CHICAGO DEPARTMENT OF TRANSPORTATION
CITY OF CHICAGO

October 8, 2014

Joseph M. Ferguson
Inspector General
740 North Sedgwick Street, Suite 200
Chicago, IL 60654

RE: Red-Light Camera Program Review

Dear Mr. Ferguson,

The City of Chicago Department of Transportation (CDOT) appreciates the work the Office of Inspector General (OIG) has performed and supports the recommendations for improvements to the Red-Light Camera (RLC) Program. CDOT is committed to improving safety on our streets and the RLC Program has proven to be a critical part of that effort. Based on analysis of the most recent crash statistics available from the State of Illinois, at intersections with red light cameras, the number of the most dangerous right-angle (T-bone) crashes has decreased by 47% between 2005 and 2012.

In addition, the results of the City's ongoing reviews do not reveal any fundamental concerns about the validity of the Program. However, a sound public safety program depends on public trust, and we must work harder to maintain the public's confidence in the Program. CDOT takes seriously the recommendation in the OIG's Report for improving the Program. Along with following those recommendations, CDOT is taking further actions that go above and beyond the OIG's recommendations. These improvements support a more transparent, consistent and effective Red Light Camera Program.

Historic Review

CDOT has studied the periods of elevated levels of daily violations at 12 intersections to understand better what occurred. CDOT has methodically reviewed all internal and external records available for each location, including additional information the previous vendor, Redflex, was able to provide. CDOT was fully transparent and cooperative with the OIG throughout this review process.

The City's expansive review included offering nearly 16,000 people who received a ticket during one of the spikes the opportunity for an additional review of the evidence by an independent third party. This review confirmed the spikes were not the result of the improper issuance of tickets; rather, even following strict standards to give the benefit of the doubt to the motorist based on the available evidence, 96% of tickets reviewed by the third party were confirmed to be valid violations. In addition,

the results of that review did not indicate manipulation of the RLC Program that would produce undeserved tickets.

CDOT's review of the spikes in ticketing did reveal significant variability in the performance of the Program under the previous vendor, Redflex. While some attention has been focused towards periods of high violations, CDOT, like the OIG, is also concerned with the periods of under-enforcement at these locations. The OIG's report identifies a condition at the Kimball-Lincoln-McCormick intersection where a loop detector was out of service for long periods of time resulting in the appearance of a spike in ticketing during the brief periods it was operational. CDOT believes such under-enforcement is also likely a cause of apparent spikes at other intersections. CDOT's review revealed that nine of the 12 locations had at least one extended period of very low or no enforcement when the cameras were not capturing violations in one or more lanes at the intersection. In fact, at six of the 12 locations, one or more lanes of traffic were not enforced by the cameras for more than a year.

The OIG's findings of the low vehicle "trigger speed" at 119th and Halsted indicate further inconsistency in the Program. The red light enforcement camera is programmed to record a potential violation only if the approaching vehicle is traveling toward the intersection at or above the trigger speed. The setting of the trigger speed is an operational decision of the vendor, not set by law, which determines which events are captured by the camera based on the likelihood that a vehicle could fully stop before entering an intersection. The trigger speed is wholly independent from whether or not a violation of the law actually occurs. Better oversight and recordkeeping could have provided a documented reason for the change in trigger speed, or at least a more timely correction (as further described in the Future Management section below).

This information supports two general conclusions about the previous RLC Program:

- First, the Redflex loop detector systems, imbedded in the roadways, were prone to frequent disruption due to the condition of the streets, weather and construction impacts. They often suffered from long periods without enforcement until the loop detector could be repaired or reconnected. This led to the appearance of a spike in enforcement, when in reality it was what should have been the true level of violations occurring at that intersection. It has become clear that this outdated technology is not well suited to Chicago's infrastructure and climate.

- Second, there was not enough timely attention or sufficient record-keeping to identify and react to developing issues, such as lanes not being enforced or sudden increases in potential violations being collected, to ensure the accurate functioning of the system (as further described in the Future Management section below).

These issues demonstrate that the past management of the Program was insufficient. Although the Program has shown dramatic improvements in safety, due to those technical and management deficiencies the Program was actually under-enforcing violations.

The City's current contract with the new vendor, Xerox, addresses these issues. In procuring the new contract in 2013, CDOT ensured that the roadway-dependent loop detector technology was to be replaced. The above-ground radar technology that Xerox implemented this year is not susceptible to the same issues as the in-road loop detector systems. In addition, as the OIG acknowledged, the current contract has stronger controls for the City to monitor and manage the contract on a timely basis.

