



OFFICE OF INSPECTOR GENERAL
City of Chicago



REPORT OF THE OFFICE OF INSPECTOR GENERAL:

***CHICAGO DEPARTMENT OF TRANSPORTATION
PAVEMENT MANAGEMENT FOLLOW-UP INQUIRY***

DECEMBER 2017

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December 11, 2017

To the Mayor, Members of the City Council, City Clerk, City Treasurer, and residents of the City of Chicago:

The City of Chicago Office of Inspector General (OIG) has completed a follow-up to its December 2015 audit of the City's pavement management process. Based on the responses provided by the Chicago Department of Transportation (CDOT), we conclude that the Department is in the process of implementing three corrective actions related to the audit finding, but does not intend to pursue any corrective action addressing pavement management issues related to the Aldermanic Menu Program (Menu).

The purpose of the 2015 audit was to determine if CDOT managed street maintenance in a cost-effective way that extended pavement life in accordance with the Federal Highway Administration's (FHWA) pavement preservation program guidelines. OIG found that CDOT's pavement management program did not comport with those guidelines. Specifically, we found that the Department's pavement management program, which manages arterial and residential streets separately, was deficient in the areas of street condition data collection, performance measurement, and preventive maintenance.

Based on the results of the audit, OIG recommended that CDOT design and implement a pavement preservation program to achieve the most cost-effective means of extending the life of City streets. This recommendation included specific action items, including developing in-house expertise about pavement preservation techniques, collecting reliable pavement-condition data on a routine basis, developing a proactive preventive maintenance strategy, and separating residential street resurfacing from the Menu. In its response to the audit, CDOT described a number of corrective actions it planned to take, but declined our recommendation to separate residential street resurfacing from the Menu.

In September 2017, OIG inquired about the status of the corrective actions CDOT had committed to and any additional actions it may have taken. Based on the Department's follow-up response, we conclude that CDOT has begun to implement three corrective actions related to conducting a residential and arterial pavement condition survey, including the implementation of an FHWA-approved Pavement Preservation Plan (PPP). Once fully implemented, OIG believes that these three corrective actions may reasonably be expected to resolve, in part, the core finding noted in the audit (i.e., that CDOT's pavement management program did not comport with federal guidelines).

However, CDOT still declines to take any corrective action to remove residential street resurfacing from the Menu. OIG found that, contrary to FHWA guidelines for an empirically-

based, network-level, long-term pavement management strategy, Menu is a decentralized approach, directed by insufficient data and aldermanic discretion. Given recent advancements in how CDOT can track and monitor street conditions, OIG found that the City's decision to defer CDOT's subject matter expertise, and knowledge of objective maintenance needs, to aldermen did not align with FHWA guidelines. We urge the Department to reconsider OIG's remaining recommendation and identify corrective actions to address this aspect of the audit finding.

We thank the staff and leadership of CDOT for their cooperation during the audit and responsiveness to our follow-up inquiries.

Respectfully,

A handwritten signature in blue ink, appearing to read 'J. Ferguson', is positioned above the typed name.

Joseph M. Ferguson
Inspector General
City of Chicago

I. FOLLOW-UP RESULTS

In September 2017, OIG followed up on a December 2015 audit of CDOT's pavement management program.¹ The Department responded to our inquiry by describing the corrective actions it has taken since receiving the audit and providing supporting documentation. We summarize the finding and the status of CDOT's corrective actions below. OIG's follow-up inquiry did not observe or test implementation of the new procedures, and thus we make no determination as to their effectiveness, which would require a new audit with full testing of the procedures.

OIG uses four categories for Status of Corrective Action:

- **Implemented** - The department has implemented actions that may reasonably be expected to resolve the core findings/concerns noted in the audit.
- **Partially Implemented** - The department has implemented actions in response to the audit, but the actions do not fully address the findings/concerns raised in the audit.
- **Pending Implementation** - The department has initiated action plans that, if fully implemented, may reasonably be expected to resolve the core findings of the audit. However, the department has not completed implementation.
- **Not Implemented** - The department has not initiated or implemented any actions responsive to OIG's findings.

FINDING 1:

CDOT's pavement management program did not comport with federal guidelines, with deficits in the areas of street condition data, performance measurement, and preventive maintenance.

OIG Recommendations:

OIG recommended that CDOT design and implement a pavement preservation program to achieve the most cost-effective means of extending the life of City streets. To that end, OIG recommended that CDOT:

- Determine which preventive maintenance treatments will be the most cost-effective for City streets and the optimal time in the pavement lifecycle to apply such treatments;
- Collect street condition data on a routine basis in a way that allows the Department to determine pavement lifecycle trends and schedule maintenance activities;
- Set pavement performance goals and track and report on progress toward those goals;

¹ The 2015 audit report is available on the OIG website: <http://chicagoinspectorgeneral.org/wp-content/uploads/2015/12/CDOT-Pavement-Management-Audit.pdf>.

- Determine the street maintenance budget based on a citywide pavement preservation program and request funding accordingly; and
- Hire a pavement preservation engineer and utilize a pavement management system to facilitate such analysis and decision-making.

