 13, 2016, or nearly 12 months after the project had been deemed substantially complete. The outstanding construction work on the punch list included: installation of proper

²⁰ DPR’s standard RFP for CM services, at Attachment A: *Solicitation for a Work Order*, Section A, which is incorporated within the contracts, sets forth the scope of construction and the construction schedule for the covered projects, along with the maximum time allowed for the projects’ close-out.

fasteners/bolts on all drinking water fountains; completion of installation and testing of the ornamental fountain's wireless system; and completion of all open contract work for the Verrazzano Monument. Administrative items, such as submission of as-built drawings, certificates, evidence of DOT inspection, and the final time-extension request were also outstanding.

- The Battery Park Carousel project was deemed substantially complete on June 25, 2015, and under the contract, final completion should have occurred within 45 days, by August 9, 2015. The contractor was directed to complete all punch list items by August 20, 2015. However, punch list items remained outstanding when we conducted a site inspection on September 26, 2016, or 15 months after the project had been deemed substantially complete. Specifically, we observed that the main entrance to the carousel was through a temporary door, because the permanent front entry door, a punch-list item, was still not installed, more than a year after all punch-list items should have been completed. We were told by the CM that the door was scheduled to be installed soon. In addition, because the records DPR provided to us did not include as-built drawings or a warranty, we do not know whether DPR has obtained them.

Delays and disruptions in project schedules may result in claims by contractors. Our auditors found that in July 2016, one of the contractors on the Battery Park Carousel project, Pavarini McGovern, filed a claim with the Comptroller's Office for \$5,062,742 plus interest. Of that total, \$3,906,411 was for alleged breach of contract, delays, interference with and disruption of work, and the remaining \$1,156,331 was claimed for the outstanding balance the contractor alleged it was owed for approved and additional work done on the project.²¹

Lack of Adequate Oversight and Policies and Procedures Governing CMs Contributed to Project Delays

While not all construction issues are foreseeable, DPR has incurred extensive schedule and cost-overruns that could have been prevented with better planning, execution and accountability in its construction projects. In our audit, we found that DPR lacked adequate policies and procedures governing its oversight of CMs in its Capital Division as well as sufficiently detailed and consistent direction to the CMs themselves as to the scope of their work. These deficiencies contributed to many of the delays we observed.

DPR Lacks Adequate Policies and Procedures and Consistent Direction Governing the Work of the CMs in the Capital Division

The Capital Division lacks written policies and procedures governing its oversight of CMs to help ensure complete and timely performance and to specify DPR staff's responsibilities for planning, executing and accounting for the Division's CM-managed projects. The absence of such policies and procedures contribute to project-delays and cost increases. While DPR does have written procedures to guide oversight of CMs that perform work for the Forestry Division, DPR officials stated that written procedures are not necessary for the Capital Division because the staff is experienced and knows what to do.²²

²¹ Claims or litigation against the City have also been initiated in connection with at least two additional DPR capital projects: (1) McCarren Park Pool Bathhouse (project #B058-108M PlaNYC); and (2) Ferry Point Golf Course Construction (project #X126-109M).

²² DPR also stated that it uses regular meetings and management reports to monitor the progress of the projects. DPR also tracks the number of projects completed on time and on budget as Key Performance Indicators (KPIs) for the MMR. At the exit conference, DPR informed us that it also uses a capital dashboard to monitor projects-progress and strategize about how to address project delays, if any.

According to Comptroller's Directive #1, *Principles of Internal Control*,

[i]nternal control must be an integral part of agency management in satisfying the agency's overall responsibility for successfully achieving its assigned mission and assuring full accountability for resources. [. . .] Effective internal control provides a necessary and continuing surveillance over the various processes, plans and procedures that are the foundation for which management relies upon to successfully achieve the purpose, goals and objectives of the agency while maintaining appropriate financial accountability for the organization's activities.

Further, Section 5.0 of the Directive states in part that,

internal controls should be documented in management administrative policies or operating manuals.

Accordingly, DPR's Capital Division should have clearly set forth its policies and operating instructions in writing to provide its in-house staff and CMs with clear guidance and enable agency management to assess whether the agency is successfully achieving its goals and objectives for capital projects with appropriate financial accountability. However, we found that despite the Capital Division's serving as DPR's primary control over the CM-managed projects in its portfolio, DPR has not established an operating manual or written administrative policies and procedures to govern the Division's oversight of its contracted CMs. Instead, DPR relies on its individual written contracts and RFPs, the CMs' proposals and DPR's work orders to establish each CM's role and responsibilities on a project-by-project basis. We found that those documents do not clearly set forth the responsibilities and authority of the DPR Capital Division staff or prescribe specific consistent guidelines and standards for the Capital Division to follow in monitoring CMs' performance, and addressing deficiencies. Similarly, the contracts, RFPs and proposals often fail to provide sufficiently detailed and consistent direction to the CMs as to what their responsibilities are under the contracts.

For example, our review found a fundamental inconsistency between provisions in the contract documents. The standard CM agreement, contained conflicting language in two different provisions regarding whether CMs were responsible for performing the general duties and responsibilities listed in the CM agreement itself, or whether they were instead responsible for performing only the specific duties listed in individual work orders. In Part I – *Summary and Scope of Work*, Article 2 – *Work Order Letters*, the standard CM agreement states, "[i]n the event of any conflict between a work order issued hereunder and any provision of this Contract, the Contract shall take precedence" However, Part II – *Standard Requirements*, Article 3 – *Payments for Services*, subsection 3, *Work Order Letters Supersede Contract*, the agreement states, "[i]f there is a discrepancy between the contract and the Work Order Letter, the Work Order Letter shall prevail."

In contrast to the inadequate and inconsistent direction provided to staff and CMs, DPR's Capital Division has a comprehensive construction-supervision manual that spells out standard policies and procedures its in-house resident engineers (DPR employees that perform the same function as the contracted CMs) are expected to follow in managing their assigned projects. With no equivalent clear direction for CM-managed projects undertaken by the Capital Division, the Capital Division's staff and the contracted CMs must instead refer to voluminous and sometimes inconsistent contract documents to delineate their respective responsibilities on each project, an ad-hoc approach that increases the likelihood that critical tasks will go undone and lead to construction delays that might have been prevented with better coordination.

For example, generally capital projects require coordination between construction managers and utilities, such as Con Edison. Accordingly, DPR's standard CM Contract, at Part II, Article 2, states that the CM is responsible for reviewing contract documents prior to the start of construction to identify any matters requiring coordination. However, individual Capital Division work orders DPR issued to its contracted CMs in the projects we reviewed did not clearly specify that responsibility. A construction-management manual, had one existed, could have prompted Capital Division staff to direct the CMs, before construction began, to review the contract documents, identify matters requiring coordination with external agencies and entities such as Con Edison, and ensure those matters were timely addressed to prevent construction delays. The lack of clear, standard, policies and procedures for the Capital Division's CM-managed projects weakens accountability of both DPR and its contracted CMs for ensuring that project risks (both pre-construction and during construction) are effectively managed.

In addition, absent clear written instructions to the contrary, we found that DPR failed to optimally use its contracted CMs' pre-construction services available under DPR's standard CM agreement (Part II, Article 2), to help better manage risks of delays and cost overruns. Pursuant to Part II, Article 2, DPR can require CMs to, among other things: review contract documents prior to the start of construction to identify any errors, omissions, discrepancies and anticipated problems relating to a need for coordination of efforts with external entities; recommend and carry out actions to minimize the impact of these issues on the progress and cost of the project; and conduct pre-construction meetings (explained in detail later under *Pre-construction Meetings Not Adequately Conducted*). Absent such reviews and subsequent actions by DPR, the failure to routinely require these services from CMs increased the risk of project delay which inevitably would increase the projects' over all costs.

Recommendations

DPR should:

1. Prepare written policies and procedures for DPR personnel that governs their oversight of CMs that:
 - a. Specify DPR staffs' duties, responsibilities and performance standards; and
 - b. Establish:
 - i. The level of authority of the DPR oversight personnel in relation to the CMs and the projects for which they are responsible, and
 - ii. Standards for assessing CMs' performance and dealing with those who fail to perform adequately.

DPR Response: "We believe this is not necessary given the fact that CMs report to Construction Directors and senior construction personnel who fully understand the duties and responsibilities of CMs working on our projects. Capital manages CMs and in-house residents in the exact same way and each performs the same duties, and reports to the Construction Directors."

Auditor Comment: DPR argues that its present system is adequate and the recommended measures unnecessary, but the audit results demonstrate otherwise. DPR has incurred extensive schedule- and cost-overruns that could have been prevented with better planning, execution and accountability in its construction projects. Developing clear, written policies and procedures that are

updated when needed and consistently followed will bring structure to the role of DPR's oversight staff and assist DPR in quickly identifying issues that require action rather than allowing them to linger and exacerbate costly delays.

2. Issue a construction supervision manual for the CMs that specifies, in writing, the duties, responsibilities, and performance standards that apply to CMs.

DPR Response: "The duties, responsibilities, and performance standards that apply to CMs are included in each parent contract with our CM firms. In addition, each individual work order further details the specific duties and responsibilities for each project. Checklists are also provided to our CMs for payments, change orders, time extensions, etc. and they now attend the same in-depth construction supervision training that we provide to our in-house staff."

Auditor Comment: We are pleased that DPR has acknowledged that the CMs need further guidance and has started to require the CMs to attend the same in-depth construction supervision training that DPR provides to their in-house staff. This was not the case during the audit period. Additionally, DPR should develop and issue clear, written standard, policies and procedures for the Capital Division's CM-managed projects to ensure accountability of its contracted CMs so that project risks (both pre-construction and during construction) are effectively managed. Further, as stated in the report, written policies and procedures would help to avoid the contracted CMs having to attempt to reconcile voluminous and sometimes inconsistent contract documents to identify specific responsibilities on each project. The existing ad-hoc approach that DPR attempts to justify, increases the likelihood that critical tasks will go undone and contributes to construction delays.

3. Develop written standard operating procedures (SOPs) with checklists to ensure that construction management issues are timely identified and that all necessary approvals, permits, surveys, design documents, and coordination with regulatory agencies and other entities, are in place prior to directing a contractor to start construction.