In addition, the OIG's report clarifies some confusion about the amber (yellow) times at traffic signals in Chicago and the relationship to the red light camera system. As the OIG Report notes, a change in

processing with the transition to the new vendor Xerox resulted in the issuance of tickets with a recorded amber time of less than the programmed signal time of 3.0 seconds.

Based on direction from the City in 2010, Redflex had not forwarded to the Department of Finance (DOF) potential violations that showed recorded amber times of less than 3.0 seconds. After Xerox transitioned into the system management, a number of potential violations had recorded amber times slightly less than the programmed time. With guidance from the National Electrical Manufacturers Association (NEMA) Transportation Standards, which allows an acceptable level of slight variance of traffic controller timing of up to one tenth of a second (as described in Appendix D), CDOT staff determined that these violations were valid and directed Xerox to continue to forward them along for processing as tickets. Further, CDOT would like to highlight the findings by Xerox included in Appendix E that demonstrate the variance in amber times is actually an imperceptible difference of hundredths or thousandths of a second less than the programmed time (e.g. 2.998 seconds).

CDOT estimates that DOF has issued approximately 77,000 tickets in 2014 with amber times measured as less than 3.0 seconds, but more than 2.9 seconds. As described in Appendix D of the OIG Report, these are valid violations that meet accepted national standards. However, this variance has led to confusion with the public and the Department of Administrative Hearings. In early September, CDOT directed Xerox to stop processing any violation with an amber measurement under 3.0 seconds. Now that the OIG's Report is complete, CDOT has directed Xerox to make this a permanent change to its business rules.

Future Management

The OIG has made four general conclusions and a related series of suggestions for future management of the Program. CDOT concurs with those recommendations, and offers several additional improvements. The following is a series of actions the City has already instituted, or is in the process of implementing:

- *Identification of Anomalies*: CDOT and Xerox have implemented an "early warning system" that provides an automated check of anomalies in the pattern of violations captured by each red light camera. Sudden increases or decreases in the number of events being auto-generated by the cameras, or large shifts in the number of violations being determined by Xerox reviewers, are flagged and marked for review. Automated emails are sent to maintenance managers and administrators. CDOT requires Xerox to investigate the operation of the system at that location, re-review videos and all available information, take corrective action when appropriate, and submit their findings in a log for CDOT review. This information is then kept as part of the record for the location.

- *More Frequent Management Meetings:* Weekly meetings are being held between CDOT, Department of Finance and Xerox staff to review the performance of the cameras to monitor the health of the system.

- *Records Management:* Records management has been greatly improved from the previous program. Xerox maintains a central database and report querying tool of camera activity, performance, productivity and maintenance records that is available to both City and Xerox staff. Reports and memoranda provided to CDOT are stored centrally on CDOT servers, not in

individual files or folders. This ensures that the City retains custody through any organizational and personnel changes.

- *Open Data*: As was announced early this summer, data on the number of violations being produced by each camera each day is being posted to the City's Open Data Portal. This provides the public greater transparency into the system's performance and to the level of violations taking place at each camera. CDOT will continue to post crash data and safety statistics for intersections throughout the city.

- *Camera Siting Decisions*: CDOT will continue to monitor crash data and decommission cameras as safety improves based on crash data which shows a significant reduction or elimination of right-angle crashes at a particular intersection. At the beginning of 2014, CDOT decommissioned 32 cameras at 16 intersections. CDOT's criteria for decommissioning cameras is already available on CDOT's website and, as noted above, the safety data behind those decisions will be posted as well.

- *Business Rules*: CDOT agrees with the OIG's recommendation to post to the City's website the business rules utilized in the determination of red light violations.

- *Service Level Agreements:* The new contract with Xerox has an improved set of Service Level Agreements (SLAs) that require greater efficiency, timeliness and transparency by the contractor. Xerox is subject to financial penalties for failure to meet these requirements. This provides the City with greater leverage to enforce the contract terms and ensure the proper and consistent operation of the Program. CDOT will continue to enforce these SLAs aggressively as may be appropriate.

- *Annual Report:* Beginning in the first quarter of 2015, the City of Chicago will produce an annual report on the Red Light Program operations, including information about monthly contract performance and management, safety statistics, any decommissioning of cameras, and the overall performance of the Program.

- *Amber Light Times*: As stated earlier, out of an abundance of caution and to support consistency in the Program, the City has directed Xerox to cease issuing violations if the measured amber time during the event is under the programmed time, even though the violations are valid and meet nationally recognized standards.

In accordance with your recommendations and the City's further commitments, these improvements support a more transparent, consistent and effective Red Light Camera Program.

Sincerely,

Rebekah Scheinfeld
Commissioner
Chicago Department of Transportation