Corrective Action 1:

In response to OIG’s audit report, CDOT agreed to “program federal Surface Transportation Program funding to complete another pavement condition rating of the City’s arterial street system in 2017. The arterial pavement condition index (PCI) values of the 2014 and the 2017 PCIs will be analyzed and compared to determine pavement deterioration trends on arterial streets. From this analysis we will set performance goals, track progress made with the grind and patch and crack seal programs, and be able to report how streets are performing long-term. CDOT will utilize this information to implement the most cost-effective preventive maintenance treatments at the optimal times.”

Status of Corrective Action:

Pending Implementation. Due to funding constraints, CDOT has not conducted a pavement condition rating for 2017. According to the Department, “CDOT planned to procure services for an arterial street pavement condition rating and development of an FHWA-approved Pavement Preservation Plan (PPP) in 2017. This planned scope of work will be more comprehensive than the pavement condition rating undertaken in 2014. The PPP is meant to complement the collection of the PCI data, by adding consulting resources to provide for active program management of the pavement condition data and related resurfacing work programs.”

CDOT estimates that these services will cost \$2.5 million. The Department planned to use \$2 million in federal funds and \$500,000 in state funds. However, the State of Illinois discontinued funding for City road projects in early 2017, and has yet to approve this \$500,000 grant. The \$500,000 state funding commitment, representing 20% of the total program cost, is needed to obtain the federal dollars. CDOT stated that it will continue to work with the State to identify a source for the \$500,000. Until CDOT receives the funding to implement the 2017 PCI and PPP, the Department plans to continue using 2014 PCI data to prioritize street resurfacing.

Corrective Action 2: In response to OIG’s recommendation to address deficiencies in performance data and goals for the arterial street paving program, CDOT stated it would “annually update the residential pavement condition database and mapping tools to show streets that were resurfaced in a particular year and re-survey the entire residential street network every three years. CDOT will analyze the pavement condition of residential streets to develop Departmental goals to maintain a high percentage of streets above a determined threshold based on available and projected budget.” In addition, the Department stated that it planned to complete a residential pavement condition survey in 2017.

Status of Corrective Action: **Partially Implemented.** In response to OIG’s follow-up inquiry, CDOT stated that it has “continued to update the residential pavement condition information in dotMaps to reflect streets that have been resurfaced and placed under moratorium. CDOT provides aldermen updated lists of the remaining streets in poor or fair condition to aid in their planning and decision-making efforts as part of the annual Capital Improvement Plan briefings each year, to guide Aldermanic decisions regarding Menu and tax increment financing (TIF) funding.”

“Starting in November 2017, after the 2017 paving season concludes and staff becomes available, CDOT will conduct a citywide Residential Street visual pavement condition survey and update the Residential street pavement condition analysis and maps.”

Corrective Action 3: In response to OIG’s original audit, CDOT agreed to work with the Office of Budget and Management (OBM) to develop a funding strategy to sustain a citywide pavement preservation program. This included hiring a pavement management specialist to consult on data collection, analyses, and appropriate tools and software, continuing work begun in 2013.

Status of Corrective Action: **Pending Implementation.** As described in Corrective Action 1, CDOT will continue to work with the State of Illinois to identify the funding needed to pay for the development of an FHWA-approved PPP along with a pavement management specialist.

OIG Recommendation: OIG recommended that CDOT assign residential street resurfacing decision-making to CDOT subject matter experts by removing it from the purview of the Aldermanic Menu Program.

Status of Corrective Action: **Not Implemented.** CDOT disagreed with OIG’s recommendation and reiterated its disagreement in response to the follow-up inquiry, stating, “CDOT still believes that the current decision-making structure for improvements to neighborhood infrastructure is appropriate. CDOT will continue to work with Aldermen to program their Menu funds in a manner that most benefits the city and their neighborhoods.”

CITY OF CHICAGO OFFICE OF INSPECTOR GENERAL

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The City of Chicago Office of Inspector General (OIG) is an independent, nonpartisan oversight agency whose mission is to promote economy, efficiency, effectiveness, and integrity in the administration of programs and operations of City government. OIG achieves this mission through,

- administrative and criminal investigations;
- audits of City programs and operations; and
- reviews of City programs, operations, and policies.

From these activities, OIG issues reports of findings and disciplinary and other recommendations to assure that City officials, employees, and vendors are held accountable for the provision of efficient, cost-effective government operations and further to prevent, detect, identify, expose, and eliminate waste, inefficiency, misconduct, fraud, corruption, and abuse of public authority and resources.

AUTHORITY

The authority to produce reports and recommendations on ways to improve City operations is established in the City of Chicago Municipal Code § 2-56-030(c), which confers upon the Inspector General the following power and duty:

To promote economy, efficiency, effectiveness and integrity in the administration of the programs and operations of the city government by reviewing programs, identifying any inefficiencies, waste and potential for misconduct therein, and recommending to the mayor and the city council policies and methods for the elimination of inefficiencies and waste, and the prevention of misconduct.