

DISTRICT OF COLUMBIA OFFICE OF THE INSPECTOR GENERAL

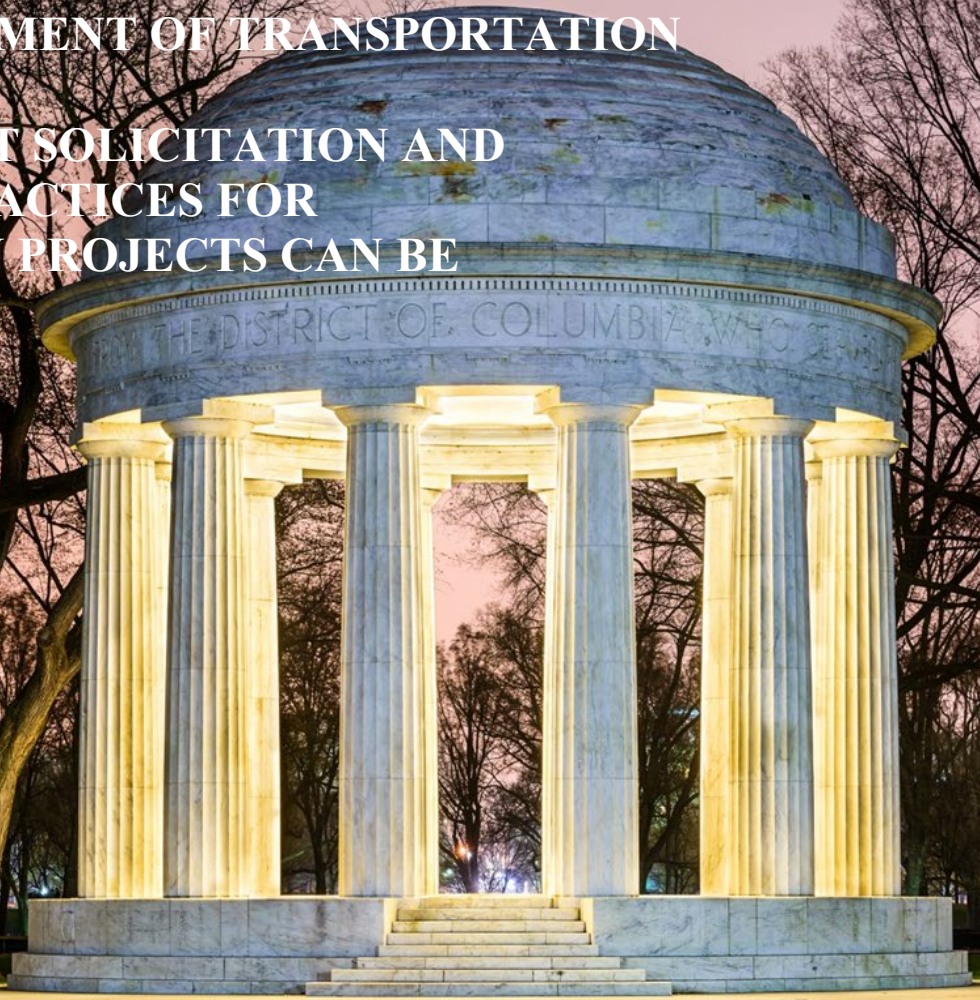
OIG Project No. 18-1-02KA

April 2019



DISTRICT DEPARTMENT OF TRANSPORTATION

DDOT'S CONTRACT SOLICITATION AND MANAGEMENT PRACTICES FOR TRANSPORTATION PROJECTS CAN BE IMPROVED



Guiding Principles

*Workforce Engagement * Stakeholders Engagement * Process-oriented * Innovation
* Accountability * Professionalism * Objectivity and Independence * Communication * Collaboration
* Diversity * Measurement * Continuous Improvement*

Mission

Our mission is to independently audit, inspect, and investigate matters pertaining to the District of Columbia government in order to:

- prevent and detect corruption, mismanagement, waste, fraud, and abuse;
- promote economy, efficiency, effectiveness, and accountability;
- inform stakeholders about issues relating to District programs and operations; and
- recommend and track the implementation of corrective actions.

Vision

Our vision is to be a world-class Office of the Inspector General that is customer-focused, and sets the standard for oversight excellence!

Core Values

Excellence * Integrity * Respect * Creativity * Ownership
* Transparency * Empowerment * Courage * Passion
* Leadership





Why the OIG Did This Audit

Improving and maintaining transportation infrastructure is essential to the economic prosperity of the District. The District of Columbia Department of Transportation (DDOT) facilitates street system improvements for traffic flow, including management of transportation projects and long-term improvements to infrastructure.

The Office of the Inspector General's (OIG) report entitled *Government of the District of Columbia Fiscal Year 2017 Procurement Practices Risk Assessment* identified contracting procedures as a risk area in the District. Of particular concern was lack of competition, document management, and vendor oversight.

Assessing the effectiveness of a system of internal controls over DDOT's contracting procedures allows the District to address those risks and ensure that the District obtains the best value for residents.

What the OIG Recommends

The OIG made 10 recommendations for DDOT to enhance competition, use data more effectively, formalize cost estimates, and release unspent funds upon completion of transportation projects.

DISTRICT DEPARTMENT OF TRANSPORTATION

Contract Solicitation and Management Practices for Transportation Projects can be Improved

What the OIG Found

DDOT has an opportunity to increase competition if it can attract more vendors to bid on transportation projects. Specifically, DDOT averaged fewer than three bidders for the Fiscal Year (FY) 2016 and 2017 transportation project solicitations we reviewed.¹ Best practices² recommend obtaining six or more bids per solicitation. According to research,³ project costs decrease about 2 percent for each additional bidder. As a result of limited vendor participation, the District may have not obtained the best value in awarding \$292 million in transportation contracts to three vendors.⁴

DDOT officials are implementing new methods to increase awareness of upcoming opportunities and vendor participation. DDOT officials stated that vendors based outside the District may struggle to compete because the District provides preferences to certified local companies during the bidding process.⁵ However, our analysis of market⁶ concentration indicated that DDOT transportation contract awards have concentrated among fewer vendors since FY 2014.⁷ Increasing the number of vendors that participate in the market for transportation projects may enhance competition among vendors that provide these services and help the District obtain better outcomes.

DDOT also did not capture the data needed to analyze key aspects of the contract solicitation process, did not have formal standardized cost estimate and bid evaluation procedures, and did not always develop and maintain the Independent Government Estimate⁸ prior to soliciting proposals. When DDOT developed the Independent Government Estimate, it could not demonstrate how it evaluated bids against the estimate to ensure the District would pay a fair and reasonable price for transportation projects. Reliable Independent Government Estimates are needed to establish a fair and reasonable price when there is limited vendor participation.

Finally, DDOT did not always close completed projects and release unspent funds. This occurred because DDOT lacked formal policies and procedures, which resulted in inconsistent practices. The OIG determined that approximately \$8.1 million of unspent funds could be used to fund other projects.

¹ We randomly selected 20 transactions and included 2 outliers that represent over half the dollars spent on construction projects during this timeframe.

² U.S. DEPT. OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, GUIDELINES ON PREPARING ENGINEER'S ESTIMATE, BID REVIEWS AND EVALUATION, ¶ 5(a) available at <https://www.fhwa.dot.gov/programadmin/contracts/ta508046.cfm> (last visited Jan. 22, 2019).

³ American Association of State Highway and Transportation Officials, Practical Guide to Cost Estimating § 7.2.1.1(1st ed. 2013) (DDOT personnel used this guideline as a best practice.).

⁴ Two Hundred Ninety-two million dollars represents 77.6 percent of all construction contracts awarded during FYs 2016 and 2017, excluding the South Capitol Street project (a large multi-year construction project).

⁵ Vendors based in the District receive contract solicitation advantages through the Local Small Disadvantaged Business Enterprise "Sheltered Markets" program.

⁶ For the purposes of this analysis, the market is defined as all vendors that have sold goods and services to DDOT during the last 20 years.

⁷ We reviewed contracts awarded over the past 20 years for comparative purposes only. There was no change in audit scope.

⁸ Independent Government Estimates determine a fair and reasonable cost to deliver a project.

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Office of the Inspector General

Inspector General



April 3, 2019

Jeff Marootian
Director
District Department of Transportation
55 M Street, S.E., Suite 400
Washington, D.C. 20003

Dear Director Marootian:

Enclosed is our final report, *District Department of Transportation: Contract Solicitation and Management Practices for Transportation Projects can be Improved* (OIG Project No. 18-1-02KA). The audit was included in our *Fiscal Year 2018 Audit and Inspection Plan*. We conducted this audit in accordance with generally accepted government auditing standards (GAGAS).

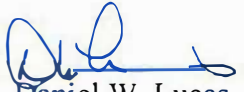
We provided DDOT with our draft report on February 15, 2019, and received its response on March 25, 2019. Based on DDOT's response, we re-examined our facts and conclusions and determined that the report is fairly presented. We acknowledge and commend DDOT's commitment to achieving more robust competition and continuously improving its procurement practices to better utilize District and federal resources. We appreciate that DDOT officials addressed some findings during the audit.

DDOT agreed with Recommendations 1, 2, 4, 5, 7, 8, 9, and 10. DDOT's actions taken and/or planned are responsive and meet the intent of the recommendations. Therefore, we consider these recommendations resolved but open pending evidence of stated actions. DDOT does not agree with Recommendations 3 and 6, but actions taken or planned by DDOT are responsive and meet the intent of the recommendations. Specifically, DDOT, as part of its response to Recommendation 3, indicated that it received the best bargain pricing in the last years of a multiple year contract, and stated that it would implement a software solution to automate line item by line item reviews in June 2019 to address Recommendation 6. Therefore, we consider these recommendations resolved but open pending evidence of stated actions. DDOT's response to the draft report is included in its entirety at Appendix E.

Director Marootian
DDOT Contracting for Transportation Projects
Final Report OIG No. 18-1-02KA
April 3, 2019
Page 2 of 3

We appreciate the cooperation and courtesies extended to our staff during this audit. If you have any questions concerning this report, please contact me or Benjamin Huddle, Assistant Inspector General for Audits, at (202) 727-2540.

Sincerely,



Daniel W. Lucas
Inspector General

DWL/rb

Enclosure

cc: See Distribution List

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BACKGROUND

The District of Columbia Department of Transportation (DDOT) facilitates street system improvements for traffic flow, including management of transportation projects and long-term improvements to transportation infrastructure. DDOT facilitates improvements by hiring contractors to provide construction services to maintain District streets, alleys, sidewalks, trees, and other infrastructure assets; manage traffic engineering, operations, vehicle, pedestrian safety control, public space, and parking regulations; and remove snow.⁹

DDOT coordinates with the District of Columbia Office of Contracting and Procurement (OCP) to purchase goods and services. OCP has embedded employees within DDOT to facilitate and manage the procurement process.