DPR Response: "As mentioned by the Report, [the] Capital [Division] has 'a comprehensive construction supervision manual' which describes all of the responsibilities, protocols, and procedures for overseeing construction projects. Furthermore, we are currently working on developing additional SOP's to reinforce the procedures outlined in the construction supervision manual."

Auditor Comment: The construction supervision manual referred to by DPR applies to its internal resident engineers only and not to its contracted CMs. We are pleased that DPR has acknowledged the need for it to develop SOPs to supplement that in-house construction supervision manual to help ensure that all necessary approvals, permits, surveys, design documents, and coordination with regulatory agencies and other entities, are in place prior to directing a contractor to start construction. However, we reiterate that DPR needs to develop an equivalent construction supervision manual for the contracted CMs (Recommendation #2), and these proposed SOPs should be a part of that manual as well.

4. Optimize its use of CMs' services to help DPR identify and timely address key logistical, scheduling, and budgeting issues.

DPR Response: DPR did not provide a direct response, but stated that “Parks’ understanding is that this recommendation relates to recommendation 5. See response to recommendation 5 below.”

Auditor Comment: The audit found that DPR failed to ensure that contract documents were sufficiently reviewed before construction started to identify any errors, omissions, discrepancies and similar issues that could foreseeably cause construction delays. The point of the recommendation is that DPR redirect and optimize its spending to pay—and require—its CMs to productively and preemptively address such problems on the front end of a project rather than paying the same CMs, unproductively, to oversee construction work that has been halted or delayed by the Department’s or the CM’s failure to anticipate and address foreseeable problems.

5. Effectively utilize CM contracts for pre-construction CM services in DPR’s capital projects including contract-document reviews and other tasks to anticipate, identify, and address project challenges to prevent and minimize delays and cost-escalation in completing the projects.

DPR Response: “If this refers to pre-construction services after the contract is awarded prior to the start of the Order to Work, the agency does employ CM services for this phase in instances where in-house resources are not available, the project is particularly complicated and warrants these additional services, and the procurement process for CM services is completed in time for the CM to be on board prior to the start of construction.”

Auditor Comment: DPR should plan and purposefully sequence its activities, including its procurement of CM services and construction services, so that design and project-planning issues are resolved before CMs are paid, on the clock, to oversee construction work that could be halted or extended because of foreseeable design and planning issues. DPR should ensure that CMs are instructed to perform those functions as necessary prior to start of the construction, pursuant to Part II, Article 2 of the standard CM agreement. This work is included in DPR’s standard contracts with its CMs in all cases, not just where “the project is particularly complicated.”

6. Ensure that CMs document the reasons and justification for extending the duration of a close-out and DPR’s approval of such an extension.

DPR Response: “Parks is already performing this action and began doing so independently from receiving this audit.”

Auditor Comment: To the extent that DPR has changed its practices and now follows the practice described in Recommendation #6, we are pleased. However, as noted in this report, during the audit period no documentation of the reasons and justification for extending the closeout periods was found in project files for any of the projects that we reviewed, including both those that were completed late and on-going projects that had already exceeded their contractually mandated close-out dates. DPR did not provide any substantiating documentation when we called this fact to its attention at the Exit Conference or with its official response to the draft audit report.

7. Require CMs to ensure that contractors complete close-outs within prescribed timeframes.

DPR Response: “Parks has always required CMs to do complete close-outs within prescribed timeframes, mindful of those dynamics beyond the immediate control of Parks.”

Auditor Comment: There was no evidence in the projects files of DPR’s requiring its CMs to complete close-outs that were past-due for periods. For example, 12 months at the Battery Park Bikeway project and the Battery Park Carousel project or of any consequences or determination of accountability for those delays. DPR did not provide any information in its response to enable us to determine why DPR believed that issues causing such closeout delays were beyond its control or that of its CMs.

8. Undertake an immediate review of all of its CM services agreements for any conflicts and inconsistencies and address any found, including but not limited to the conflict between Part I, Article 2 and Part II, Article 3, subsection 3 described previously in this report.

DPR Response: “This has already been completed and conflicting language was corrected in 2016 prior to receiving this audit report.”

Auditor Comment: Although it never provided proof to the auditors to support this claim, we are pleased if DPR has corrected the conflicting language in the new contracts after we informed the Department of this issue during the course of the audit. DPR should also take preemptive steps to ensure that the conflicting language regarding work orders issued under any open CM contracts that predate its corrective action are addressed.

DPR’s Inadequate Enforcement of CMs’ Adherence to Contract Requirements Contributed to Project Delays

CMs Were Not Required to Maintain and Submit Project Records in Accordance with Contract Requirements

According to DPR’s standard CM agreement, CMs must “[p]repare all required administrative paperwork related to Projects,” and subsequently submit documents to DPR to substantiate that the CMs are monitoring their assigned projects to ensure efficient and orderly progress on them.²³ However, the evidence we obtained did not demonstrate that DPR adequately ensured that the CMs maintained all critical project documents and/or provided them to DPR. Rather, we found that DPR’s hard-copy records for 11 sampled projects managed by its contracted CMs were missing essential documents, including project-delay analyses that CMs are required to prepare.

When we informed DPR that these and other critical documents were missing from DPR’s hard copy records, agency officials provided auditors with some but not all of the missing documents. The absence of critical documents from the pertinent DPR files reflects both omissions by the CMs in their documentation and record keeping and laxity on the part of DPR in its monitoring of the CMs’ maintenance of project records. Such records are needed to be created and readily available to help ensure orderly project progress and for to enable the City to better defend against potential claims by contractors.

²³ Standard CM agreement, Part II - *Standard Requirements*, Article 2 – *Specific Requirements*, Section (C)11.

Further, we found that DPR lacked a standard record-keeping system covering the essential documents that need to be prepared or obtained from third parties and maintained in DPR's project files. Such a system might also assign project documents to designated folders to be maintained in specific order, with a leading sheet that would serve as a master index of table of the file's contents.

Pre-construction Meetings Were Not Adequately Conducted

The audit found that while DPR generally held pre-construction meetings with DPR staff, project CMs and construction contractors, it did not always secure the attendance of all the necessary stakeholders, including utility companies, City agencies, and the Metropolitan Transportation Authority. Further, we found that it did not, in the alternative, communicate with the missing stakeholders separately to address foreseeable issues requiring coordination prior to the commencement of work. As a result, there was inadequate communication among key stakeholders and delays that occurred because issues that should have been resolved before construction started were not timely addressed.

Pre-construction meetings are intended to: (1) clarify any details that may be unclear in project plans and specifications; and (2) identify and reconcile potential job-site scheduling and operational conflicts that could delay work from proceeding. DPR Capital Division's Construction Supervision Manual, Section 3, and the Standard Construction Operating Procedure issued by the New York City Department of Design and Construction, both identify pre-construction meetings as helping to mitigate project schedule delays and cost-overflow risks. Although DPR's standard CM agreement, Part II, Article 2, (B) 3, states that the CM will conduct the pre-construction meeting, it appears that in practice, DPR typically conducts the meetings while the CMs provide support. At the exit conference, DPR stated that in many cases it chose not to involve CMs in pre-construction meeting or that CMs did not attend because they may not have been "on-board" by then.

While in our 11 sampled projects we found that DPR held pre-construction meetings that addressed critical items such as permits and utility issues, we also found that not all stakeholders attended the meetings. For example, a Con Edison representative did not generally attend pre-construction meetings. However, timely coordination with and cooperation from Con Edison to address items such as cost sharing and utility lines requiring relocation was frequently necessary to keep a project on schedule, prevent delays and ultimately control project cost.

In our sample, we found that many of the pre-construction phase items that caused schedule delays and cost overruns could have been reviewed, discovered and mitigated by CMs, had DPR assigned them to conduct required pre-construction meetings, with all stakeholders in attendance.

For example:

- We found a 298-day delay for issuance of drawings, gas line cost sharing and water sleeving (for controlling water pressure) for the Greenstreets Stormwater Capture Phase 2 project (#QG-813M). It is the job of a CM to identify project needs, such as in this case that a gas cost-sharing agreement was needed prior to the start of construction. Had that been done, critical time would likely have been saved along with money for CM services that was spent as a result of delay.²⁴

²⁴ This project ultimately had \$640K in scope reduction but took longer to complete, although there was no reduction in CM costs.

- We found a 130-day delay for the lack of a required building permit and a 71-day delay due to the need to relocate a Con Edison gas line for the Battery Park Carousel project (#M005-208M). In that project, DPR's pre-construction meeting was held approximately five months before the contracted CM was designated and assigned to the project; as a result, the CM did not participate in the meeting or have an opportunity to identify and comment on the issues prior to start of construction. A CM, if assigned to the project before construction started, would have been expected to identify the missing approvals for building permits and to coordinate issues relating to utility lines with Con Edison.
- We found a 78-day delay for performing test pits to confirm depth of subway roofs and a 37 day delay due to the relocation of a Con Edison gas main, for the Battery Park Bikeway project (project #M005-111M). In its response to DPR's RFP, the CM identified the subway's potential interference with the planned construction, but failed to timely and effectively address the issue.

Project Progress Schedules Were Not Consistently Obtained

DPR did not adequately monitor CMs to ensure that they obtained and maintained updated construction schedules from the contractors. Such schedules are essential for ensuring efficient and orderly work on DPR projects. Of the 11 sampled projects, one was completed on schedule, but the other 10 projects had their schedules extended. In 7 of those 10 projects, there were no updated progress schedules in the project files and DPR was unable to provide them to us.

For example, in the Battery Park Carousel project file, while some progress schedules were present, the most recent schedule, dated April 2013, showed a projected completion date of September 2013, even though the project was not granted substantial completion status more than two years later on June 25, 2015. There were no additional progress schedules in the file that covered the work schedule from April 2013 through June 25, 2015. The CM's failure to obtain, review and maintain progress schedules for that two-year period, and DPR's apparent failure to obtain them, may have contributed to the project delay and allowed for additional CM compensation. DPR's standard CM agreement, Article 2 – *Specific Requirements* Subsection C, requires CMs to “[p]repare all required administrative paper work related to the projects.” That requirement should apply to construction schedules through completion of the projects. In that regard, DPR's in-house Construction Supervision Manual expressly requires that a revised progress schedule be submitted when the original is no longer appropriate. Without updated progress schedules, DPR is hampered in its ability to effectively oversee the CMs who are monitoring project schedules, including updating long-lead items and coordinating the work of different contractors.²⁵

Delay Analyses Not Always Prepared

We also found that DPR did not always require its contracted CMs to fully account for the delays that occurred on the projects they were assigned to manage, as they are required to do in their contracts. DPR's standard CM agreements, Article 2, Section C, require CMs to “[p]repare all required administrative paper work related to the projects,” which includes delay analyses.