The objective of this audit was to assess District of Columbia contracting procedures for transportation projects. The audit was included in the Office of the Inspector General's (OIG) *Fiscal Year 2018 Audit and Inspection Plan* and resulted from issues identified in the OIG's report entitled *Government of the District of Columbia Fiscal Year 2017 Procurement Practices Risk Assessment* (OIG Project No. 16-1-17MA). Risks identified in this report included a lack of competition, document management, and vendor oversight. A summary of prior risks and our current evaluation of these risks at DDOT are contained in Appendix D.

In addition to the District's rules and regulations that are applicable to DDOT's contracting and procurement procedures, we used the U.S. Department of Transportation, Federal Highway Administration (FHWA) guidelines and best practices. FHWA provides funding to the District government for the design, construction, and maintenance of highway systems.¹⁰

Also, we used the American Association of State Highway and Transportation Officials' (AASHTO) *Practical Guide to Cost Estimating* as a best practice because it sets technical standards for all phases of highway system development.¹¹ AASHTO is a nonprofit, nonpartisan association representing highway and transportation departments in the 50 states and the District of Columbia. DDOT personnel use this guideline as a reference book as well.

We conducted this audit in accordance with generally accepted government auditing standards (GAGAS).

⁹ GOV'T OF THE DISTRICT OF COLUMBIA FY 2018 PROPOSED BUDGET AND FINANCIAL PLAN CONGRESSIONAL SUBMISSION, VOL. 4 AGENCY BUDGET CHAPTERS PART III F-13 (2017).

¹⁰ Federal Highway Administration, <https://www.fhwa.dot.gov/about/> (last visited Jan. 11, 2019).

¹¹ AASHTO, <https://www.transportation.org/home/organization/> (last visited Jan. 11, 2019).

FINDINGS

DDOT CAN ENHANCE COMPETITION BY ATTRACTING MORE PARTICIPANTS TO THE CONTRACT SOLICITATION PROCESS

DDOT has an opportunity to increase competition by attracting more vendors to ensure the District obtains the best value when awarding transportation contracts. The market for local construction services at DDOT is concentrated among three firms, and has been more concentrated since FY 2014. More robust competition for transportation projects may enhance the benefit the District receives from the contracts awarded.

DDOT did not Attract an Optimal Number of Vendors When Awarding Transportation Contracts

DDOT did not attract more than three bidders on average during FY 2016 and 2017. We determined that the average number of responsive bidders was 2.5 for the 10 construction contracts within our random sample of 20 transportation contracts. According to the Federal Highway Administration (FHWA), “[c]ompetition should be considered excellent when there are six or more bids within 20 percent of the low bid, including the low bid. Fewer competitive bids should require evaluation to determine whether competition was adequate, and whether additional competition or better prices could be obtained.”¹²

We discussed this issue with DDOT officials who stated that competition varies by project type, and that some projects attract more bids. The officials stated that eight recent large projects attracted approximately four bidders on average. Although DDOT may have attracted four bidders on average for these recent contracts, DDOT’s solicitations still do not meet the best practice of six as recommended by FHWA. Further, sustainable competition requires a process that reliably attracts the most vendors to compete for work. Inadequate vendor participation indicates the District may not have obtained the best value in awarding transportation contracts.

We also found one instance in our sample where the losing bidder was a subcontractor of the winning bidder, which could indicate that the pool of contractors is even smaller than the average number of bidders observed, and may increase the risk of anticompetitive practices.¹³

¹² U.S. DEPT. OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, GUIDELINES ON PREPARING ENGINEER’S ESTIMATE, BID REVIEWS AND EVALUATION, ¶ 5(a) *available at* <https://www.fhwa.dot.gov/programadmin/contracts/ta508046.cfm> (last visited Jan. 22, 2019).

¹³ According to the Federal Acquisition Regulations, “[e]xamples of anticompetitive practices are collusive bidding, follow-the-leader pricing, rotated low bids, collusive price estimating systems, and sharing of the business.” 48 C.F.R. § 3.301(a).

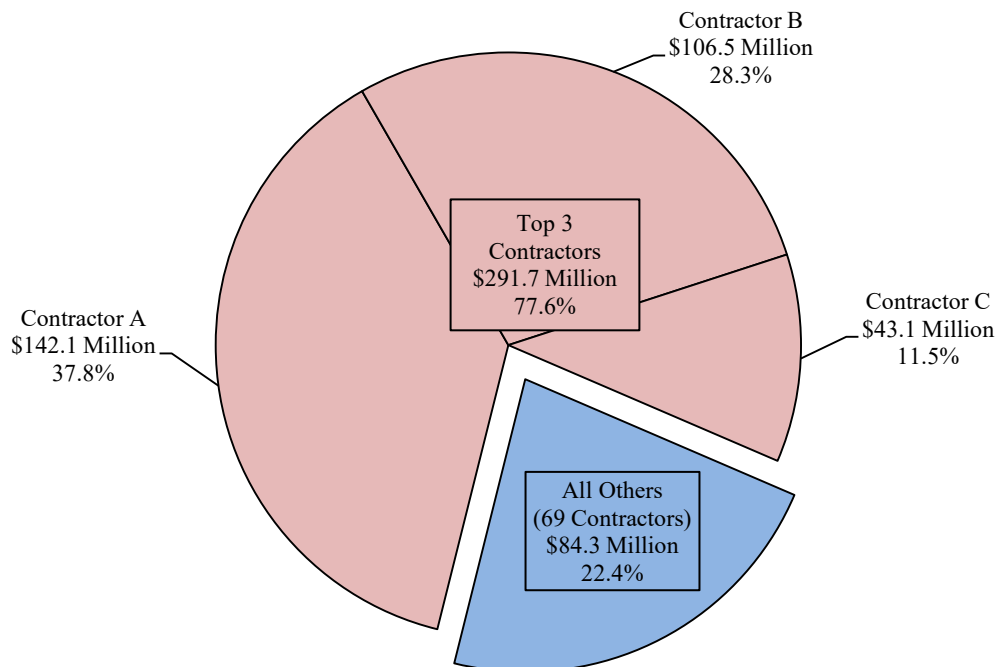
According to the U. S. Department of Transportation and the U.S. Department of Justice, *Suggestions for the Detection and Prevention of Construction Contract Bid Rigging*:

Collusion among contractors often takes the form of agreements whereby competitors become joint venturers or partners on a project, or **assign subcontracts to each other** (emphasis added) Nevertheless, it is advisable that the state contracting agency be informed of them at the time bids are submitted. The agency can then make its own determination as to whether or not to accept a particular bid.¹⁴

DDOT Awarded the Majority of Construction Contracting to Three Vendors

Our analysis indicated that DDOT awarded \$376 million in construction contracts during FYs 2016 and 2017, of which approximately \$291.7 million went to three vendors. That accounted for 77.6 percent of all construction contracting during this timeframe, excluding the South Capitol Street project. We excluded this project because it is large, construction spans multiple years, and it is not comparable with other projects at DDOT. Figure 1 below shows the relative proportion of construction contracts awarded to other vendors during the audit period.

Figure 1: DDOT’s Awarded Construction Contracts in Audit Period¹⁵



Source: OIG Analysis of accounting and procurement data from 10/1/2015 through 9/30/2017.

¹⁴ THE INTERDEPARTMENTAL BID RIGGING INVESTIGATIONS COORDINATING COMMITTEE, SUGGESTIONS FOR THE DETECTION AND PREVENTION OF CONSTRUCTION CONTRACT BID RIGGING 5 (Feb. 1983), available at <https://www.fhwa.dot.gov/programadmin/contracts/dotjbid.cfm> (last visited Jan. 22, 2019).

¹⁵ This analysis excludes the South Capitol Street project awarded at approximately \$486,000,000.

Research described in the American Association of State Highway and Transportation Officials' (AASHTO) *Practical Guide to Cost Estimating* (AASHTO Guide) indicates that procurement costs decrease "about 2 percent each time the number of bidders is increased by one."¹⁶

We discussed the vendor concentration issue with DDOT officials who stated:

The IG's information relates to the number of bidders generally participating in locally funded construction. The nature of the local marketplace and the District regulatory structure contribute to that observation. Potential non-District entrants [in] to the marketplace would face pricing challenges related to bidding preferences The IG's observation is recognition that there are generally three primary local competitors in the horizontal construction marketplace.

According to DDOT, the District's regulatory structure awards preference points for local small businesses, and that this advantage may discourage other vendors from participating. However, limited vendor participation may also indicate that the District has an opportunity to increase competition.

We recommend that the Director, DDOT:

1. Compare current practices against AASHTO and Federal Highway guidance on increasing and evaluating competition and develop a plan to increase competition.
2. Implement procedures to detect potential anticompetitive practices.

DDOT has Used Fewer Vendors in Recent Years

To assess vendor concentration for DDOT transportation contract awards over time, we collected data on transportation spending dollars by vendor for each year since 1999 and computed Herfindahl-Hirschman Indices (HHI)¹⁷ for each of these years. HHI indices are a commonly accepted measure of market concentration, and are used by the U.S. Department of Justice to assess market concentration. According to our analysis of contracts awarded over the past 20 years using HHI, DDOT's contract awards have concentrated among fewer vendors since FY 2014.

An HHI approaching zero indicates that contracts were awarded to many vendors without any one vendor receiving a disproportionate amount of business. The maximum value of 10,000 points indicates procurements were awarded to a single firm. Generally, markets with the HHI between 1,500 and 2,500 points are moderately concentrated, while markets with HHI in excess

¹⁶ AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, PRACTICAL GUIDE TO COST ESTIMATING § 7.2.1.1(1st ed. 2013) (DDOT personnel used this guideline as a best practice.).