Of the 11 sampled projects, 10 were delayed and therefore required both time extension requests by the construction contractors and delay analyses by the assigned CMs in accordance with

²⁵ A long lead item is one that requires extensive time to manufacture and/or deliver prior to its scheduled installation date on a construction project.

contractual provisions.²⁶ Of those 10 projects, the records of 5 contained only incomplete delay analyses prepared by the CMs that did not account for the full duration of the delayed projects. Missing from the records of the five projects were time extension requests, which the contractors should have been required to submit, and subsequent delay analyses by CMs to account for the full duration of the delayed projects.

Without having both time extension requests from contractors and delay analyses by its contracted CMs that fully and contemporaneously account for the duration of its projects, DPR cannot identify in a timely manner the parties responsible for the delays. Nor can it assess potential liquidated damages, and process construction payments. In addition, the lack of such documentation leaves DPR vulnerable to claims filed by construction contractors. Thus, the CMs' deficient performance in preparing required delay analyses may have contributed to the projects' delays and allowed for additional CM compensation.

Change Order Records Were Incomplete

DPR did not monitor its contracted CMs to ensure that they maintained proper records of change orders issued in their assigned projects, including change orders necessitated by design errors and omissions that should have resulted in DPR's recoupment of costs from those responsible. Of the 11 projects we sampled, 8 had change orders. However, none of the files for these CM-managed projects contained a project-specific change order log (also known as a change register), which is a sequential log of all change orders on a given project. When we asked for change order logs, DPR provided them for only four of the eight sampled projects in which change orders had been issued.

In addition, DPR's project files did not contain records of some of the change orders reflected in the documentation provided by DPR. For the 8 sampled projects in which change orders had been issued, auditors found records for a total of 57 change orders in DPR's project files, while they found records for 79 change orders for the 8 projects in OASIS, the Comptroller's official contract registration system, indicating that records for 22 (79 minus 57) change orders were missing from the DPR's files. DPR did not provide any of the missing records after we called their omission to the attention of agency officials.

A lack of standard recordkeeping system for the hard copy records and to provide clear guidance to CMs about the scope of their work, likely contributed to the inconsistencies and gaps we found in DPR's change order records. The CMs are responsible for "change order preparation" as specified in their contracts (Part 1 – Summary and Scope of Services, Article 1), and also under their individual work orders (Attachment A, Section B – Agency Assumptions Regarding Contractor Approach). While DPR's in-house supervision manual requires its resident engineers to maintain project-specific change order logs and records of associated change orders, these requirements are not specifically stated in the CM contracts. However, the absence of complete change order records could inhibit DPR's ability to accurately track the cost of change orders, and likely create or exacerbate delays because contract changes that are not readily accounted for might be delayed in securing additional funds and necessary permits for the additional work.

Additionally, 8 change orders that totaled \$136,644 appear to have resulted from design errors or omissions and therefore required memoranda from DPR project managers to DPR's legal counsel to seek or evaluate the potential of recouping the resulting costs from DPR's design consultants.

²⁶ A delay analysis provides reasons for delay including responsible parties and delay days, and is utilized to approve an extension to the project schedule. The extension of scheduled completion time is requested in writing by the contractor, subsequently, the CM prepares a delay analysis (on DPR Form 53B) and submits to DPR for an approval.

However, the project files showed that memoranda to DPR's legal counsel were sent for only two change orders totaling \$56,236. There was no evidence counsel was informed of the possible recoupment of \$80,407 associated with the remaining six change orders. Consequently, DPR cannot assure that the appropriate recoupment process is being followed, a condition that was also noted in our previous audit (#7E12-067A - *Audit Report on the Department of Parks and Recreation's Oversight of Capital Projects*) issued on January 11, 2013.

Critical Documents Missing from Project Files

Overall, DPR's oversight of the 11 sampled projects was insufficient to ensure that the assigned CMs were properly maintaining all critical records. Table II, which follows, presents the results of our review of the sampled project files to ascertain whether six categories of critical documentation evidencing DPR's oversight efforts could be found.²⁷ The absence of a critical record is denoted as "N."

Table II

Completeness of Critical Documents in DPR Hard Copy Files

	Division (C)apital (F)orestry	Project	CM Performance Evaluations (PEs)	Time Extension Requests with Delay Analysis	Preconstruction meeting minutes (or equivalent)	Updated Progress Schedules	Change Order Log	All Change Orders
1	F	BG-810MA	N	Y	Y	N	N/A	N/A
2	F	BG-511MR	N	Y	Y	N	N	N
3	F	CNYG-2410MR	Y	N/A	Y	N/A	N/A	N/A
4	F	CNYG-512M	N	N	Y	N	N	Y
5	C	Q468-108MA	N	Y	Y	N	Y	N
6	F	BG-315M	Y	Y	Y	N	N/A	N/A
7	F	QG-813M	N	N	Y	N	N	N
8	C	M005-208M/ M005-110M	N	N	Y	N	N	N
9	C	M005-111M	N	Y	Y	Y	Y	N
10	C	Q099-110MA	N	N	Y	Y	Y	N
11	C	MG-609M	N	N	Y	Y	Y	N

Y = Meets Criteria
N = Missing / Incomplete
NA = Not Applicable

DPR Did Not Consistently Complete Required Evaluations of Its CMs' Performance

Our audit found that DPR did not conduct all required performance evaluations of its CMs on 9 (82 percent) of the 11 sampled projects as shown in Table II above. According to DPR, its

²⁷ Evaluations by DPR of the CMs' performance, identified in Table II as one of the five categories of critical documents that should have been in the project files, are discussed below under the heading "DPR Did Not Consistently Complete Required Evaluations of its CMs' Performance."

supervising project manager evaluates the performance of the CMs assigned to the projects he or she manages by preparing performance evaluations—once annually, plus a final evaluation at the end of a project—which are subsequently submitted into the VENDEX (now PASSPort) system, in accordance with the New York City Procurement Policy Board (PPB) Rules, Section 4-01. However, the performance evaluations on file for 9 of the 11 sampled projects were not conducted timely, did not include a required final performance evaluation, or did not cover the full duration of the project. Furthermore, according to DPR, the Department does not maintain or employ any additional performance metrics for its CMs other than the performance evaluations that should be filled out for each CM-managed project.²⁸

A City agency's evaluations of its contractors' performance, including the performance of its contract-CMs, are critical to that and other agencies' determinations of whether to award, renew, extend, or terminate contracts with those contractors. Given the high percentage of projects that lacked required evaluations, DPR cannot be assured that the evaluation process effectively fulfills its intended purposes.

Recommendations

DPR should:

9. Develop a standard record-keeping system for its capital projects to define and ensure that essential documents are obtained, maintained, and are readily retrievable.

DPR Response: "Parks is already performing this action and began doing so independently of receiving this audit."

Auditor Comment: We are pleased that DPR is addressing the weakness in its procedures that resulted in the absence of required records from its project files. However, the evidence found in the audit showed the Parks' action had not yet produced a reliable record-keeping system, as is evident in Table II, above. For example, required performance evaluations were either missing from or incomplete in the files for 9 of 11 sampled projects (82 percent), and the files for 7 of 10 projects (70 percent) were missing required updated progress schedules. Moreover, when DPR was informed of what was missing, it was unable to provide copies. Accordingly, DPR's system needs to be reevaluated and enhanced to address the problems identified in the audit.

10. Conduct pre-construction meetings as a milestone—a critical step for each project—at which all pre-construction phase checks are performed, so that risks of schedule and costs overruns can be managed effectively and efficiently.

DPR Response: "Parks is already performing this action and began doing so independently of receiving this audit."

Auditor Comment: We are pleased that DPR has attempted to address weaknesses that the audit identified and that it did so before it received a final draft of this audit report. The audit showed, however, that DPR did not always secure the attendance of necessary stakeholders, or communicate and follow-up sufficiently with them to ensure that issues requiring coordination were addressed prior to the commencement of work. As a result, avoidable project delays and cost overruns occurred. Therefore, DPR should review the effectiveness of its

²⁸ At the exit conference, DPR officials stated that they use a dashboard based on the Unifier data to monitor its capital projects.

current procedures and ensure that all pre-construction checks are performed so that risks of schedule and costs overruns can be managed efficiently.

11. Ensure that CMs obtain updated progress schedules from the contractors in all cases in which previous schedules have been superseded by events affecting the projects, are not being followed, or for any other reason are not adequate for properly monitoring and controlling project progress.

DPR Response: DPR did not provide a direct response, but stated, “See response to recommendation 7 above.”

Auditor Comment: DPR’s response to recommendation 7 relates to a separate issue regarding project close-outs and not to this recommendation—that DPR require CMs to obtain updated progress schedules from the contractors. Without such schedules, DPR’s ability to track whether its CMs are effectively monitoring project schedules—before and during the closeout phase—is hampered.

12. Ensure that the CMs require the contractors they oversee to submit time-extension requests in a timely manner for any project work that the contractor will not complete on schedule, and that the CMs in turn submit appropriate delay analyses to DPR.

DPR Response: DPR did not provide a direct response, but stated, “See response to recommendation 7 above. Nevertheless, CMs are required to maintain and submit a delay analysis summary.”

Auditor Comment: There was little evidence in the project files that DPR’s CMs required the contractors they oversaw to submit required time-extension requests when it became evident that those contractors would not complete work on schedule, or that DPR required the CMs, in turn, to submit appropriate delay analyses to DPR. CMs complied with those requirements in only 50 percent of the relevant sampled projects, and we found no evidence that they incurred any consequence for noncompliance. Disregard of such controls over costly delays allows the delays to go unexplained, diminishing each participant’s accountability for the timeliness of its work. Therefore, DPR should enforce the relevant requirements.