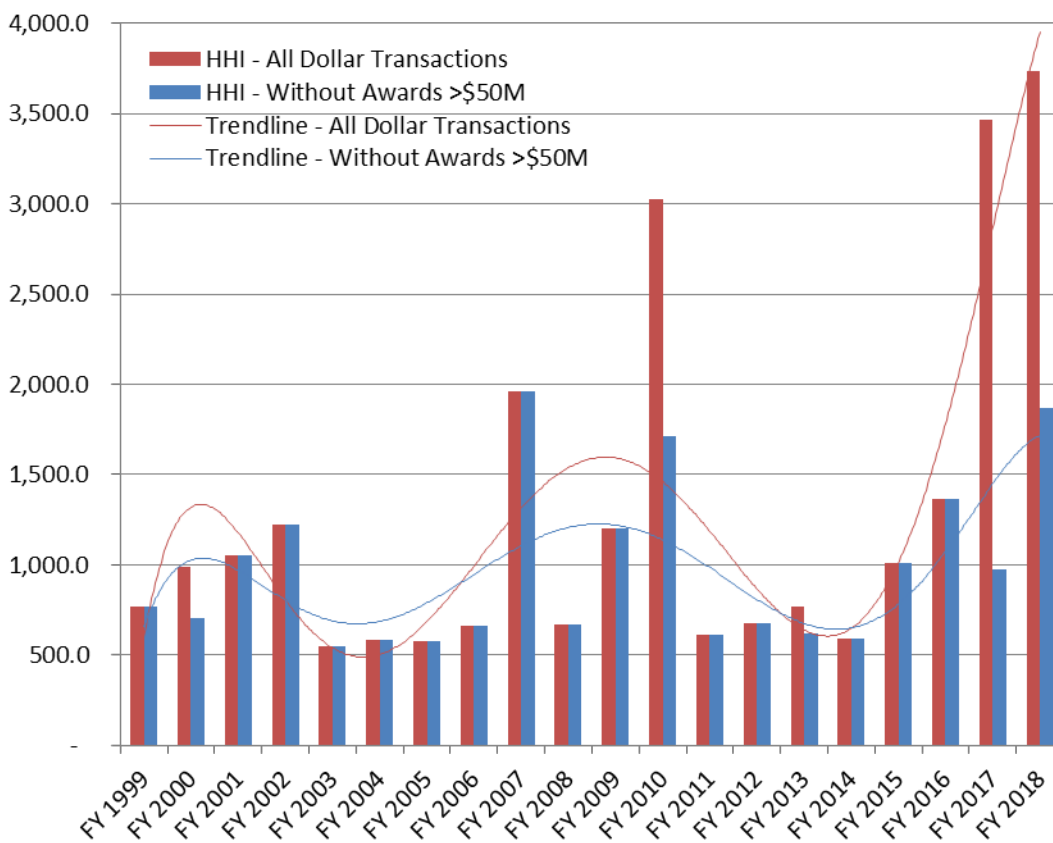
¹⁷ The HHI is calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers. For example, for a market consisting of four firms with shares of 30, 30, 20, and 20 percent, the HHI is 2,600 ($30^2 + 30^2 + 20^2 + 20^2 = 2,600$)

of 2,500 points are highly concentrated and offer far less competition.

In the DDOT data, we observed a trend toward use of fewer vendors, even when large projects of \$50 million or more were excluded from the analysis.¹⁸ In such instances, the HHI increased 217 percent from FY 2014 to FY 2018, which indicates that vendor concentration is increasing regardless of project size (see Figure 2 below, blue bars). In fact, the increase in HHI from 590 in 2014 to 1868 in 2018 indicates that the market for transportation projects at DDOT has become significantly more concentrated among fewer vendors.

Figure 2 presents an HHI based on all DDOT contract awards from October 1, 1998, to June 18, 2018. As the HHI increases, the awarded contracts become more concentrated among fewer vendors.

Figure 2: Analysis of DDOT’s Contract Awards Concentration



Source: OIG calculated HHI based on spending data by vendor from 10/1/1998 to 6/18/2018.

¹⁸ We excluded large, multi-year capital construction projects because including them may cause the results to appear that the market is more concentrated. Although large projects are awarded to a single firm, there are often many subcontractors involved in these projects.

DDOT officials acknowledged that they are aware of the limited number of participants in locally-funded competitions, and have addressed this issue by creating a project forecast website to increase awareness of upcoming opportunities so contractors have sufficient notice to schedule and prepare their bid responses.

DDOT did not Re-compete a Contract Upon its Expiration

DDOT did not resolicit a contract or determine in writing that issuing a task order for 1 additional year was in the best interest of the District. While evaluating the execution of option year 4 of an Indefinite Delivery Indefinite Quantity (IDIQ)¹⁹ contract, we noted that on March 31, 2018, DDOT increased the contract ceiling value for option year 4 to \$45 million from the original contract ceiling value of \$11 million.

DDOT issued a task order for another year on April 6, 2018, 2 days before the expiration of the 5-year contract term. The original IDIQ contract signed on April 9, 2013, was for 1 base year and 4 option years – a total of 5 years – with no limits on the number of task orders that could be issued during the overall term of the contract.

According to 27 DCMR § 2005.2:

The total of the base period in a contract for goods or services shall not exceed one (1) year, unless the contract is funded from an appropriation that is available for more than one (1) year is a multiyear contract. The total of the base and option periods in a contract for services or goods shall not exceed five (5) years unless:

* * *

(b) Prior to the expiration of a contract, the Director determines in writing that it is in the best interest of the District to extend the term beyond the total term specified in the contract and the contracting officer provides justification for using a sole source modification in accordance with Chapter 17²⁰ of this title.

Overall, DDOT increased the total ceiling value for the contract to \$121 million from the original total ceiling contract value of \$56 million. According to DDOT, the contract ceilings were increased to accommodate the additional need for local paving restoration services. This action resulted in a net increase of \$65 million (117% of the original contract ceiling value) without competition during the 5-year period.

When asked about the contract extension, DDOT officials stated that the term limit applied to the contract and not to the task order. The officials said that as long as the task order is issued within

¹⁹ An IDIQ contract provides for an indefinite quantity of supplies or services during a fixed period of time.

²⁰ See 27 DCMR § 1700.2 regarding preparation of a determination and findings to justify use of a sole source procurement.

the contract's term period, the task order is valid even if it extends beyond the original term of the contract.

We recommend that the Director, DDOT:

3. Determine in writing why increasing the original contract ceiling value without competition and/or issuing a task order beyond the original contract term is in the best interest of the District.

DDOT CAN USE DATA MORE EFFECTIVELY AND DEVELOP FORMAL COST ESTIMATE AND BID EVALUATION PROCEDURES

DDOT can reduce the risk of anticompetitive practices and help ensure the District receives the best value for goods and services by performing a more detailed analysis of the procurement process. For example, DDOT did not capture data needed to analyze key aspects of the contract solicitation process and did not have formal standardized cost estimate and bid evaluation procedures. Further, DDOT did not always develop the Independent Government Estimate prior to soliciting proposals and subsequently maintain adequate supporting documentation.

DDOT did not Maintain Data on Competitive Solicitation Activities

DDOT did not maintain key data as part of its solicitation processes. Solicitation processes include advertisement of proposed construction projects, receipt of bids, and the opening and reading of the bids in a public setting. As a best practice, the AASHTO Guide²¹ recommends maintaining and performing periodic analysis of such data for developing strategies to increase vendor participation.

We discussed this condition with DDOT officials who stated that, going forward, DDOT contracting officers will record both who participated and the bid amount for each participant and maintain such data in a spreadsheet. Although maintaining such summary information is helpful, DDOT could improve solicitation functions and outcomes by developing and analyzing detailed performance measures. Careful analysis of data, plans, or other metrics can help identify challenges that reduce competition. Performance analysis may also indicate other areas of improvements in DDOT's procurement strategies.

We recommend that the Director, DDOT:

4. Maintain and analyze historical data pertaining to solicitations and contract awards to develop procurement plans that include strategies to improve competition.

²¹ AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, PRACTICAL GUIDE TO COST ESTIMATING § 8.2.1(1st ed. 2013).

DDOT did not Always Develop and Maintain the Independent Government Estimate Prior to Soliciting Proposals

The objective of the Independent Government Estimate is to determine a fair and reasonable cost to deliver a project. Title 27 DCMR § 2602.1 states an “estimate of construction costs shall be prepared for each proposed contract and for each proposed contract modification estimated to exceed ten thousand dollars (\$10,000).”²²

Although DDOT showed it prepared Independent Government Estimates for the majority of the contracts we reviewed, it did not maintain documentation on how the Independent Government Estimates were developed. Specifically, DDOT could not demonstrate how it derived Independent Government Estimates for 15 of 19 sampled contracts that required estimates.²³

We also did not observe any evidence of a formal detailed review by the preparer’s supervisor for all 19 contracts. According to AASHTO²⁴ best practices, supervisory reviews are essential to achieve consistent and accurate estimates.

Finally, in four instances when DDOT developed and documented the required Independent Government Estimates, it did not use a standardized format to ensure it captured formal signoffs and documented all of the estimate’s supporting information in a consistent manner. According to the AASHTO Guide, “[t]he project estimate package should include the estimate basis (i.e., project definition documents and project characteristics) and all supporting documentation used to estimate item costs.”²⁵

We discussed the missing Independent Government Estimates with DDOT officials, who agreed that the objective of Independent Government Estimates is to provide a check of the original estimate developed by the engineer of record and determine a fair and reasonable cost to deliver a project. The officials added that in August 2016, DDOT contracted an independent consultant to provide cost estimating services.

Although DDOT has outsourced this function, DDOT must document and maintain Independent Government Estimate calculations independently to support its procurement decisions. DDOT must evaluate the reliability of its estimating practices over time to ensure a fair and reasonable cost to deliver projects. Without an evaluation of Independent Government Estimates over time, the reliability of these estimates may decline without detection by the users of those estimates. Additionally, confidence in the estimates becomes more important in determining a fair and reasonable price when there is low participation in the bidding process as observed during this audit.

²² We also note that effective October 8, 2016, the Procurement Integrity, Transparency, and Accountability Amendment Act of 2016, L 21-158, raised the threshold from \$10,000 to \$100,000. Specifically, D.C. Code § 2-356.05(a) states: “An estimate of costs shall be prepared by the contracting officer for each proposed contract, contract modification, or change order to be issued in connection with a construction project and anticipated to exceed \$100,000.”

²³ Of the 19 samples, DDOT provided a summery level estimate for 12, but could only provide documentation to support the development of 4 estimates.

²⁴ AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, PRACTICAL GUIDE TO COST ESTIMATING § 4.4 (1st ed. 2013).

²⁵ *Id.* § 3.3.6.

We recommend that the Director, DDOT:

5. Implement AASHTO guidelines for Independent Government Estimate calculations and develop policies and procedures for documenting a supervisor's signoff and review.

DDOT had no Formal Policy or Procedures to Detect an Unbalanced Bid²⁶

Contractors can use unbalanced bids to take advantage of errors in the project plans or specifications by offering unfair prices. DDOT did not establish formal policy and procedures to conduct a line-by-line comparison to address risk of overbids and underbids that are significantly different from Independent Government Estimates. To determine whether a bid is unbalanced, it must be evaluated for reasonable conformance to the Independent Government Estimate.

A line-by-line comparison of the bid to the Independent Government Estimate is important for pinpointing key indicators of unbalanced bids. According to the FHWA *Contract Administration Core Curriculum Manual*:²⁷

There may be situations where the quantity of an item could vary due to inaccuracies in the original quantity or cost estimating, errors on the plans, changes in site conditions or design, etc. In these situations, the bids should be further evaluated to determine if the low bidder would ultimately yield the lowest cost.

Therefore, a materially unbalanced bid may not result in the lowest final cost to the District, even though it appears to be the lowest cost during bidding procedures. DDOT program officials explained that they prepared a list of the line items with a variance of 10 percent or more and discussed them with OCP personnel. The DDOT Program officials prepared a "Memorandum of Bid Analysis and Recommendation" for one of the contracts that we sampled. The memo summarized how many line items in the bid were above, below, and equal to those in the Independent Government Estimates but did not have supporting documentation for each line item's variance explaining why differences above or below the Independent Government Estimates were permissible.

DDOT officials stated they did not have formal policies and procedures but they identified unbalanced bids through bid analysis and in preparing the Determination and Findings. Nonetheless, formal policy and procedures for a line-by-line comparison improve DDOT's ability to systematically detect unbalanced bids or other errors with vendor pricing information.