13. Ensure that CMs maintain change order logs and that the required documentation for all change orders is appropriately retained and submitted to DPR, to adequately track construction cost increases.

DPR Response: DPR did not provide a direct response, but stated, “See response to recommendation 7 above.”

Auditor Comment: DPR’s response to Recommendation #7 relates to project closeouts, a separate issue, not to this recommendation that DPR require its CMs to maintain required change order logs and related documentation. The audit revealed that change order logs were missing from the files of half the sampled projects that required them and that change order records were missing or incomplete in almost all of the files that required them. Our repeated requests to DPR for change order documentation failed to yield sufficiently complete records to enable us to accurately reconcile the associated construction cost increases. Accordingly, we urge DPR to implement this recommendation.

14. Ensure that the CMs prepare, maintain and provide to DPR all project documents that their contracts require, to enable DPR to determine whether the projects' files are complete.

DPR Response: "Parks is already performing this action and began doing so independently of receiving this audit."

Auditor Comment: We are pleased that DPR has attempted to address this weakness in its procedures and that it did so before receiving a final draft of this audit report. However, during the audit, we did not find evidence that improved procedures had been implemented. Instead, during our examination of the DPR's project files, we found that required project documents were missing and incomplete. Further, we have no evidence that DPR implemented the recommended actions through May 3, 2018 when it submitted its response to the draft audit report without providing critical documents that the auditors had been seeking and that DPR had been told were missing from its project files. Based on DPR's apparent inability to produce such documents, improved enforcement is needed, and we urge the agency to reexamine and enhance the efforts it represents constitute compliance with this recommendation.

15. Ensure that all required performance evaluations for all CMs are conducted as required and are submitted into the VENDEX (now PASSPort) as required.

DPR Response: "A more robust, comprehensive citywide procurement tracking and vendor evaluation system (PASSPort) was rolled out last year to all city agencies which replaces VENDEX. Similar to the VENDEX system, staff are required to submit CM performance evaluations into PASSPORT. We acknowledge that some performance evaluations related to the projects in this audit were not completed in a timely manner. In order to improve on this, the agency is currently working on adding this task as a formal step to our project management system (Unifier), and is actively working with the Mayor's Office of Contracts Services to integrate this process in Unifier with the PASSPORT system."

Auditor Comment: We are pleased that DPR recognizes the gaps in its preparation and subsequent submittal of required CM performance evaluations into the citywide performance evaluation system. Consistent enforcement of this requirement should help facilitate accurate decision making for DPR as well as other city agencies during award, renewal, extension, and/or termination of contracts with those contractors.

Inadequate Project Cost Allocation Hinders DPR's Ability to Monitor the Performance of Its CMs

Payment requests by CMs must be tracked against individual project budgets and activity to enable DPR to accurately identify, in real time, which CMs are keeping their projects on schedule and within budget, and which are not. This knowledge could help DPR identify the CMs that might need closer supervision and those that could be assigned to more complex projects in the future. However, our audit found that the Forestry Division does not track CMs' payment requests, including those that exceed the amounts budgeted, by individual project. Instead, the Forestry Division aggregates capital projects for purposes of encumbering funds to pay its contracted CMs, who manage multiple capital projects. Without project-specific tracking, Forestry cannot adequately monitor the CMs' work, the causes of project delays or assess DPR's costs for the

CM's services as a percentage of the construction costs on individual projects. Moreover, as a result of not tracking CMs' payment requests by project, DPR may be overpaying for the services it receives and forgoing claims it could otherwise assert to recover costs from contractors.

Unlike the Capital Division, which generates a separate work order for each CM-managed construction project, the Forestry Division typically includes multiple CM-managed projects assigned to a single CM firm in one work order. In those cases, the budget for the CM's work is based on DPR's estimate of the combined CM-staffing hours for all projects on the work order. The CM's payment requests, including timesheets for each project, are approved and paid by DPR and are drawn down from the amount budgeted as reflected on the aggregated work order. DPR informed us that the CM's invoices and timesheets are reviewed before payment is approved, to ensure that payments are appropriate.

Comptroller's Directive #2, *Procedures for the Audit of Payment Requests Submitted Under Cost Reimbursable Contracts*, Section 3, establishes cost accounting standards that apply to the CMs' payment requests to DPR. The standards require that records supporting such payments are to be maintained at the project level. However, we found that when multiple projects in the Forestry Division are combined in one work order, DPR does not track its payments to the CM for each individual project. Furthermore, if the CM is paid additional monies—for additional hours worked—through DPR's issuance of a supplemental work order, DPR does not track those additional costs at a project level. As a result, the agency has no mechanism to readily identify which projects exceed DPR's cost estimates for CM services.

For example, a review of work order #14 for the Forestry Division indicated that CM firm Hill International would be paid \$1.7 million for project-management services on 10 Street-Tree Planting projects in the five boroughs. Subsequently, \$202,751 was added for additional project-management services in supplemental work order #14A, but without identifying which of the 10 projects in the original work order had exceeded their budgets and needed additional funds. Upon further analysis, we determined that 4 of the 10 projects exceeded their baseline schedules. DPR stated in substance that tracking payments to CMs on an individual project basis is not required. However, without tracking CM payments on each project, DPR cannot identify the variance between the estimated and actual CM staffing hours on each project. Nor can DPR easily determine whether delays and cost overruns are due to increases in the scope of work, unsatisfactory contractor performance, or other reasons.

Further, DPR's forms and procedures for the submission, review and approval of payment requests by its contracted CMs on Forestry Division projects do not include a summary breakdown or cover sheet that would show, for each project covered by the payment request: (1) the initial budget for CM services; (2) the expenditures to date for such services; (3) the remaining budgeted sum; and (4) the percentage of the construction work completed. Without such a breakdown, DPR's project managers cannot adequately monitor the budgets for their CM-managed projects as DPR's costs for the CMs' services on those projects are incurred and paid.

As discussed above, DPR's Forestry Division typically includes multiple projects that are managed by an individual contracted CM in one work order. In those instances, the CM's payment request includes charges for all services the CM provided—on an hourly basis—on all of those projects during a specified time period, typically a month, supported by individual timesheets for each project. However, in reviewing the charges for payment, DPR does not tally, record or track the hourly charges for the individual projects.

Once a CM's payment request is reviewed and approved by the Forestry Director, the original copy of the full payment request with supporting documentation, including the CM's timesheets,

is submitted to DPR's Engineering Audit Office for review and payment. *Thereafter*, the CM's timesheets are separated by project and placed into their respective project files, with the payment request for the total, multi-project paid amount. Our audit found no evidence that the timesheets are used, before or after payment, by the respective project managers to monitor their project budgets in relation to the work completed.

Accordingly, the file for one Forestry Division project we reviewed (#BG-511MR PlaNYC) contained a payment request from the assigned CM totaling \$444,792 on a multi-project work order. Of that amount, only \$14,794 was supported by the CM's timesheets related to the individual project, which were in the project file, and consequently it appeared that the \$429,998 balance of the CM's payment request was for work charged to other projects listed on the work order. However, with no summary of payments made to the CM by project, we were unable to assess DPR's costs for the CM's services as a percentage of the construction costs for any of the projects covered by the work order. DPR project managers do not track or monitor the costs of CM services on the projects for which they are responsible. DPR took the position that it was not required to track the costs of the CMs at an individual project level.

Recommendations

DPR should:

16. Require CMs to include a summary breakdown of total payment requests by individual projects, in requests where multiple projects are covered by one work order. The breakdown should identify initial CM staffing budgets, expenditures to date, remaining CM staffing dollars and the construction completion percentage for each project.

DPR Response: "Forestry already requires CMs to report the progress of projects with every invoice. Also, CMs are now required to include the associated cost per project with the invoice."

Auditor Comment: We are pleased that DPR recognized the importance of tracking the cost per project where multiple projects are covered by one work order, and that DPR has taken a step towards implementing the recommended control measures. However, as noted in the audit, payment request information was not found where a contractor was responsible and billing for multiple projects at one time. Consistent compliance with the control that DPR claims to now have in place will help readily track payment requests and total cost by individual projects. Further, implementation of all the recommended control measures and consistent compliance with those will also help DPR to conduct evaluations of CMs performance and in budget planning.

17. Ensure that each project file contains a copy of the relevant summary breakdown, for each payment request so that DPR project managers can track or monitor the costs of CM services on the projects for which they are responsible.

DPR Response: "Forestry already requires CMs to report the progress of projects with every invoice. Also, CMs are now required to include the associated cost per project with the invoice."

Auditor Comment: DPR's response does not adequately address the recommendation. As noted in the audit report, summary breakdowns for each payment request were not found in the project files. Without them, the relevant

DPR project managers cannot track or monitor the costs of CM services on the projects for which they are responsible. We urge DPR to implement this recommendation to enable effective cost monitoring by its project managers.

Ineffective Use of Unifier

We found that, as with DPR's hard-copy project files, improvements are needed in the Department's computerized record-keeping practices in its project-management system known as "Unifier." As described earlier in this report, the Unifier system is intended to enable DPR to monitor its capital projects, including those managed by CMs, for scheduling, cost-control and accounting purposes and to serve as an electronic repository for digital copies of critical documents. It is accessed and maintained by DPR staff exclusively, and not by the Department's contracted CMs.

Our audit found, however, that the information in Unifier regarding eight key categories of data for eleven sampled CM-managed projects was either incomplete or inaccurate, or in some cases both. As shown in Table III below, deficiencies—meaning data that was missing or incomplete or that contained discrepancies—were found in the Unifier records of all 11 projects in the sample. Of the eight key categories of data that we tested for, (anticipated project completion and closeout dates with supporting documentation, DPR approvals of cost increases and subcontractors, time extension requests and delay analyses, weekly site reports, payment data, and contractor performance evaluations), the number of categories in which each of the 11 projects was deficient ranged from two to seven.