²⁶ Unbalanced bids are bids structured so that some work is underpriced and some work is overpriced. For a bid to be balanced, each element of the bid must be proportionate to the total cost or each element plus profits.

²⁷ U.S. DEPT. OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, CONTRACT ADMINISTRATION CORE CURRICULUM MANUAL 135 *available at* <https://www.fhwa.dot.gov/programadmin/contracts/cacc.pdf> (last visited Jan. 22, 2019).

We recommend that the Director, DDOT:

6. Develop and implement policies and procedures for conducting a line-by-line comparison of costs described in a bid to the Independent Government Estimates in evaluating unbalanced bids.

DDOT HAD FLAWED CONTRACT DOCUMENTATION, ADMINISTRATION, AND CLOSEOUT PROCEDURES

DDOT did not hold contractors accountable for design errors, follow key budgetary controls that are designed to ensure proper appropriation and allocation of budget authority, or release unspent funds for use elsewhere. This occurred because DDOT's practices were inconsistent, which is attributable to a lack of formal policies and procedures.

DDOT did not Always Justify Change Orders Resulting from Design Errors

When DDOT awarded a contract that required a subsequent design change, it could not provide documentation to show whether it considered recovering costs from the architect-engineer contractors when the agency incurred additional expenses due to design omission or design error.

According to 27 DCMR § 2630.2, “[w]hen modification of a construction contract is required because of an error or deficiency in the services provided under an architect-engineer contract, the contracting officer shall consider the extent to which the architect-engineer contractor may be liable.” Further, 27 DCMR § 2630.4 states, “[t]he contracting officer shall include in the contract file a written statement of the reasons for the decision whether to recover costs from the firm.”

We determined that three change orders in a sampled contract contained errors or deficiencies in the original design documents. However, we did not observe any evidence (written statements) that the contracting officer considered the extent to which the architect-engineer contractor may have been liable. Not following regulations to assess and recover the costs of errors or deficiencies could result in monetary losses to the District.

We discussed these three change orders with DDOT officials who stated, “DDOT will add a specific item to the change order/modification process checklist . . . because of an error or deficiency in the services provided under an architect-engineer contract. Those will be referred to OAG [Office of the Attorney General] for their concurrence re[garding] probable causation.”

We recommend that the Director, DDOT:

7. Implement procedures to assess the liability of the designer when processing change orders and maintain documentation as required by 27 DCMR § 2630.

DDOT did not Always Ensure that Purchase Orders Preceded Vendor Work Authorizations

According to the Office of the Chief Financial Officer (OCFO) Office of Financial Operations and Systems *Policies and Procedures Manual*, 10401001.10:

Purchase orders and contract[s] are used to legally obligate agencies to future disbursements for goods and services received. The preparation and issuance of a purchase order and contract is the process of establishing a contractual relationship with a supplier of goods or services.²⁸

DDOT did not always comply with the requirement to first encumber funds by executing purchase orders to establish budgetary controls over spending. Instead, DDOT permitted contractors to perform work under a task order before establishing the commitment in the Procurement Automated Support System (PASS). PASS is an online system that allows for the creation of purchase orders, which along with funding, are evidence of an “obligation” on the part of the District to pay for goods or services when delivered by the vendor described in the purchase orders.²⁹

DDOT did not always ensure that purchase orders preceded vendor work authorizations because DDOT personnel did not submit the requisitions and/or OCP did not approve the purchase orders prior to authorizing work. We discussed this practice with DDOT officials, who indicated that payment of invoices before a purchase order is approved in PASS is not the ordinary DDOT practice but may occur situationally.

Not establishing a purchase order circumvents budgetary controls that are designed to ensure the proper appropriation and allocation of budget authority. In FYs 2016 and 2017, this resulted in vendors submitting 127 invoices, totaling \$10.3 million, before DDOT approved purchase orders and encumbered funds in System of Accounting and Reporting (SOAR).

We recommend that the Director, DDOT:

8. Approve and issue purchase orders prior to authorizing work or receiving invoices for payment or document the fund availability for exceptions.

DDOT had no Formal Policy and Procedures to Release Unspent Funds

DDOT did not always release unspent funds upon completion of transportation projects. The OIG estimates \$8.1 million³⁰ of unspent funds were not released for other uses.

²⁸ D.C. OFFICE OF THE CHIEF FINANCIAL OFFICER, OFFICE OF FINANCIAL OPERATIONS AND SYSTEMS, POLICIES AND PROCEDURES MANUAL, Vol. I, § 10401001.10 (updated Nov. 21, 2014).

²⁹ *Id.* § 10401001.60.

³⁰ This estimate excludes federally obligated funds and the value of invoices paid on average after 1 year of inactivity.

According to the OCFO Office of Financial Operations and Systems *Policies and Procedures Manual*, 10401001.10:

Encumbrances³¹ are obligations for goods and services for which a purchase order or contract has been recorded and allocated to an appropriate budget line. Encumbrance accounting enhances the effective execution of budgetary controls over obligations and expenditures by ensuring proper appropriation and allocation of budget authority. Each obligation and related expenditure is encumbered against the budget thereby preserving, to the extent possible, projected budget appropriations.³²

We obtained a list of all open encumbrances from SOAR and prepared an aging analysis based on each purchase order’s period of inactivity. Inactivity may indicate the project was completed. We observed contracts/ purchase orders in SOAR without activity (voucher or adjustment) over 12 months, with a total open encumbrance balance of approximately \$16 million or about 36 percent of open purchase orders (see Table 1 below). This \$16 million includes federally obligated amounts and potential liabilities. To estimate the amount of local funds that could have been put to better use, we excluded \$7.9 million in federal funds because these funds are not available for other uses.

Table 1: DDOT Transportation Projects’ Value and Count of Open Purchase Orders by Period of Inactivity

	0-6 months (Current)	7-12 months	13-24 months (Over 1 year) a	25-36 months (Over 2 years) b	37+ months (Over 3 years) c	Total over 12 months of inactivity = a + b + c
Balance on open POs	\$669,720,311 93.0%	\$34,440,707 4.8%	\$10,469,909 1.5%	\$1,606,268 0.2%	\$3,907,375 0.5%	\$15,983,552 2.2%
Number of open POs	362 44.7%	154 19.0%	124 15.3%	66 8.2%	103 12.7%	293 36.2%

Source: OIG calculated from SOAR encumbrance data from 10/1/1998 to 4/6/2018.

In 2017, before we started our audit, DDOT’s Resource Allocation Division reviewed and closed 292 purchase orders totaling \$17.4 million³³ after recognizing a need to close inactive purchase orders. During our audit fieldwork, on June 18, 2018, DDOT implemented standard operating procedures to address deficiencies in the closeout process for locally-funded projects. DDOT also expected to introduce a standard operating procedure for federally-funded projects to be included in its January 2019 training on managing the federal capital portfolio. During the audit period, however, DDOT lacked formal procedures for closing out purchase orders and did not properly monitor the closeout process.

³¹ Encumbered funds are set aside for particular projects and cannot be made available for other uses until the project is complete and any unspent funds are released.

³² D.C. OFFICE OF THE CHIEF FINANCIAL OFFICER, OFFICE OF FINANCIAL OPERATIONS AND SYSTEMS, POLICIES AND PROCEDURES MANUAL, Vol. I, § 10401001.10 (updated Nov. 21, 2014).

³³ We did not review these results as part of this audit.

We recommend that the Director, DDOT:

9. Review purchase orders that are inactive for more than 1 year for potential closure and release of funds for better use.
10. Implement a closeout procedure for federally-funded projects and monitor performance of the closeout (i.e., District and federal) process.

CONCLUSION

Procurement decisions can affect the number of bids received for a given solicitation. Adequate vendor participation and reliable estimates of project costs are vital to obtain fair and reasonable prices for transportation projects. DDOT could improve its contracting procedures and maintain procurement data for use in understanding how to better foster vendor participation. Additionally, the agency could standardize the cost-estimating process to make its estimates and bid evaluations more reliable in detecting designer errors. DDOT can also enhance budgetary controls to put the District's funds to better use by closing and releasing unspent funds from completed projects.

RECOMMENDATIONS

We recommend that the Director, DDOT:

1. Compare current practices against AASHTO and Federal Highway guidance on increasing and evaluating competition and develop a plan to increase competition.
2. Implement procedures to detect potential anticompetitive practices.
3. Determine in writing why increasing the original contract ceiling value without competition and/or issuing a task order beyond the original contract term is in the best interest of the District.
4. Maintain and analyze historical data pertaining to solicitations and contract awards to develop procurement plans that include strategies to improve competition.
5. Implement AASHTO guidelines for Independent Government Estimate calculations and develop policies and procedures for documenting a supervisor's signoff and review.
6. Develop and implement policies and procedures for conducting a line-by-line comparison of costs described in a bid to the Independent Government Estimates in evaluating unbalanced bids.
7. Implement procedures to assess the liability of the designer when processing change orders and maintain documentation as required by 27 DCMR § 2630.

8. Approve and issue purchase orders prior to authorizing work or receiving invoices for payment or document the fund availability for exceptions.
9. Review purchase orders that are inactive for more than 1 year for potential closure and release of funds for better use.
10. Implement a closeout procedure for federally-funded projects and monitor performance of the closeout (i.e., District and federal) process.

DDOT'S RESPONSE AND OFFICE OF THE INSPECTOR GENERAL COMMENTS

We provided DDOT with our draft report on February 15, 2019, and received its response on March 25, 2019. Based on DDOT's response, we re-examined our facts and conclusions and determined that the report is fairly presented. We appreciate that DDOT officials addressed some findings during the audit.

DDOT agreed with Recommendations 1, 2, 4, 5, 7, 8, 9, and 10. DDOT's actions taken and/or planned are responsive and meet the intent of the recommendations. Therefore, we consider these recommendations resolved but open pending evidence of stated actions.

DDOT does not agree with Recommendations 3 and 6, but actions taken or planned by DDOT are responsive and meet the intent of the recommendations. Specifically, DDOT, as part of its response to Recommendation 3, indicated that it received the best bargain pricing in the last years of a multiple year contract, and stated that it would implement a software solution to automate line item by line item reviews in June 2019 to address Recommendation 6. Therefore, we consider these recommendations resolved but open pending evidence of stated actions. DDOT's response to the draft report is included in its entirety at Appendix E.

APPENDIX A. OCP AND THE PROCUREMENT PROCESS

OCP partners with vendors and District agencies like DDOT to purchase goods and services for the District and is required to follow the Procurement Practices Reform Act of 2010 and the District of Columbia Municipal Regulations (DCMR) to establish standards for processing and monitoring procurements. Figure 3 shows the steps involved in OCP's procurement process.

Figure 3: Steps in the District of Columbia Procurement Process



Source: OCP *Procurement Procedures Manual* (2018 Revision).

Requirements: Identifying and assessing agency's need for specific goods or services, development of Statement of Work, verification of availability of funding, and development of Independent Government Estimate.