Table III

Completeness of Records in Unifier

Sample Project #			Capital Division					Forestry Division					
			Q099-110MA+++Q099-510M-OMBP++++	MG-609M	Q468-108MA	M005-208M / M005-110M	M005-111M	BG-810MA	BG-511MR PlaNyC	CNYG-2410MR	CNYG-512M	BG-315M	QG-813M
Attribute tested in Unifier													
1	Construction	Anticipated Completion Date	N	Y	N	N	Y	Y	Y	N	Y	N	N
2		Closeout Date	N	N	N	N	Y	N	N	N	Y	N	N/A
3		Cost Increase Approval	N	Y	N	Y	N	N	Y	N/A	N	N/A	Y
4		Subcontractor Approval	Y	N	Y	Y	Y	N	N	Y	N	Y	N
5		Time Extension Request/ Delay Analysis	N	Y	N	N	N	N	Y	N/A	N	N/A	N
6		Weekly Site Reports	N	Y	N	N	Y	N	Y	Y	Y	Y	Y
7	Payments		N	N	N	N	N	N	Y	Y	N	Y	N/A
8	Performance Evaluations		N	N	N	N	N	N	N	N	Y	N/A	N/A

Y = Meets Criteria / No Discrepancies
N = Missing / Incomplete / Discrepancies
N/A = Not Applicable

Through our testing, we found that the Unifier system's records of all sampled projects either omitted key information—reflected, for example, by blank data fields—or contained inaccurate information. In some cases, digital copies of required documents were not present. Based on our review, it appears that DPR staff was not adequately updating the Unifier system with accurate project information and uploading critical documentation. Department officials stated that some of the incorrect data in the Unifier system may have resulted from transfers of incorrect data from its previous legacy project management system, "Q&A." In those cases, DPR staff failed to review the transferred data and correct the discrepancies.

At the exit conference, DPR stated that the record-keeping in the Unifier was implemented in three phases; design data in 2011, procurement data in 2012 and construction data in 2013. Specifically, DPR started the construction phase-in, the final phase-in, meaning transferring data from the Q&A system and inputting the data related to construction phase in the Unifier was implemented in January 2013. Consequently, per DPR, construction related data for some of the sampled projects would not have been recorded in the Unifier for the projects whose construction started prior to January 2013. Per our review of DPR data, the construction of 7 of the 11 sampled projects was started prior to January 2013. Additionally, DPR stated that as of January 2016, the data in the Unifier was *complete* and *up-to-date*. However, results of our review of the data after January 2016 in Unifier presented in Table III showed otherwise. Specifically, as to projects that started on or after January 2013, we found that some of the data was incorrect, missing or had discrepancies.

The lack of complete and accurate project information in Unifier for the 11 sampled CM-managed capital projects indicates that DPR is not effectively utilizing the system as a management tool to timely identify and resolve problems with ongoing projects, such as extended construction durations, increased CM staffing fees and increased construction costs.

Comptroller's Directive #1, *Principles of Internal Control*, identifies, at Section 5.0, various examples of internal controls recommended to agency management, including control over computer information processing to ensure that software performs the functions that it is intended to, and that processed data is accurate and reliable. Additionally, according to Comptroller's Directive #18, *Guidelines for the Management, Protection and Control of Agency Information and Information Processing Systems*, electronic information can be "made useless by the introduction of unintentional or purposeful errors. . . . Another risk of corrupted information is the potential adverse impact that erroneous information can have on the agency's general business or strategic decisions." Consistent with the guidance of those directives, and based on the above-described results of our review, DPR's record-keeping practices in relation to its Unifier system should be improved.

Additionally, at the exit conference, DPR stated that it uses a dashboard based on the Unifier data to monitor capital projects, information it did not provide to the auditors until the exit conference. According to DPR, the dashboard shows all of the relevant data needed to track capital construction projects and also serves as the basis for DPR's monthly "dashboard meetings" at which senior management reviews all of their active projects in detail and discusses progress and how to address project delays. DPR added that it does not make any distinction in the dashboard between projects that are CM-managed and those that are managed in-house.

However, since as noted above the information in Unifier appears to be inaccurate and incomplete, that data cannot be relied upon by agency management to accurately track and assess the progress of its projects. Further, since the dashboard does not differentiate between CM-managed or in-house managed projects, it cannot be utilized by DPR senior management to monitor performance of the CMs and CM-managed projects, and to alert the management about contract management issues.

Recommendations

DPR should:

18. Develop, implement, and enforce control procedures to ensure that complete and accurate data is timely entered and that required project documents are timely uploaded into the Unifier system.

DPR Response: “As discussed during the exit conference, Parks already has procedures in place, established several years ago, to ensure accurate data is entered into Unifier in a timely manner. Timely and accurate data entry has been added as a formal task to annual staff evaluations. Additionally, our Strategic Initiatives team performs monthly data entry checks to assess if any data is missing or inaccurate and contact the appropriate staff member to make corrections, if necessary. Senior management at Capital are included on all of this correspondence with staff to further emphasize the importance of this task.”

Auditor Comment: DPR’s insistence that it has adequate procedures in place to ensure accurate data is entered and maintained in Unifier is belied by the evidence obtained in the audit. Accordingly, we are pleased that DPR has taken additional measures to implement necessary controls to ensure that accurate data is entered into the Unifier system in a timely manner and that necessary quality checks are also performed. Consistent compliance with all those controls should allow DPR to rely on the Unifier data for monitoring CMs and CM-managed projects performance.

19. Utilize the Unifier system to accurately assess the performance of CMs and effectively manage the CM-managed construction projects based on factors such as: whether project schedules and cost targets were met; whether the records for which the CM is responsible were timely and accurately completed and filed; and the CMs’ have met their key responsibilities; and retain the completed evaluations for each project in Unifier.

DPR Response: “Parks holds monthly dashboard meetings, which were established in 2015, to review all of the projects in Unifier (as we do not distinguish between projects managed by in-house staff or CMs) to ensure active projects will meet their on-time and on-budget targets. The dashboard meetings provide vital analytical information, directly from Unifier, and allow us to identify issues early in the process and resolve them so we can avoid delays. We believe these meetings are one of the reasons our construction metrics (‘MMR indicators’) have been increasing over the past few years.”

Auditor Comment: We found significant issues with the quality and/or completeness of the data in the Unifier system, as shown above in Table III of the report. Analysis and monitoring based on incorrect or incomplete Unifier data would not be reliable and could hinder DPR's efforts to keep its projects on track and minimize delays.

In addition, we cannot corroborate effectiveness of DPR's monthly dashboard meetings because DPR did not provide evidence that it identified or took steps to mitigate issues affecting any of the delayed sample projects at or as a result of those meetings.

20. Develop and maintain performance metrics to evaluate effectiveness of CM managed projects.

DPR Response: "Parks uses its existing construction MMR indicators to evaluate our CM managed projects, in addition to our in-house managed projects. The current MMR indicators were established more than 15 years ago and measure the number of construction projects completed each fiscal year, as well as the on-time percentage (agency target is 80%) and on-budget percentage (agency target is 85%). We do not think it is necessary to establish separate metrics for our CM-managed projects since they are already included in our current MMR indicators and are treated the same way as our in-house managed projects."

Auditor Comment: Regardless of how DPR reports its construction project performance in the MMR, without having an organized methodology and performance metrics to evaluate the effectiveness of CM-managed projects or compare them with the projects DPR manages in-house, DPR has no objective means to assess whether its outsourcing decisions are in the best fiscal interests of the City taxpayers.

Additionally, in the 15 years since DPR established its MMR indicators, the Department's capital expenditure has more than doubled to \$471 million from \$187 million. Considering DPR entered into 12 contracts with CMs totaling \$96 million during the past six years, we urge DPR to revisit its existing construction MMR indicators and add any appropriate indicators for CM-managed projects to increase their transparency and enable an objective assessment of their efficiency and economy.

21. Conduct post-completion evaluations of major projects to determine whether project objectives were met, identify problems, such as delays and cost overruns and determine their causes, and develop measures to mitigate the risks of such problems in future projects.

DPR Response: "We agree with this recommendation and will implement it going forward."

Other Matters

Issues with Forestry Projects

Our audit also found issues at several Forestry Division project sites that were primarily the responsibility of DPR, including inadequate inspections during the two-year guarantee period for the installation of plantings, and uncorrected design errors. DPR would have greater assurance

that Forestry projects are implemented successfully if it monitored inspection reports from CMs and ensured that contractors have performed required maintenance.

Two-year Guarantee Period on Forestry Projects Not Utilized Optimally

All Forestry Division construction contracts require the contractor to provide a two-year guarantee on all work. The contracts each provide that, “[t]he Contractor shall maintain all perennials/groundcover within the limits of this contract, and in accordance with the plans, specifications, and directions of the project manager, until two (2) years after the final acceptance of the whole work of this contract.” We found, however, that DPR’s enforcement of this requirement was compromised by its failure to inspect or direct its contracted CMs to inspect the covered work at certain sites during the two-year guarantee period.

According to their contracts, the maintenance tasks that the Forestry Division’s contractors are required to perform include watering throughout the guarantee period, which should take place at approximately two-week intervals from May 15th to October 31st and not less than once a week if it has not rained during that period. They are further required to maintain the area during the two year guarantee period by weeding, cultivating, mulching, edging, controlling and protecting the planted areas against insects, fungus, and other diseases; repairing minor washouts, replacing soil, performing other horticultural operations necessary for the proper growth of all perennials and to generally keep the area where the contracted work was performed neat in appearance.

Although DPR’s contracts with its construction contractors specify the kinds of maintenance that the contractors must provide, the agency has not implemented written policies and procedures to ensure that its in-house staff or its contracted CMs enforce those maintenance obligations. The Department’s Central Forestry Supervision Manual requires CMs to conduct only one inspection of all project sites *one month* prior to the expiration date of the two-year guarantee period. The lack of monitoring by DPR’s contracted CMs or its own staff throughout the 23-month period preceding the final month of the guarantee period severely limits its opportunity to timely identify and secure the responsible contractor’s performance of required maintenance during the guarantee period and the contractor’s replacement of dead or dying trees and plants under the guarantee.