Procurement (Requirements) Planning: Using the appropriate acquisition method based on urgency, type, source of the product or service, and availability of funding. DDOT/OCP predominately uses the following competitive procurement methods for transportation projects:

- **Competitive Sealed Bids - Invitation for Bid:** With Invitation for Bids, upon receiving of the competitive bids, OCP awards the contract to the responsible bidder with the lowest-priced responsive bid.
- **Competitive Sealed Proposals - Request for Proposal:** For Request For Proposals, the bidders submit technical and price proposals and the award is based on evaluation of the quality of items, price, past performance, and other relevant factors.
- **Architect and Engineering Schedule:** For Architect and Engineering services, DDOT pre-qualifies firms and awards Indefinite Delivery Indefinite Quantity (IDIQ) contracts. Scheduled vendors compete based on competency, qualifications, and experience at a fair and reasonable price.

Solicitation Process: Issuing the solicitation based on the procurement type, conducting pre-proposal and pre-bid conferences, discussing Request for Information or Sources Sought Synopsis, releasing solicitation, and keeping customer informed.

Review and Evaluation: Evaluating the bids based on reasonableness and responsiveness to the solicitation. A bid is responsive when it conforms in all material respects to the solicitation. The evaluation also considers whether bidders are responsible.

Award: Awarding the contract.

Contract Administration: Administering the contract.

APPENDIX B. OBJECTIVES, SCOPE, AND METHODOLOGY

We conducted our audit work from January 2018 to October 2018 in accordance with generally accepted government auditing standards (GAGAS). 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.

The audit objective was to assess the District of Columbia's contracting procedures for transportation projects during fiscal years (FY) 2016 and 2017. This included transportation projects that were initiated, continued or modified in this period.

To accomplish the objective, we reviewed the applicable laws and regulations to assess whether DDOT complied with requirements in all material respects. We conducted interviews with DDOT and OCP staff members and appropriate officials involved to gain an understanding of the contracting process and their role in the process.

To assess the reliability of DDOT's data, we: (1) performed testing for errors in accuracy and completeness; (2) reviewed documentation, including third-party audit reports on data verification; and (3) interviewed agency officials knowledgeable about the data. We determined that the data were sufficiently reliable for the purposes of our audit.

We randomly selected 20 transactions and 2 outliers that started or continued (e.g., exercise of an option year) in FYs 2016 and 2017 to determine if contracts were technically and financially the most advantageous to the District and whether an additional 15 judgmentally selected contract modifications/change orders made were in compliance with District's policies and procedures. In addition, we assessed the competitiveness of the bidding process and how DDOT developed Independent Government Estimates.

We also used the American Association of State Highway and Transportation Officials *Practical Guide to Cost Estimating* to identify best practices in road construction.

APPENDIX C. ACRONYMS AND ABBREVIATIONS

AASHTO	American Association of State Highway and Transportation Officials
DCMR	District of Columbia Municipal Regulations
DDOT	District of Columbia Department of Transportation
FHWA	Federal Highway Administration
FY	Fiscal Year
GAGAS	Generally Accepted Government Auditing Standards
HHI	Herfindahl-Hirschman Index
IDIQ	Indefinite Delivery Indefinite Quantity
OCFO	Office of the Chief Financial Officer
OCP	Office of Contracting and Procurement
OIG	Office of the Inspector General
PASS	Procurement Automated Support System
SOAR	System of Accounting and Reporting

APPENDIX D. OIG PRIOR YEAR RISK ASSESSMENT AND CURRENT AUDIT ISSUES

Risk Area Identified by KPMG	OIG's Current Assessment at DDOT
<p>Data Integrity – Procurement systems' data fields do not have standard definitions, which hinders reconciliation efforts and impacts the ability for meaningful portfolio analysis.</p>	<p>We noted discrepancies between data from DDOT's Procurement Automated Support System (PASS) and System of Accounting and Reporting (SOAR). Primary issue: Changes to encumbrances in SOAR are not interfaced back to PASS.</p>
<p>Agency Fiscal Management – Some District agencies show marked increases in fiscal year-end spending volume, potentially increasing the risk that resources are not being prudently expended.</p>	<ol style="list-style-type: none"> 1. DDOT did not always comply with the requirement to first encumber funds by executing purchase orders to establish budgetary controls over spending. Instead, DDOT permitted contractors to perform work under a task order before establishing the commitment in PASS. 2. DDOT did not release excess funds upon completion of transportation projects. Consequently, OIG estimates that approximately \$8.1 million of encumbered funds were unavailable for other uses because DDOT did not closeout completed projects.
<p>Document Management – Inconsistent document management practices may increase the likelihood of noncompliance with established procurement procedures, resulting in an inability to validate decisions, including sole source and emergency awards, change orders, and changes to standard terms and conditions.</p>	<p>DDOT could not demonstrate how it derived the Independent Government Estimates for the contract awards sampled.</p> <p>When DDOT awarded a contract that required a subsequent design change, it could not provide documentation that it considered whether to recover costs from the architect-engineer contractors when the agency incurred additional expenses due to design omission or design error.</p>
<p>Procurement Governance – The multiple procurement governance structures in place may increase opportunities for compliance risk and operational inefficiency across District agencies.</p>	<p>DDOT is responsible for managing both local and federal funds. DDOT officials indicated the certified business enterprises set-aside requirements created contributed to the lack of adequate competition.</p>

**APPENDIX D. OIG PRIOR YEAR RISK ASSESSMENT AND
CURRENT AUDIT ISSUES**

Risk Area Identified by KPMG	OIG’s Current Assessment at DDOT
<p>Sourcing Practices – Current forecasting practices across the District may result in lost opportunities for more competitive sourcing, and, ultimately, pricing which potentially increases the District’s total non-personnel spend.</p>	<ol style="list-style-type: none"> 1. DDOT did not attract more than three bidders on average for the sampled construction solicitations of 22 contracts valued at \$537 million. 2. Approximately 77 percent of all construction contracts (excluding a large bridge project) with a total value of approximately \$292 million were awarded mainly to three vendors. 3. An analysis of market concentration over the past 20 years for DDOT’s contract awarding indicates that the contracts since 2014 were highly concentrated and offered less competition with some years heavily dominated by individual vendors or large projects. 4. DDOT did not maintain data on the competitive bidding activities that could aid the agency in measuring outcomes and developing strategies to increase competition in future contracting decisions. Performance analysis may also indicate other areas of improvements in DDOT’s procurement strategies.
<p>Organizational Structure – Organizational structures in place, including positioning and staffing for District procurement functions, may blur actual lines of authority and adversely impact the control environment and operational efficiency.</p>	<p>OCP has embedded employees within DDOT to facilitate and manage the procurement process. DDOT issued two purchase orders related to purchase of Information Technology products without obtaining the required authorization from the Office of the Chief Technology Officer.</p>
<p>Vendor Oversight – Meaningful oversight of District vendors and their delivery of goods and services may not be consistent across District agencies.</p>	<p>We found that vendors submitted 127 invoices, totaling \$10.3 million, during FYs 2016 and 2017 before DDOT approved purchase orders and encumbered funds.</p> <p>DDOT issued a task order 2 days before the expiration of a 5-year contract.</p>

APPENDIX E. DDOT'S RESPONSE TO THE DRAFT REPORT

Government of the District of Columbia
Department of Transportation



MEMORANDUM

TO: Daniel W. Lucas, Inspector General

FROM: Jeff Marootian, Director

THRU: [REDACTED], Chief Contracting Officer Infrastructure

DATE: March 25, 2019

RE: Response to OIG Audit on Contract Solicitation and Management Practices for Transportation Projects

The Office of the Inspector General completed a report entitled, *District Department of Transportation: Contract Solicitation and Management Practices for Transportation Projects can be Improved* (OIG Project No. 18-1-02KA) and delivered the report to DDOT February 15, 2019. The draft report requests that DDOT:

For each recommendation, indicate whether you "agree" or "disagree" with the recommendation. For each recommendation, your response should include actions taken or planned, target dates for completion of planned actions, and reasons for any disagreement with the findings or recommendations. Your response may propose alternative solutions that will address the intent of the recommendations more effectively or efficiently.

We have prepared a response, item by item, to address the OIG's recommendations. OIG findings are listed in italics as set forth in the draft report. Footnotes and charts in the draft report are generally omitted from the response.

OIG FINDINGS (text from draft report in italics)

DDOT CAN ENHANCE COMPETITION BY ATTRACTING MORE PARTICIPANTS TO THE CONTRACT SOLICITATION PROCESS

DDOT has an opportunity to increase competition by attracting more vendors to ensure the District obtains the best value when awarding transportation contracts.

APPENDIX E. DDOT'S RESPONSE TO THE DRAFT REPORT

The market for local construction services at DDOT is concentrated among three firms, and has been more concentrated since FY 2014. More robust competition for transportation projects may enhance the benefit the District receives from the contracts awarded.

DDOT did not Attract an Optimal Number of Vendors When Awarding Transportation Contracts

DDOT did not attract more than three bidders on average during FY 2016 and 2017. We determined that the average number of responsive bidders was 2.5 for the 10 construction contracts within our random sample of 20 transportation contracts. According to the Federal Highway Administration (FHWA), “[c]ompetition should be considered excellent when there are six or more bids within 20 percent of the low bid, including the low bid. Fewer competitive bids should require evaluation to determine whether competition was adequate, and whether additional competition or better prices could be obtained.”¹²

We discussed this issue with DDOT officials who stated that competition varies by project type, and that some projects attract more bids. The officials stated that eight recent large projects attracted approximately four bidders on average. Although DDOT may have attracted four bidders on average for these recent contracts, DDOT's solicitations still do not meet the best practice of six as recommended by FHWA. Further, sustainable competition requires a process that reliably attracts the most vendors to compete for work. Inadequate vendor participation indicates the District may not have obtained the best value in awarding transportation contracts.

We also found one instance in our sample where the losing bidder was a subcontractor of the winning bidder, which could indicate that the pool of contractors is even smaller than the average number of bidders observed, and may increase the risk of anticompetitive practices.¹³

Response

Disagree. In an effort to increase the competitive marketplace over the past two years DDOT has already taken a number of actions which have not yet had an opportunity to fully bear competitive fruit and are not reported in the IG recommendations. First, DDOT provides increasingly more accurate annual construction project projections through the OCP OAPT tool and specific quarterly look ahead providing additional details on near-term construction projects. Next, DDOT conducted a market review for firms that had at one time contracted with DDOT but currently do so infrequently or not

APPENDIX E. DDOT’S RESPONSE TO THE DRAFT REPORT

at all. Using this information and the new local paving solicitations as an example, DDOT restructured its draft solicitation to: separate out one type of work into a new contract (flexible porous paving); developed separate citywide and non-citywide solicitations (so that smaller firms could in theory more fully participate in non-citywide quantities); reduced the number of IDIQ contract bid items from approximately 800 to about 50, simplifying the process; and introduced tiered pricing and monthly paving quantity targets to enable the opportunity for the District to achieve better pricing for higher quantities of work performed.