During site inspections of the sampled Forestry Division projects, we found that the work performed was generally performed in accordance with the project design and of good quality. However, at several sites we found conditions indicating that contractors had not been performing required maintenance during the two-year guarantee period and that DPR staff was unaware of those omissions at the time of our inspection, which was conducted jointly with DPR staff. For example, at one project (#CNYG-2410MR) at Alley Pond Park in Queens, DPR contracted for the removal of an estimated 33,400 square yards of invasive species and plant 3,900 new trees. However, when we inspected the area in October 2016, almost 7 months before the 2-year guarantee period end date, we found unwanted weed species encroaching on the new plantings that should have been cleared by the contractor during the guarantee period. According to the DPR staff who accompanied us during the site visit, those unwanted species would die off during winter and would be easy to remove. Nevertheless, the overgrown weeds evidenced a lack of appropriate maintenance and could also obstruct the growth of new plantings, create visually unappealing sites, trap litter, lead to unsafe conditions in natural areas and diminish the recreational use of nearby areas of the park.

We also found deficient conditions that appeared to have been caused by inadequate maintenance at two Green Infrastructure projects where DPR undertook to construct bioswales and plant 3,390 new trees throughout Queens. (See *Appendix III* for photos of select site conditions.)

- One newly planted street tree that had been planted as part of the project was being pushed out of alignment by a sidewalk shed that had been erected to facilitate work on an adjacent building. The condition, which will likely damage the tree and possibly require its replacement, could have been identified and the shed would have been constructed around the tree had the DPR Green Infrastructure contractor been performing routine maintenance of the tree as required by the DPR contract.
- Unwanted weeds and trash were found in new plantings at several bioswale installations. The proliferation of weeds obstructs the growth of the vegetation that was planted under the contract and buildup of trash will also result in quality of life complaints. The condition indicates deficient maintenance during the guarantee period.

Further, DPR's failure to ensure that contractors provide required maintenance during the two-year guarantee period may result in the City's incurring additional costs, after the guarantee expires, to replace or restore plantings that have not yet been properly maintained. Moreover, these conditions, left unaddressed, may also become quality of life issues, including potential tripping hazards due to overgrown weeds extending onto sidewalk areas.

Recommendations

DPR should:

22. Ensure that periodic inspections are conducted during the two-year guarantee period to ensure that contractors are performing routine watering and maintenance, as required by their contracts.

DPR Response: "Periodic inspections are being conducted and the contractor's compliance with watering requirements is closely monitored."

Auditor Comment: Contractual maintenance requirements are not limited to watering as implied by DPR in its response. Maintenance includes weeding, cultivating, mulching, edging, control of insects, fungus, and other diseases, repair of minor washouts, soil replacements and other horticultural operations necessary for the proper growth of all perennials, and for keeping the entire area within the contract limits neat in appearance. Our audit site inspections found, among other things, dead trees, debris in planting areas with overgrown weeds, a tree intertwined with building scaffolding and plantings removed and replaced with underground wiring without DPR knowledge.

DPR should ensure that contractors consistently perform periodic inspections and required maintenance including watering so that City's investment in improving the environment and enhancing public health is protected as well as aesthetic quality of the plantings are maintained. We urge DPR to review its current procedures that allowed the findings we observed to occur and improve its procedures as needed.

23. Ensure that the responsible contractor on each project corrects the issues noted during the site inspections.

DPR Response: “Forestry already has procedures in place to ensure that the responsible contractor on each project corrects the issues noted during site inspections. Contractors are sent a list of outstanding punch list items with the inspection reports.”

Auditor Comment: Issues noted during our site inspections pertain to insufficient or lack of maintenance by contractors during the guarantee period, not just during DPR’s partial acceptance (use) inspections or final inspections. We urge DPR to review its current procedures that allowed the findings we observed to occur and improve its procedures as needed.

24. Consider performing a cost benefit analysis to determine the feasibility of using CMs to perform the periodic inspections.

DPR Response: “Forestry already uses CMs to perform periodic inspections.”

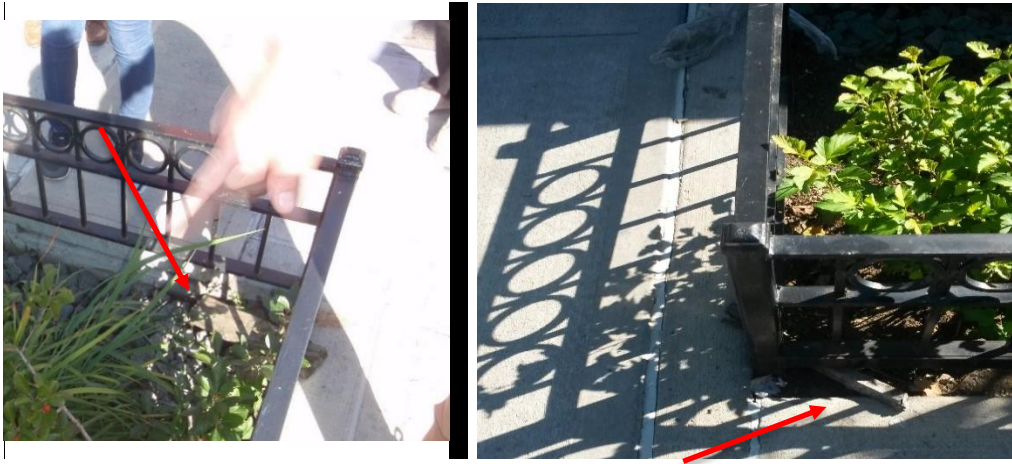
Auditor Comment: Although DPR uses CMs to perform periodic inspections, problems were observed at several sites during our site inspections. DPR should strengthen the controls to ensure that the periodic inspections conducted by the CMs are adequate and cost effective.

Sinking Tree Guard Installations Found

During site inspections of one Green Infrastructure project (#CNYG-512M) in Queens, we found that iron tree guards at several locations were sinking into the soil due to a lack of proper footings, or support. DPR stated that to correct these conditions DPR staff installed wooden blocks at the corners of the tree guards for support and to prevent tree guards from sinking further. However, wooden blocks are at best temporary repairs; they can become dislodged or break and by extending onto sidewalks can create tripping hazards for pedestrians, as shown in photographs below. DPR staff also stated that the tree guards were originally installed in accordance with DEP design standards at the time. Those standards foreclosed the use of concrete footings, because of a concern that they might have reduced storm water absorption. Because the work met the standards prevailing at the time of installation and the two-year guarantee period had expired, DPR staff said, the contractor was not obligated to correct the conditions. Department staff also stated that design standards for tree guards had since been updated, which would prevent the problem from occurring on future projects.

Photographs 1 and 2

Temporary wood blocks supporting sinking tree guards on Junction Blvd., Queens
(project #CNYG-512M)



Recommendation

DPR should:

25. Inspect sites where tree guards were installed under prior design standards. If they are found to be sinking, DPR should ensure that conditions are corrected with proper footings.

DPR Response: “Revisions to the tree guard specifications were made in 2015.”

Auditor Comment: DPR’s response does not address the recommendation, which is intended to address existing problems with tree guards that were installed before the specifications were revised. Our recent visit on April 11, 2018 to locations on Junction Blvd. and on Horace Harding Blvd. in Queens where tree guards were installed under the prior specification showed that temporary wooden supports which were present during our audit inspections over a year ago are no longer there and tree guards have sunk further. We urge DPR to implement this recommendation.

DETAILED SCOPE AND METHODOLOGY

We conducted this performance audit 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. This audit was conducted in accordance with the audit responsibilities of the City Comptroller as set forth in Chapter 5, §93, of the New York City Charter.

The scope of this audit covers the Capital Division and the Forestry Division capital construction projects supervised by CM consultants, which were completed and/or still active during Fiscal Years 2014 and 2015.

We obtained from DPR relevant organization charts, policies and procedures, contracts, a list of IT systems and a list of all associated projects with detailed project information. These included: organization charts for the overall agency operation and for two divisions that use CM contracts; Construction Procedures Manual (2010) used by the Capital Division staff; Central Forestry Supervision Manual (2014) used by the Forestry Division staff; and lists of capital projects and CM agreements with relevant details.

We reviewed submitted documents and interviewed appropriate key DPR officials, CMs, reviewed DPR project files and DPR's computerized project management system (Unifier). Subsequently, we documented our understanding of the control environment in a memorandum.

We reviewed DPR hard copy project files, evaluated record-keeping in the Unifier system and conducted field inspections at the sampled projects sites to assess the conditions of the facilities, tress, plantings and bioswales. When necessary, we requested additional information or documents from DPR.

During audit survey and fieldwork, we:

- Interviewed the Chief of Capital Program Management regarding DPR's oversight structure, and the Chief of Management Services (who was also the Agency's Chief Contracting Officer or ACCO) regarding CM contracts and the office's role;
- Interviewed the Deputy Chief of Construction and the Director of the Forestry Division to understand their operational processes. We also attended a training class offered to CMs to witness how the Forestry Division conveys its expectations to CMs;
- Interviewed the Director of Systems and Analysis to obtain a brief overview of DPR's project management system "Unifier";
- Interviewed the DPR's Engineering Audit Officer to understand CM payments approval process;
- Developed a spreadsheet to evaluate contract distribution among CMs, including associated contract durations and expenditures;