Further, both DDOT and OCP participate in quarterly meetings with industry groups, e.g., NUCA, ACEC and COMPTO and our District partners at DSLBD to solicit feedback on changes in procurement practices. One change, reduction of the contractual retainage withheld from 10% down to 5%, has been positively received by prime contractors, and especially subcontractors. When asked by the OIG team what data supported this as an additional practice in support of enhanced competition, OCP admitted there was no specific data supporting this change. It is, however, another element of our campaign to be a better business partner. We listen, we respond. We collaborate instead of dictate. All of these changes are meant to demonstrate that the District is open for competitive business regardless of the source of funds.

There are two separate marketplaces for DDOT: federal and local. In the federal marketplace, there is generally adequate to robust competition depending on the specifics of a particular project, i.e., size and scope. In the local marketplace, there are three primary DSLBD-certified firms competing in the horizontal construction marketplace. Generally, some or all three of these firms regularly participate in local construction solicitations. Any new entrant to the local marketplace that is not a DSLBD-certified firm must offer prices that are lower than the maximum CBE preference evaluation percentage, i.e., up to 12% lower. This point will be further demonstrated below.

The following is an example (Parkside Pedestrian Bridge) from a recent locally-funded construction project that received 4 bids:

Company A	\$12,551,179.40 new competitor
Company B	\$11,955,984.35 apparent low bidder/participates in fed market
Company C	\$12,852,278.25 CBE
Company D	\$12,285,467.50 participates in fed market

Companies B and D are relatively active competitors in the federal marketplace but rarely in the local market. The engineer’s estimate (EE) for the project was \$11,762,913.24. The

APPENDIX E. DDOT’S RESPONSE TO THE DRAFT REPORT

apparent low bid was 1.63% over the EE, which is a very accurate estimate. However, when the CBE’s 12 percent preference is included, the evaluated price for the lowest evaluated price competition purposes (i.e., how the contract award is made) becomes \$11,310,004.86. Thus, the highest actual price becomes the lowest evaluated bid when DSLBD preference percentages are added. While this example demonstrates that local preferences work, it also serves as a reminder that firms looking to offer competitive bids on locally-funded projects may become discouraged from further participation.

With regard to the OIG observations, the number cited for “excellent” competition per the FHWA, is general competitive guidance provided for states, as compared to cities. While the District is treated as a state by FHWA, the locally-funded marketplace is very much a city marketplace. For the Parkside Pedestrian Bridge example provided above, using the OIG’s citation of FHWA guidance (chart provided below), in this case given the closeness of the Engineer’s Estimate to the bid price, competition may be considered adequate when only two bids were received. In this case, the District received 4 bids within 20% of the EE. That is excellent competition. From the FHWA:

Assessing Competition

Competition should be considered excellent when there are six or more bids within 20 percent of the low bid, including the low bid. Fewer competitive bids should require evaluation to determine whether competition was adequate, and whether additional competition or better prices could be obtained. As a guideline to this determination, the following is offered as a suggestion for determining whether adequate competition was obtained:

Number of competitive bids * (*Range = low bid + 20 percent)	Competition May be considered adequate when low bid does not exceed **
5	120 percent of engineer's estimate
4	115 percent of engineer's estimate
3	110 percent of engineer's estimate

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Number of competitive bids * (*Range = low bid + 20 percent)	Competition May be considered adequate when low bid does not exceed **
2	105 percent of engineer's estimate
1	The engineer's estimate

See citation at OIG draft report fn 12.

According to the U. S. Department of Transportation and the U.S. Department of Justice, Suggestions for the Detection and Prevention of Construction Contract Bid Rigging:

*Collusion among contractors often takes the form of agreements whereby competitors become joint venturers or partners on a project, or **assign subcontracts to each other** (emphasis added) Nevertheless, it is advisable that the state contracting agency be informed of them at the time bids are submitted. The agency can then make its own determination as to whether or not to accept a particular bid.¹⁴*

DDOT Awarded the Majority of Construction Contracting to Three Vendors

Our analysis indicated that DDOT awarded \$376 million in construction contracts during FYs 2016 and 2017, of which approximately \$291.7 million went to three vendors. That accounted for 77.6 percent of all construction contracting during this timeframe, excluding the South Capitol Street project. We excluded this project because it is large, construction spans multiple years, and it is not comparable with other projects at DDOT

Research described in the American Association of State Highway and Transportation Officials’ (AASHTO) Practical Guide to Cost Estimating (AASHTO Guide) indicates that procurement costs decrease “about 2 percent each time the number of bidders is increased by one.”¹⁶

We discussed the vendor concentration issue with DDOT officials who stated: The IG’s information relates to the number of bidders generally participating in locally funded construction. The nature of the local marketplace and the District regulatory structure contributed to that observation. Potential non-District entrants [in] to the market- place

APPENDIX E. DDOT'S RESPONSE TO THE DRAFT REPORT

would face pricing challenges related to bidding preferences The IG's observation is recognition that there are generally three primary local competitors in the horizontal construction marketplace.

According to DDOT, the District's regulatory structure awards preference points for local small businesses, and that this advantage may discourage other vendors from participating. However, limited vendor participation may also indicate that the District has an opportunity to increase competition.

We recommend that the Director, DDOT:

- 1. Compare current practices against AASHTO and Federal Highway guidance on increasing and evaluating competition and develop a plan to increase competition.*

Agree. As noted above, DDOT had already reviewed its current practices before the OIG initiated this audit and concluded that the actions detailed above would be good initial steps to enhance competition in both the local and federal marketplace. As these efforts have occurred within the past year, there is not yet data to confirm whether such actions have had or will have positive competitive effects. DDOT practices continuous process improvement through both a review and evaluation of existing data and feedback from industry groups and partner agencies.

- 2. Implement procedures to detect potential anticompetitive practices.*

Agree. As indicated during the exit interview, DDOT currently reviews each bid received to determine if the bid might be the result of an anticompetitive practice as such is described in the OIG's cited sources and District and federal regulations. DDOT is especially sensitive to such practices where the local competitive marketplace is limited. By the end of June 2019, it is anticipated that all construction bids will be issued and received in AASHTOware. This software system will automatically conduct data and price analysis to assist in bid evaluation and competitive pricing determinations. The software will also have the capability to compare bids by individual bid item price across numerous jurisdictions. It is believed that when such transparency is achieved for District bidding prices, this may also serve to enhance competition. Additionally, DDOT has posted all bid item prices online for several months now, instead of just individual contractor bid total prices. This effort is meant to increase market transparency and to provide enticement for new bidders to participate.

APPENDIX E. DDOT'S RESPONSE TO THE DRAFT REPORT

DDOT has Used Fewer Vendors in Recent Years

To assess vendor concentration for DDOT transportation contract awards over time, we collected data on transportation spending dollars by vendor for each year since 1999 and computed Herfindahl-Hirschman Indices (HHI) for each of these years. HHI indices are a commonly accepted measure of market concentration, and are used by the U.S. Department of Justice to assess market concentration. According to our analysis of contracts awarded over the past 20 years using HHI, DDOT's contract awards have concentrated among fewer vendors since FY 2014.

An HHI approaching zero indicates that contracts were awarded to many vendors without any one vendor receiving a disproportionate amount of business. The maximum value of 10,000 points indicates procurements were awarded to a single firm. Generally, markets with the HHI between 1,500 and 2,500 points are moderately concentrated, while markets with HHI in excess of 2,500 points are highly concentrated and offer far less competition. In the DDOT data, we observed a trend toward use of fewer vendors, even when large projects of \$50 million or more were excluded from the analysis. In such instances, the HHI increased 217 percent from FY 2014 to FY 2018, which indicates that vendor concentration is increasing regardless of project size (see Figure 2 below, blue bars). In fact, the increase in HHI from 590 in 2014 to 1868 in 2018 indicates that the market for transportation projects at DDOT has become significantly more concentrated among fewer vendors.

Figure 2 presents an HHI based on all DDOT contract awards from October 1, 1998, to June 18, 2018. As the HHI increases, the awarded contracts become more concentrated among fewer vendors.

DDOT officials acknowledged that they are aware of the limited number of participants in locally-funded competitions, and have addressed this issue by creating a project forecast website to increase awareness of upcoming opportunities so contractors have sufficient notice to schedule and prepare their bid responses.

DDOT did not Re-compete a Contract Upon its Expiration

DDOT did not resolicit a contract or determine in writing that issuing a task order for 1 additional year was in the best interest of the District. While evaluating the execution of option year 4 of an Indefinite Delivery Indefinite Quantity (IDIQ)¹⁹ contract, we noted that on March 31, 2018, DDOT increased the contract ceiling value for option year 4 to \$45 million from the original contract ceiling value of \$11 million.

APPENDIX E. DDOT'S RESPONSE TO THE DRAFT REPORT

DDOT issued a task order for another year on April 6, 2018, 2 days before the expiration of the 5-year contract term. The original IDIQ contract signed on April 9, 2013, was for 1 base year and 4 option years – a total of 5 years – with no limits on the number of task orders that could be issued during the overall term of the contract.

According to 27 DCMR § 2005.2:

The total of the base period in a contract for goods or services shall not exceed one (1) year, unless the contract is funded from an appropriation that is available for more than one (1) year is a multiyear contract. The total of the base and option periods in a contract for services or goods shall not exceed five (5) years unless:

(b) Prior to the expiration of a contract, the Director determines in writing that it is in the best interest of the District to extend the term beyond the total term specified in the contract and the contracting officer provides justification for using a sole source modification in accordance with Chapter 17 of this title.

Overall, DDOT increased the total ceiling value for the contract to \$121 million from the original total ceiling contract value of \$56 million. According to DDOT, the contract ceilings were increased to accommodate the additional need for local paving restoration services. This action resulted in a net increase of \$65 million (117% of the original contract ceiling value) without competition during the 5-year period.

When asked about the contract extension, DDOT officials stated that the term limit applied to the contract and not to the task order. The officials said that as long as the task order is issued within the contract's term period, the task order is valid even if it extends beyond the original term of the contract.

We recommend that the Director, DDOT:

- 3. Determine in writing why increasing the original contract ceiling value without competition and/or issuing a task order beyond the original contract term is in the best interest of the District.*

Disagree. As explained during the exit interview, the task order in question was issued after Council approved the ceiling increase. An IDIQ task order may be issued at any time during the term of the contract and thus extend beyond the term of the contract. See 48 CFR 52.216-22 Indefinite Quantity. Any order issued during the effective period of the contract and not completed within that period shall be

APPENDIX E. DDOT'S RESPONSE TO THE DRAFT REPORT

completed by the contractor within the time specified within the order. The OIG recommendation posits that a "new" competition will automatically result in better pricing than Option Year 4 pricing. This conclusion ignores observed practice that some of the best bargains received are pricing in the last years of a multiple year IDIQ when contractors are only guesstimating at market conditions and more often than not guess too low. Further, with respect to the task order issued the sole source regulations simply do not apply.