- Developed projects spreadsheets to gain an understanding of scale and risks of CM-managed projects based on the documents provided by DPR.²⁹ Conducted tests to ascertain whether the lists of projects submitted by DPR were complete and accurate. We followed up with DPR to clarify or obtain additional information, when deemed necessary;
- Analyzed the data to assess variances in schedules and budgets. According to our analysis, there were 91 CM-managed projects that were either completed or still active during the audit scope. These projects had a final construction value of \$374,640,009 along with \$24,062,769 in associated CM costs. We determined that of the 91 projects, there was a usable population of 69 projects totaling \$317,022,277 in construction costs with associated CM costs totaling \$18,758,443;³⁰
- Selected a judgmental sample of 11 (or 16 percent) of the 69 projects, which included projects from both divisions and projects that were completed as well as in progress. The audit sample included projects that were over budget and/or over schedule, and had disproportionate CM/construction expenditure compared to project progress. The audit sample contained six Forestry Division projects and five Capital Division projects.³¹ The total contract amount for the 11 projects (\$48,289,932) was approximately 15 percent of the total construction contract amount for all 69 projects (\$317,022,277) that were either completed or active at that time. The CM costs for the 11 projects (\$9,327,622) was 50 percent of the total CM costs for all 69 projects (\$18,758,443);
- Reviewed all DPR-provided manuals, a CM agreement, RFPs issued by DPR for CM services and proposals submitted by CMs in response to those RFPs, to understand scope of CM services, services offered by CMs and work scopes sought by DPR;
- Developed a review checklist to examine the 11 sampled projects records to ascertain whether CMs performed required duties and to check for evidence of DPR's oversight. Also, examined the information maintained on the Unifier system to assess whether project information was complete, accurate and documents were being uploaded timely;
- Reviewed CMs' payment requests for select sampled projects to ensure that they were reviewed prior to issuing payments to CMs. Examined CMs' weekly time sheets within the pay period for evidence of DPR review and verification of accuracy of hourly rates and dollar value calculations;
- Conducted site inspections of the 11 sampled projects with respective staff (Borough Team Leaders, Project Managers, Foresters, and CMs). Documented the results of these site visits with written notations and photographs of existing conditions; and
- Requested DPR to provide any documentation that may have been missing from the project documentation during the fieldwork and at the conclusion of fieldwork, and requested clarifications when necessary.
- As criteria for our evaluations, we used CM agreements, DPR Capital Project - Construction Procedure Manual (January 2010) for in-house staff, DPR Central Forestry Supervision Manual (2014) for in-house staff and for consultant oversight of contractors, RFPs, responses to RFPs, work orders associated with the sampled projects, the PPB

²⁹ Project information included items such as: the completed or active status, DPR contract registration numbers, Order to Work Dates (OTWs), initial Scheduled Completion Dates (SCDs), actual/anticipated completion dates (ACDs) along with the initial and current construction contract dollar values, and initial and current CM dollar values for managing assigned capital projects.

³⁰ A total of 22 projects were removed from the audit population such as the sidewalk reconstruction projects that were no longer funded under the capital budget and Hurricane Sandy related projects that may have necessitated special oversight requirements. For these 22 projects, the construction costs and associated CM costs totaled \$57,617,723 and \$5,304,325, respectively.

³¹ We substituted two originally selected sample projects, McCarren Park Pool Bathhouse (project #B058-108M PlaNYC) and Ferry Point Golf Course construction (project #X126-109M) because they were under litigation, upon a request from DPR.

Rules (Section 4-01, Evaluation and Documentation of Vendor Performance), Comptroller's Directives (#1, *Principles of Internal Controls*, #2, *Procedures for the Audit of Payment Requests Submitted Under Cost Reimbursable Contracts* and #18, *Guidelines for the Management, Protection and Control of Agency Information and Information Processing Systems*). We used information obtained during our walkthroughs/interviews with DPR and CMs to supplement our criteria.

The results of our audit procedures and tests, while they cannot be projected to the entire population of DPR's completed and ongoing capital construction projects supervised by CM consultants during Fiscal Years 2014 and 2015, provided sufficient, appropriate evidence to support our findings and conclusions about DPR's oversight of CMs.

Projects with Schedule Delays

#	Project #	Project Description	Active/ Complete?	Planned Construction Schedule (Days)	Revised Construction Schedule (Days)	Schedule Delay (Days)
1	BG-810MA	Brooklyn Borough-Wide Street Tree Planting and Tree Pit Guard Installation	C	539	671	132
2	BG-511MR PlaNYC	Brooklyn Street Tree Planting, CB 7, 10-15, 17, 18 - FY13	C	364	578	214
3	BG-1013M	Brooklyn Street Tree Planting, CB 5, 9, 16, 17, 18 - FY14	C	364	393	29
4	BG-813M	Brooklyn Street Tree Planting, CB 1-6 & 8 - FY14	C	364	393	29
5	BG-913M	Brooklyn Street Tree Planting, CB 7 & 10-15, FY14	C	364	393	29
6	QG-1113M	Queens Street Tree Planting CB 7, 8, 9, 11 - FY14	C	364	437	73
7	XG-713M	Bronx Street Tree Planting, CB 7-12 - FY14	C	364	373	9
8	CNYG-512M	Brooklyn & Queens Greenstreet Construction	C	364	988	624
9	XG-212M	Bronx Green Infrastructure Construction	C	364	874	510
10	BG-210M	Brooklyn Street Tree Planting CB 2	C	364	495	131
11	Q099-110MA+++Q099-510M-OMBP++++	Olmsted Center Annex Construction	C	539	998	459
12	MG-609M	Fort Washington Park & Inwood Hill Park ADA Ramp Connection Construction	C	659	921	262
13	B058-108M PLANYC	McCarren Park Pool Bathhouse	C	729	1631	902
14	X126-109M	Ferry Point Golf Course Construction	C	749	1711	962
15	M028-211M PLANYC	Fort Washington Park Ballfields Reconstruction	C	364	415	51
16	QG-907M	Queens East River & North Shore Greenway Construction	C	360	716	356
17	CNYG-3009M	Bronx and Queens General Roofing Systems Reconstruction	C	1094	1722	628
18	Q468-108MA	Louis Armstrong Center HVAC Reconstruction	C	360	709	349
19	BG-215M	Brooklyn Street Tree Planting, CB 5, 8, 9, 16, 17 - FY15	A	365	458	93
20	BG-315M	Brooklyn Street Tree Planting, CB 6, 7, 10, 12 - FY15	A	365	438	73
21	CNYG-414M	Yankee Stadium-Related Street Tree Planting	A	365	439	74
22	CNYG-1013M	Citywide Green Infrastructure Construction - FY13	A	365	610	245
23	QG-813M	Greenstreets Stormwater Capture Phase 2	A	365	760	395
24	M071-310M	79th Street Boat Basin Dock A Reconstruction	A	365	423	58
25	Q099-808MA1	Olmsted Center Reconstruction	A	540	782	242
26	M005-208M / M005-110M	The Battery Carousel Construction (GC & Electrical contracts combined)	A	548	1747	1199
27	M005-111M	The Battery Town Green and Battery Bikeway Construction	A	540	1139	599
				35111	42939	7828

*
A = Active
C = Complete

Costs Overruns and Schedule Delays
(Sampled Projects)

	Project #	Project Description	CM Firm	CM Cost Overrun		Project Schedule Delay		Construction Cost Overrun	
				\$	%	Days	%	\$	%
Capital Division	1	Q099-110MA++++Q099-510M-OMB++++	Hill	\$ 269,320	67%	459	85%	\$ 373,593	6%
	2	MG-609M	Hill	\$ 150,048	46%	262	40%	\$ 316,933	5%
	3	Q468-108MA	URS	\$ 53,634	29%	349	97%	\$ 104,157	5%
	4	M005-208M / M005-110M	Liro	\$ 928,575	208%	1199	219%	\$ 800,627	9%
	5	M005-111M*	Liro	\$ 814,304	185%	599	111%	\$ (719,169)	-6%
Forestry Division	6	BG-810MA	Hill	\$ 241,920	28%	132	24%	\$ 393,115	17%
	7	BG-511MR PlaNYC	Hill	\$ -	0%	214	59%	\$ 212,000	16%
	8	CNYG-2410MR	Liro	\$ -	0%	-19	-2%	\$ -	0%
	9	CNYG-512M	Hill	\$ 268,658	152%	624	171%	\$ (68,199)	-2%
	10	BG-315M	Hill	\$ -	0%	73	20%	\$ -	0%
	11	QG-813M**	Liro	\$ -	0%	395	108%	\$ (640,119)	-24%

Notes * The project scope was reduced by \$1 million.
 ** The project scope was reduced by \$640,119.

**Problems with Maintenance by Contractors
during Two-year Guarantee Period**

Conditions noted during audit inspections

(*sites related to project #CNYG-512M and **sites related to project #BG-315M)
(Audit inspections were conducted during September to October 2016)

Tree growing through sidewalk shed*
@108th St & 65th Rd., Queens



Overgrown weeds*
@108th St & 64th Rd. (North), Queens



Removed plantings and unauthorized electrical lines installed* @108th St & 64th Ave., Queens



Broken concrete edging with exposed rebar*
@Junction Blvd & Horace Harding Expressway, Queens



Dead tree**
@Ocean Ave. & Ave. O, Brooklyn



Trash in planting area*
@108th St & 64th Rd. (South), Queens





May 3, 2018

Marjorie Landa
Deputy Comptroller of Audit
1 Centre Street, Room 1100
New York, NY 10007

Re: Audit Report (“Report” or “Audit”) on the Department of Parks and Recreation’s (“Parks”) Oversight of Construction Management (“CM”) Consultants, SE16-062A

Dear Deputy Comptroller Landa,

This letter addresses the findings and recommendations contained in the New York City Comptroller’s (“Comptroller”) Report, dated April 19, 2018, on the above subject matter. Parks disagrees with the Report’s accuracy and many of its findings and conclusions, and also believes the Report does not provide a timely, useful analysis toward the enhancement of program operations. Parks’ concerns in this regard were conveyed during the exit conference as we hoped to address the most material points of disagreement; however, it does not seem that these points are reflected in the Report.

As you know, the Report covered Fiscal Years 2014 and 2015 (July 2013 through June 2015) and focuses heavily on the Capital Division’s (“Capital”) oversight of CMs. Most of the Capital construction projects included in this time period, were completed more than three years ago, some began design more than seven years ago, and many are reflective of outdated systems and policies. We also note that the Report focuses on 12 completed Capital projects. This represents only 6% of Parks’ total 198 completed Capital projects in Fiscal Years 2014 and 2015, as the vast majority of Capital projects do not utilize CM consultants (which are only generally used for specialized projects where Parks does not have the requisite in-house expertise). Moreover, several of the Report’s recommendations are based on outlier projects with circumstances which are (1) not representative of the broader Capital project portfolio – but provide a narrow, specific narrative – and (2) from a time period which predates the current administration. Thus, the Report does not provide Parks with many insights and alternatives it can usefully apply as Parks has continually worked to improve its Capital project processes. In fact, 14 of the 19 Capital recommendations have been implemented since Fiscal 2014, or were already in place prior to Fiscal 2014.