DDOT CAN USE DATA MORE EFFECTIVELY AND DEVELOP FORMAL COST ESTIMATE AND BID EVALUATION PROCEDURES

DDOT can reduce the risk of anticompetitive practices and help ensure the District receives the best value for goods and services by performing a more detailed analysis of the procurement process. For example, DDOT did not capture data needed to analyze key aspects of the contract solicitation process and did not have formal standardized cost estimate and bid evaluation procedures. Further, DDOT did not always develop the Independent Government Estimate prior to soliciting proposals and subsequently maintain adequate supporting documentation.

DDOT did not Maintain Data on Competitive Solicitation Activities

DDOT did not maintain key data as part of its solicitation processes. Solicitation processes include advertisement of proposed construction projects, receipt of bids, and the opening and reading of the bids in a public setting. As a best practice, the AASHTO Guide recommends maintaining and performing periodic analysis of such data for developing strategies to increase vendor participation.

We discussed this condition with DDOT officials who stated that, going forward, DDOT contracting officers will record both who participated and the bid amount for each participant and maintain such data in a spreadsheet. Although maintaining such summary information is helpful, DDOT could improve solicitation functions and outcomes by developing and analyzing detailed performance measures. Careful analysis of data, plans, or other metrics can help identify challenges that reduce competition. Performance analysis may also indicate other areas of improvements in DDOT's procurement strategies.

We recommend that the Director, DDOT:

- 4. Maintain and analyze historical data pertaining to solicitations and contract awards to develop procurement plans that include strategies to improve competition.*

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Agree. As indicated during the exit interview, DDOT reviewed historical data, gathered industry feedback and conducted market analysis to make the changes and improvements detailed above prior to the OIG audit. The OIG recommendation was that DDOT maintain this data in a specific database. As previously discussed, there is currently no single source of information relating to DDOT procurement and competitive performance metrics. Information relating to this subject matter is included in a number of sources, including PASS. At the time of the development of DDOT's system known as ProTrack+, all data relating to procurement activities was to be included in that system. Unfortunately, the system's development has not yet been fully achieved. In the interim, DDOT can continue use of spreadsheets until the implementation of the AASHTOware bid submission software projected to be implemented in June 2019.

DDOT did not Always Develop and Maintain the Independent Government Estimate Prior to Soliciting Proposals

*The objective of the Independent Government Estimate is to determine a fair and reasonable cost to deliver a project. Title 27 DCMR § 2602.1 states an "estimate of construction costs shall be prepared for each proposed contract and for each proposed contract modification estimated to exceed ten thousand dollars (\$10,000)."*²²

*Although DDOT showed it prepared Independent Government Estimates for the majority of the contracts we reviewed, it did not maintain documentation on how the Independent Government Estimates were developed. Specifically, DDOT could not demonstrate how it derived Independent Government Estimates for 15 of 19 sampled contracts that required estimates.*²³

We also did not observe any evidence of a formal detailed review by the preparer's supervisor for all 19 contracts. According to AASHTO best practices, supervisory reviews are essential to achieve consistent and accurate estimates.

*Finally, in four instances when DDOT developed and documented the required Independent Government Estimates, it did not use a standardized format to ensure it captured formal signoffs and documented all of the estimate's supporting information in a consistent manner. According to the AASHTO Guide, "[t]he project estimate package should include the estimate basis (i.e., project definition documents and project characteristics) and all supporting documentation used to estimate item costs."*⁵

We discussed the missing Independent Government Estimates with DDOT officials, who agreed that the objective of Independent Government Estimates is to provide a check of

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the original estimate developed by the engineer of record and determine a fair and reasonable cost to deliver a project. The officials added that in August 2016, DDOT contracted an independent consultant to provide cost estimating services.

Although DDOT has outsourced this function, DDOT must document and maintain Independent Government Estimate calculations independently to support its procurement decisions. DDOT must evaluate the reliability of its estimating practices over time to ensure a fair and reasonable cost to deliver projects. Without an evaluation of Independent Government Estimates over time, the reliability of these estimates may decline without detection by the users of those estimates. Additionally, confidence in the estimates becomes more important in determining a fair and reasonable price when there is low participation in the bidding process as observed during this audit.

We recommend that the Director, DDOT:

5. Implement AASHTO guidelines for Independent Government Estimate calculations and develop policies and procedures for documenting a supervisor's signoff and review.

Agree. DDOT has taken a significant number of actions to improve Engineer's Estimates in the past three years. Some are contained in this report and response. These Estimates form a critical part of the District's overall determination for price reasonableness. When alerted to upcoming changes in market conditions by industry groups, e.g., recent increases in steel and concrete, OCP and DDOT work together to include this impact on future Estimates.

As previously detailed, DDOT's Programmatic (IPMD) Construction Cost Estimating Procedures (IGE development) are as follows. In an effort to improve the accuracy of the independent government estimates for construction contracts, DDOT implemented a system whereby two independent estimates would be developed prior to soliciting a construction invitation for bids. The objective is to provide a check of the original estimate developed by the engineer of record to determine a fair and reasonable cost to deliver the project. This is in compliance with DCMR section 2602.1 which states "an estimate of construction costs shall be prepared for each proposed contract and for each proposed contact modification estimated to exceed ten thousand dollars (\$10,000)." Initially, the engineer of record prepares a project cost estimate as defined in the DDOT Design and Engineering Manual at Section 12.5. They begin by preparing a list of pay items based on the contract drawings and specifications and then apply appropriate unit costs for each pay item. InfoTech's AASHTOWare Project Estimator and DDOT's recent bid tabulations from representative projects are utilized to develop unit costs for

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standard pay items. Complicated and non-standard/specialized items for which the Department does not have sufficient pay item cost data, for example a Bridge Protection Shield, would utilize a build-up approach including estimated costs for labor, materials, and equipment.

In August 2016, an independent consultant was contracted by DDOT to provide Cost Estimating Services. After a project team receives a cost estimate from their design consultant, they provide the independent consultant with the project's plans, specifications, special provisions, and contract line items and quantities. The independent consultant uses this information to develop an independent estimate. It may also utilize the DDOT Design and Engineering Manual (June 2017), RS Means Cost Works 2018, VDOT Bid Tabs, MDOT Bid Tabs, and USDOT Intelligent Transportation System Cost Database as references to develop its independent estimate. Following receipt of the independent consultant's estimate a cost estimate reconciliation meeting is held between DDOT, the independent estimator, and the Design Consultant to review the estimates. Items with significant (high percentage or dollar value) differences between the two estimates are discussed in detail. Backup data is presented to understand the approach used by each party to develop their estimate. The project team is then responsible for finalizing the cost estimate. The DDOT project engineer and supervisor (program manager) participate in the process and the final IGE represents the culmination of these efforts.

DDOT had no Formal Policy or Procedures to Detect an Unbalanced Bid²⁶

Contractors can use unbalanced bids to take advantage of errors in the project plans or specifications by offering unfair prices. DDOT did not establish formal policy and procedures to conduct a line-by-line comparison to address risk of overbids and underbids that are significantly different from Independent Government Estimates. To determine whether a bid is unbalanced, it must be evaluated for reasonable conformance to the Independent Government Estimate.

A line-by-line comparison of the bid to the Independent Government Estimate is important for pinpointing key indicators of unbalanced bids. According to the FHWA Contract Administration Core Curriculum Manual

There may be situations where the quantity of an item could vary due to inaccuracies in the original quantity or cost estimating, errors on the plans, changes in site conditions or design, etc. In these situations, the bids should be further evaluated to determine if the low bidder would ultimately yield the lowest cost.

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Therefore, a materially unbalanced bid may not result in the lowest final cost to the District, even though it appears to be the lowest cost during bidding procedures. DDOT program officials explained that they prepared a list of the line items with a variance of 10 percent or more and discussed them with OCP personnel. The DDOT Program officials prepared a "Memorandum of Bid Analysis and Recommendation" for one of the contracts that we sampled. The memo summarized how many line items in the bid were above, below, and equal to those in the Independent Government Estimates but did not have supporting documentation for each line item's variance explaining why differences above or below the Independent Government Estimates were permissible.

DDOT officials stated they did not have formal policies and procedures but they identified unbalanced bids through bid analysis and in preparing the Determination and Findings. Nonetheless, formal policy and procedures for a line-by-line comparison improve DDOT's ability to systematically detect unbalanced bids or other errors with vendor pricing information.

We recommend that the Director, DDOT:

6. Develop and implement policies and procedures for conducting a line-by-line comparison of costs described in a bid to the Independent Government Estimates in evaluating unbalanced bids.

Disagree. Bidders may bid individual line items based upon their supplier relationships, bid items on hand in the bidder's existing stock, or any number of other reasons which have nothing to do with a potentially unbalanced bid. The existing process generally complies with the cited guidelines. Evaluation of line item's variance of at least 10% ensures that the bid has been evaluated for these purposes. The Engineer's Estimate, coupled with supplemental analysis to substantiate or highlight variances is used to complete the Determination and Findings for Price Reasonableness. Several years ago, DDOT eliminated a previous practice that a price within 10% of the EE was automatically deemed fair and reasonable. DDOT uses FHWA and federal guidance relating to unbalanced bidding. The line item by line item review will be a part of the analysis within the AASHTOware bid submission software projected to be implemented in June 2019. See fhwa.dot.gov/programadmin/contracts/051688.cfm.

The following details the processes followed by IPMD. IPMD performs an in-depth evaluation of the bid transmittals for all advertised projects. The evaluations specifically look at extreme variations from the engineer's estimate and determine whether any unbalancing of unit prices has occurred. At times it could be noted that some items appear unbalanced, most probably to front load payment or to potentially exploit an

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expectation of overrun in contract quantities. IPMD project bid evaluations verify the correctness of the individual pay item quantities. The full range of bids is reviewed to determine where the IGE came in relation to all bids, the gap between first and second bids, and all bids. A comparison of the complete listing of the bid pay items for each contractor is made to compare against the Independent Government Estimate to help determine if unusual bid patterns exist.

Several other factors are also considered in IPMD's evaluation which includes, but is not limited to:

- Significant shift in economic factors (e.g., steel tariffs) have occurred in the past year which the engineer's estimate does not account for but the bidders are accounting for in their bids.
- Risk factors related to work requiring extensive coordination with utility companies.
- Risk factors related to work requiring extensive coordination with third party stakeholders such as the National Park Service, Army Corps of Engineers, DC Department of Energy and Environment, Business Improvement Districts, and Advisory Neighborhood Councils.

Based on the above factors and experience, IPMD sets a threshold for a deviation of generally up to 10 percent between the lowest bid and the engineer's estimate to be considered acceptable and a construction project meeting such criteria is recommended to move forward for award by the Office of Contracting and Procurement. OCP does not automatically accept such recommendations and IPMD and the Contracting Officer discuss the variance, reasons for the variance, and what additional analysis is required to make the recommendation acceptable. For projects where the bid variance is deemed unacceptable, the program and OCP agree to cancel the solicitation.

After the review is complete, IPMD prepares an engineer's recommendation. It is worth mentioning that IPMD continuously monitors and reexamines its evaluation criteria to account for changes in the economic and project-specific factors as well as factors related to various stakeholder requirements.

DDOT HAD FLAWED CONTRACT DOCUMENTATION, ADMINISTRATION, AND CLOSEOUT PROCEDURES

DDOT did not hold contractors accountable for design errors, follow key budgetary controls that are designed to ensure proper appropriation and allocation of budget authority, or release unspent funds for use elsewhere. This occurred because DDOT's

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practices were inconsistent, which is attributable to a lack of formal policies and procedures.

DDOT did not Always Justify Change Orders Resulting from Design Errors

When DDOT awarded a contract that required a subsequent design change, it could not provide documentation to show whether it considered recovering costs from the architect-engineer contractors when the agency incurred additional expenses due to design omission or design error.

According to 27 DCMR§ 2630.2, “[w]hen modification of a construction contract is required because of an error or deficiency in the services provided under an architect-engineer contract, the contracting officer shall consider the extent to which the architect-engineer contractor may be liable.” Further, 27 DCMR § 2630.4 states, “[t]he contracting officer shall include in the contract file a written statement of the reasons for the decision whether to recover costs from the firm.”

We determined that three change orders in a sampled contract contained errors or deficiencies in the original design documents. However, we did not observe any evidence (written statements) that the contracting officer considered the extent to which the architect-engineer contractor may have been liable. Not following regulations to assess and recover the costs of errors or deficiencies could result in monetary losses to the District.

We discussed these three change orders with DDOT officials who stated, “DDOT will add a specific item to the change order/modification process checklist . . . because of an error or deficiency in the services provided under an architect-engineer contract. Those will be referred to OAG [Office of the Attorney General] for their concurrence re[garding] probable causation.”

We recommend that the Director, DDOT:

7. Implement procedures to assess the liability of the designer when processing change orders and maintain documentation as required by 27 DCMR § 2630.

Agreed. Changes in design may be caused by any number of factors, including a consultant’s design errors or omissions. These reasons are reviewed during the contract change order and modification process. Actual consultant design errors are an unusual circumstance. However, instead of dealing with this occurrence on a case by case basis in the eventuality that it might happen, to ensure that DDOT

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assesses the liability of a designer when processing change orders, Article 3's or other such contract modifications, DDOT has added the item to the checklist and is drafting a policy for further departmental guidance.

The general process relating to design changes is provided. For modifications to contracts required because of an apparent error or deficiency in the services provided under an architect-engineer contract or task order, the Contracting Officer considers the extent to which the architect-engineer contractor may be liable. IPMD supports the Contracting Officer in this effort by evaluating every change order accordingly. Contract modifications to construction contracts are very common in the District due to the complexity of DDOT projects which may include DC Water and Pepco work. Examples include delays due to unexpected events/weather, difficulties with access/third party permits, delays by third party utilities in DDOT work zones, utility conflicts not captured on as-builts, and recommended changes requested by constituents during construction. To assist with improved quality from the designers at each milestone design submission, DDOT reviews engineering design development for conformance to the Design and Engineering Manual and the use of DDOT standards. The vast majority of changes are needed to account for unforeseen conditions and therefore not due to consultant design errors or omissions. Each time there is change, the reason is considered to determine the appropriate cause. Typical change orders are comprised of no cost time extensions, owner directed changes, and change in scope due to unforeseen or changed conditions. IPMD always considers whether a design error or omission is the root cause of the change order. A justification is provided with each change order, noting the reason for the proposed change and if there was an error, it would be noted accordingly. The Contracting Officer would then have clear notice to consider the extent to which the architect-engineer contractor may be responsible and liable.

DDOT did not Always Ensure that Purchase Orders Preceded Vendor Work Authorizations

According to the Office of the Chief Financial Officer (OCFO) Office of Financial Operations and Systems Policies and Procedures Manual, 10401001.10:

Purchase orders and contract[s] are used to legally obligate agencies to future disbursements for goods and services received. The preparation and issuance of a purchase order and contract is the process of establishing a contractual relationship with a supplier of goods or services.²⁸

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DDOT did not always comply with the requirement to first encumber funds by executing purchase orders to establish budgetary controls over spending. Instead, DDOT permitted contractors to perform work under a task order before establishing the commitment in the Procurement Automated Support System (PASS). PASS is an online system that allows for the creation of purchase orders, which along with funding, are evidence of an "obligation" on the part of the District to pay for goods or services when delivered by the vendor described in the purchase orders.²⁹

DDOT did not always ensure that purchase orders preceded vendor work authorizations because DDOT personnel did not submit the requisitions and/or OCP did not approve the purchase orders prior to authorizing work. We discussed this practice with DDOT officials, who indicated that payment of invoices before a purchase order is approved in PASS is not the ordinary DDOT practice but may occur situationally.

Not establishing a purchase order circumvents budgetary controls that are designed to ensure the proper appropriation and allocation of budget authority. In FYs 2016 and 2017, this resulted in vendors submitting 127 invoices, totaling \$10.3 million, before DDOT approved purchase orders and encumbered funds in System of Accounting and Reporting (SOAR).

We recommend that the Director, DDOT:

8. Approve and issue purchase orders prior to authorizing work or receiving invoices for payment or document the fund availability for exceptions.

Agreed. As noted during the exit interview, two of the instances cited totaling \$2.5M related to stipends to be paid for the Frederick Douglass Memorial Bridge. In those instances, the contract required the invoice to be submitted as the mechanism triggering stipend payment. Thus, as dictated by the contract, the invoice was required to be dated before the PO. There was never an issue involving insufficient funds or lack of contractor oversight. Similarly, for release of contractual retainage held as another example, the contractor submits a request for release of retainage. The Contracting Officer, after consultation with the Contract Administrator, determines whether to release the requested amount and notifies the contractor. The contractor immediately submits an invoice for the release which may occur before the requisition in PASS has been approved and converted to a Purchase Order (PO). Even though the contractor has earned the retained amount, there may not be an existing PO from which to pay the amount. Thus, it may properly occur that an invoice is created before a PO. However, no release of the contractor's withheld funds is approved nor payment made without a PO. Further, the list does not

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take into account the various other situations where an invoice may appear to precede a PO, such as Article 3 changes, emergency repairs, contracts signed using a certification of funds, and continuation letters between fiscal years just to name a few. DDOT specifically checks for and confirms funding availability using the variety of permissible contractual means prior to issuing a Notice to Proceed for a task order.

DDOT had no Formal Policy and Procedures to Release Unspent Funds

DDOT did not always release unspent funds upon completion of transportation projects. The OIG estimates \$8.1 million³⁰ of unspent funds were not released for other uses. According to the OCFO Office of Financial Operations and Systems Policies and Procedures Manual, 10401001.10:

Encumbrances³¹ are obligations for goods and services for which a purchase order or contract has been recorded and allocated to an appropriate budget line. Encumbrance accounting enhances the effective execution of budgetary controls over obligations and expenditures by ensuring proper appropriation and allocation of budget authority. Each obligation and related expenditure is encumbered against the budget thereby preserving, to the extent possible, projected budget appropriations.³²

We obtained a list of all open encumbrances from SOAR and prepared an aging analysis based on each purchase order's period of inactivity. Inactivity may indicate the project was completed. We observed contracts/ purchase orders in SOAR without activity (voucher or adjustment) over 12 months, with a total open encumbrance balance of approximately \$16 million or about 36 percent of open purchase orders (see Table 1 below). This \$16 million includes federally obligated amounts and potential liabilities. To estimate the amount of local funds that could have been put to better use; we excluded \$7.9 million in federal funds because these funds are not available for other uses.

In 2017, before we started our audit, DDOT's Resource Allocation Division reviewed and closed 292 purchase orders totaling \$17.4 million after recognizing a need to close inactive purchase orders. During our audit fieldwork, on June 18, 2018, DDOT implemented standard operating procedures to address deficiencies in the closeout process for locally-funded projects. DDOT also expected to introduce a standard operating procedure for federally-funded projects to be included in its January 2019 training on managing the federal capital portfolio. During the audit period, however, DDOT lacked formal procedures for closing out purchase orders and did not properly monitor the closeout process.

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We recommend that the Director, DDOT:

9. Review purchase orders that are inactive for more than 1 year for potential closure and release of funds for better use.

10. Implement a closeout procedure for federally-funded projects and monitor performance of the closeout (i.e., District and federal) process.

Agreed. Beginning in FY 2017, DDOT's Resource Allocation Division (RAD) initiated a PO Palooza, which is a concentrated focus on inactive PO/RQs. PO Palooza was replicated in FY 2018 and will be each year, thereafter. Additionally, DDOT finalized a PO Closeout Standard Operating Procedure in the summer of 2018 and trained over 100 staff. It is important to note that while the PO/RQ closeout process is initiated through PO Palooza, it is also a part of project closeout.

DDOT does have a Standard Operating Procedure to close out local capital projects and is finalizing an SOP to close out federally-funded capital projects this spring. Over 100 project managers have already been trained on the closeout process. It is important to note that the first Monday of each month DDOT staff including Project Managers and the OCFO attends monthly project closeout meetings whereby projects that have been identified for closeout are discussed and tracked.

CONCLUSION

Procurement decisions can affect the number of bids received for a given solicitation. Adequate vendor participation and reliable estimates of project costs are vital to obtain fair and reasonable prices for transportation projects. DDOT could improve its contracting procedures and maintain procurement data for use in understanding how to better foster vendor participation. Additionally, the agency could standardize the cost-estimating process to make its estimates and bid evaluations more reliable in detecting designer errors. DDOT can also enhance budgetary controls to put the District's funds to better use by closing and releasing unspent funds from completed projects.

As noted above, the subject matter of many of the OIG's individual recommendations was already in the process of changing practices before the OIG audit. Nevertheless, DDOT and OCP appreciate the insight of and collaboration demonstrated by the Office of the Inspector General during this review. As OCP and DDOT embarked on this transformation three years ago, there was much work to be done. DDOT has made a significant number of changes to procurement and fiscal documentation, processes, and policies in the past three years. DDOT now has OAG-approved contract templates for

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both federal- and locally-funded construction solicitations and construction management requests for qualifications. Additional changes are progressing for better gathering of data and its use for systematic analysis of the procurement process and results. Proposed changes to the ProTrack+ system will enable DDOT to track both procurement solicitation and change order work and processing times. The upcoming AASHTOware upgrade will enable DDOT to add transparency and to better track bid item costs and overall pricing. DDOT has already done considerable work to improve cost estimating for better accuracy and reliability. DDOT will supplement current processes to better document decisions related to design changes and whether such are required because of error or omission on the part of design consultants. Project closeout is another area where DDOT has already completed significant process change efforts.

Again, DDOT appreciates the OIG's insights and recommendations toward process improvements and achieving better competitive results. More robust competition is always a goal. DDOT will carry on with the continuous process improvements (plan/do/check/act) to make changes to better utilize District and federal resources.

CC: George Schutter, Chief Procurement Officer

[REDACTED]