For example, in Fiscal Years 2014 and 2015, of the 198 Capital projects Parks completed, an average of 81% of these projects were completed on time and 82% were completed within budget. In Fiscal Years 2016 and 2017, of the 201 Capital projects Parks completed, an average of 85% of these projects were completed on time and 87% were completed within budget – a measurable improvement over the averages from the prior two fiscal years, and a performance trend we work to continue and increase. Clearly, this progress demonstrates that Capital has already initiated efforts to broadly identify and implement strategic improvements for its Capital process, inclusive of the small number of CM Consultant projects.

The Report includes 25 recommendations: 19 to Parks' Capital Division and six to the Forestry, Horticulture and Natural Resources Division. Below is a response to the Report's recommendations.

Recommendation 1 – Prepare written policies and procedures for DPR personnel that governs their oversight of CMs that:

- a. Specify DPR staffs' duties, responsibilities and performance standards; and
- b. Establish (i) The level of authority of DPR oversight personnel in relation to the CMs and the projects for which they are responsible, and (ii) Standards for assessing CMs' performance and dealing with those who fail to perform adequately.

Response: We believe this is not necessary given the fact that CMs report to Construction Directors and senior construction personnel who fully understand the duties and responsibilities of CMs working on our projects. Capital manages CMs and in-house residents in the exact same way and each performs the same duties, and reports to the Construction Directors.

Recommendation 2 – Issue a construction supervision manual for the CMs that specifies, in writing, the duties, responsibilities, and performance standards that apply to CMs.

Response: The duties, responsibilities, and performance standards that apply to CMs are included in each parent contract with our CM firms. In addition, each individual work order further details the specific duties and responsibilities for each project. Checklists are also provided to our CMs for payments, change orders, time extensions, etc. and they now attend the same in-depth construction supervision training that we provide to our in-house staff.

Recommendation 3 – Develop written SOPs with checklists to ensure that construction management issues are timely identified and that all necessary approvals, permits, surveys, design documents, and coordination with regulatory agencies and other entities, are in place prior to directing a contractor to start construction.

Response: As mentioned by the Report, Capital has “a comprehensive construction supervision manual” which describes all of the responsibilities, protocols, and procedures for overseeing construction projects. Furthermore, we are currently working on developing additional SOP's to reinforce the procedures outlined in the construction supervision manual.

Recommendation 4 – Optimize its use of CMs' services to help DPR identify and timely address key logistical, scheduling and budgeting issues.

Response: Parks' understanding is that this recommendation relates to recommendation 5. See response to recommendation 5 below.

Recommendation 5 – Effectively utilize CM contracts for pre-construction CM services in DPR's capital projects including contract-document reviews and other tasks to anticipate, identify, and address project challenges to prevent and minimize delays and cost-escalation in completing the projects.

Response: With the understanding that this recommendation is in reference to constructability reviews, please recall that it was explained to the audit team during the exit conference that these reviews are routinely performed during the design phase, utilizing existing in-house construction staff. Procurement of CM services during the design phase would have adverse cost implications to our Capital projects as we

would need to retain their services from design through procurement and into construction. If this refers to pre-construction services after the contract is awarded prior to the start of the Order to Work, the agency does employ CM services for this phase in instances where in-house resources are not available, the project is particularly complicated and warrants these additional services, and the procurement process for CM services is completed in time for the CM to be on board prior to the start of construction.

Recommendation 6 – Ensure that CMs document the reasons and justification for extending the duration of a close-out and DPR’s approval of such an extension.

Response: Parks is already performing this action and began doing so independently from receiving this audit.

Recommendation 7 – Require CMs to ensure that contracts complete close-outs within prescribed timeframes.

Response: Parks has always required CMs to do complete close-outs within prescribed timeframes, mindful of those dynamics beyond the immediate control of Parks.

Recommendation 8 – Undertake an immediate review of all of its CM services agreement for any conflicts and inconsistencies and address any found, including but not limited to the conflict between Part 1, Article 2 and Part II, Article 3, subsection 3 described previously in the report.

Response: This has already been completed and conflicting language was corrected in 2016 prior to receiving this audit report.

Recommendation 9 – Develop a standard record keeping system for its Capital projects to define and ensure that essential documents are obtained, maintained, and are readily retrievable.

Response: Parks is already performing this action and began doing so independently of receiving this audit.

Recommendation 10 – Conduct pre-construction meetings as a milestone—a critical step for each project—at which all pre-construction phase checks are performed, so that risks of schedule and costs overruns can be managed effectively and efficiently.

Response: Parks is already performing this action and began doing so independently of receiving this audit.

Recommendation 11 – Ensure that CMs obtain updated progress schedules from the contractors in all cases in which previous schedules have been superseded by events affecting the projects, are not being followed, or for any other reason, are not adequate for properly monitoring and controlling project progress.

Response: See response to recommendation 7 above.

Recommendation 12 – Ensure that the CMs require the contractors they oversee to submit time-extension requests in a timely manner for any project work that the contractor will not complete on schedule, and that the CMs in turn submit appropriate delay analysis to DPR.

Response: See response to recommendation 7 above. Nevertheless, CMs are required to maintain and submit a delay analysis summary.

Recommendation 13 – Ensure that CMs maintain change order logs and that the required documentation for all change orders is appropriately retained and submitted to DPR, to adequately track construction cost increases.

Response: See response to recommendation 7 above.

Recommendation 14 – Ensure that the CMs prepare, maintain and provide to DPR all project documents that their contracts require, to enable DPR to determine whether the projects' files are complete.

Response: Parks is already performing this action and began doing so independently of receiving this audit.

Recommendation 15 – Ensure that all required performance evaluations for all CMs are conducted as required and are submitted into the VENDEX as required.

Response: A more robust, comprehensive citywide procurement tracking and vendor evaluation system (PASSPORT) was rolled out last year to all city agencies which replaces VENDEX. Similar to the VENDEX system, staff are required to submit CM performance evaluations into PASSPORT. We acknowledge that some performance evaluations related to the projects in this audit were not completed in a timely manner. In order to improve on this, the agency is currently working on adding this task as a formal step to our project management system (Unifier), and is actively working with the Mayor's Office of Contracts Services to integrate this process in Unifier with the PASSPORT system.

Recommendation 16 – Require CMs to include a summary breakdown of total payment requests by individual projects, in requests where multiple projects are covered by one work order. The breakdown should identify initial CM staffing budgets, expenditures to date, remaining CM staffing dollars and the construction completion percentage for each project.

Response: Forestry already requires CMs to report the progress of projects with every invoice. Also, CMs are now required to include the associated cost per project with the invoice.

Recommendation 17 – Ensure that each project file contains a copy of the relevant summary breakdown for each payment request so that DPR project managers can track or monitor the cost of CM services on the projects for which they are responsible.

Response: Forestry already requires CMs to report the progress of projects with every invoice. Also, CMs are now required to include the associated cost per project with the invoice.

Recommendation 18 – Develop, implement, and enforce control procedures to ensure that complete and accurate data is timely entered and that required project documents are timely uploaded into the Unifier system.

Response: As discussed during the exit conference, Parks already has procedures in place, established several years ago, to ensure accurate data is entered into Unifier in a timely manner. Timely and accurate data entry has been added as a formal task to annual staff evaluations. Additionally, our Strategic Initiatives team performs monthly data entry checks to assess if any data is missing or inaccurate and

contact the appropriate staff member to make corrections, if necessary. Senior management at Capital are included on all of this correspondence with staff to further emphasize the importance of this task.

Recommendation 19 – Utilize the Unifier system to accurately assess the performance of CMs and effectively manage the CM-managed construction projects based on factors such as: whether project schedules and cost targets were met; whether the records for which the CM is responsible were timely uploaded into the Unifier system.

Response: Parks holds monthly dashboard meetings, which were established in 2015, to review all of the projects in Unifier (as we do not distinguish between projects managed by in-house staff or CMs) to ensure active projects will meet their on-time and on-budget targets. The dashboard meetings provide vital analytical information, directly from Unifier, and allow us to identify issues early in the process and resolve them so we can avoid delays. We believe these meetings are one of the reasons our construction metrics (“MMR indicators”) have been increasing over the past few years.

Recommendation 20 – Develop and maintain performance metrics to evaluate effectiveness of CM managed projects.

Response: Parks uses its existing construction MMR indicators to evaluate our CM managed projects, in addition to our in-house managed projects. The current MMR indicators were established more than 15 years ago and measure the number of construction projects completed each fiscal year, as well as the on-time percentage (agency target is 80%) and on-budget percentage (agency target is 85%). We do not think it is necessary to establish separate metrics for our CM-managed projects since they are already included in our current MMR indicators and are treated the same way as our in-house managed projects.

Recommendation 21 – Conduct post-completion evaluations of major projects to determine whether project objectives were met, identify problems, such as delays and cost overruns and determine their causes, and develop measures to mitigate the risks of such problems in future projects.

Response: We agree with this recommendation and will implement it going forward.

Recommendation 22 – Ensure that periodic inspections are conducted during the two-year guarantee period to ensure that contractors are performing routine watering and maintenance, as required by their contractors.

Response: Periodic inspections are being conducted and the contractor’s compliance with watering requirements is closely monitored.

Recommendation 23 – Ensure that the responsible contractor on each project corrects the issues noted during the site inspections.

Response: Forestry already has procedures in place to ensure that the responsible contractor on each project corrects the issues noted during site inspections. Contractors are sent a list of outstanding punch list items with the inspection reports.

Recommendation 24 – Consider performing a cost benefit analysis to determine the feasibility of using CMs to perform the periodic inspections.

Response: Forestry already uses CMs to perform periodic inspections.

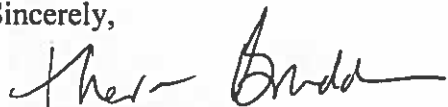
Recommendation 25 – Inspect site where tree guards were installed under the prior design standards. If they are found to be sinking, DPR should ensure that conditions are corrected with proper footings.

Response: Revisions to the tree guard specifications were made in 2015.

In conclusion, Parks will continue to work toward further enhancing its capital projects operations to strengthen the New York City parks system and, in turn, the experience of park patrons.

Parks thanks you and your audit staff for the time and effort devoted to completing this Report.

Sincerely,

A handwritten signature in black ink, appearing to read "Therese Braddick", written over a horizontal line.

Therese Braddick

Deputy Commissioner for Capital Projects