



A Red Light Running (RLR) Photo Enforcement System was installed at the intersection of US Rte. 6 (159<sup>th</sup> Street) at Dixie Hwy on October 28, 2008 (southbound), after finding limited success with other attempted measures to promote safer driving and improve compliance with traffic laws. This RLR Photo Enforcement System was suspended for safety improvement on August 3, 2009, less than a year after installation. Following completion of the safety improvement, the RLR Camera System was reinstalled on January 21, 2015.

The Illinois Compiled Statutes, 625 ILCS 5/11-208.6 Automated Traffic Law Enforcement System states:

*(k-7) A municipality or county operating an automated traffic law enforcement system shall conduct a statistical analysis to assess the safety impact of each automated traffic law enforcement system at an intersection following installation of the system. The statistical analysis shall be based upon the best available crash traffic and other data and shall cover a period of time before and after installation of the system sufficient to provide a statistically valid comparison of safety impact. The statistical analysis shall be consistent with professional judgment and acceptable industry practice. The statistical analysis also shall be consistent with the data required for valid comparisons of before and after conditions and shall be conducted within a reasonable period following the installation of the automated traffic law enforcement system. The statistical analysis required by this subsection (k-7) shall be made available to the public and shall be published on the website of the municipality or county. If the statistical analysis for the 36-month period following installation of the system indicates that there has been an increase in the rate of accidents at the approach to the intersection monitored by the system, the municipality or county shall undertake additional studies to determine the cause and severity of the accidents, and may take any action that it determines is necessary or appropriate to reduce the number or severity of the accidents at that intersection.*

As a condition of reinstallation, the Illinois Department of Transportation require a safety analysis report evaluating the safety effectiveness of the RLR Camera System be conducted. Specifically, the report “shall include as a measure of safety performance the number of red light running violations pre- and post-safety improvement and corresponding crash analysis”.

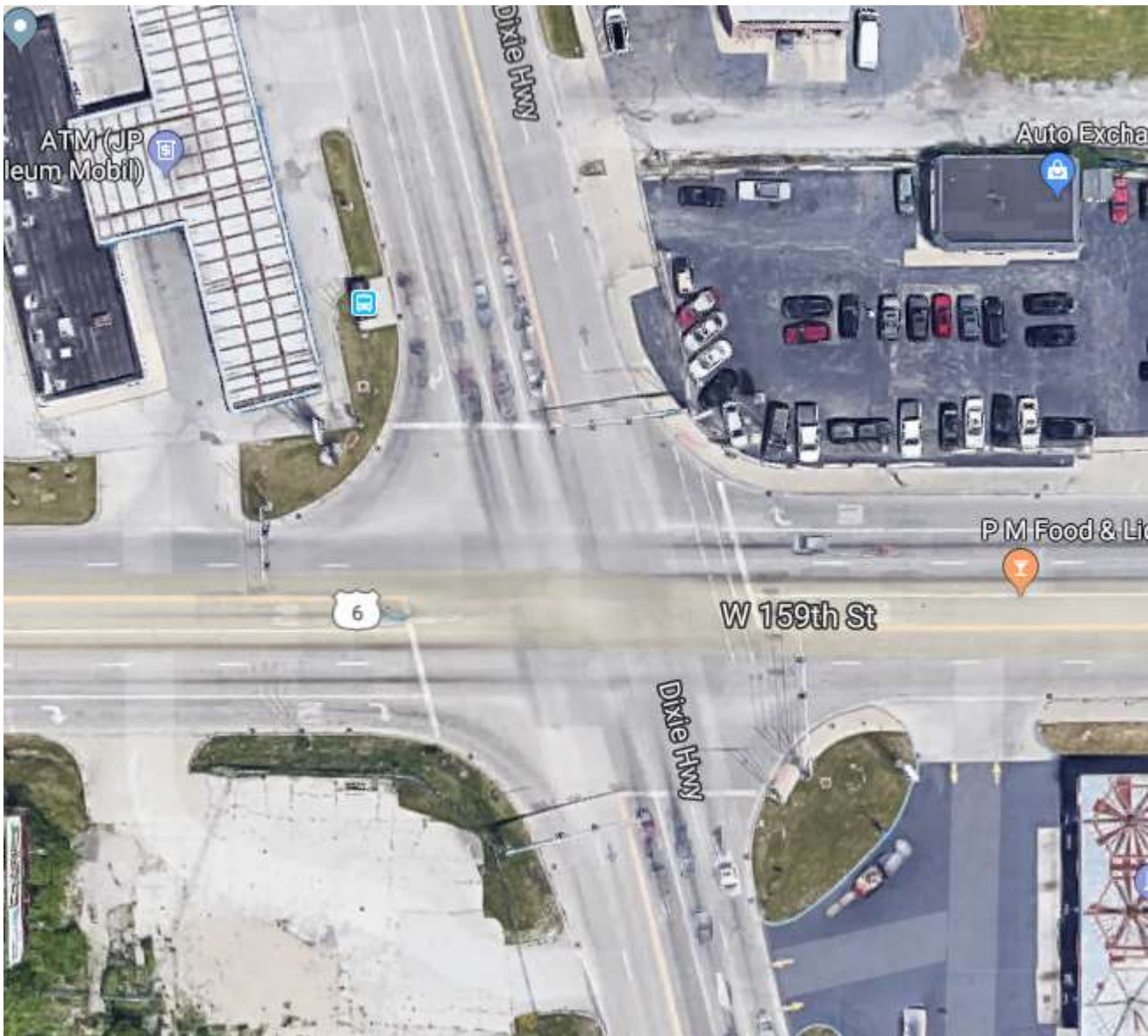
The following analysis was performed through 2017.

*Calendar year 2018 was not included, as the Illinois Department of Transportation (IDOT) has not yet completed collecting all data. The statistical analysis will be updated annually, as IDOT collected data becomes available for release.*



**US Rte. 6 (159<sup>th</sup> Street) at Dixie Hwy**  
**Markham, IL**

- RLR Photo Enforcement System monitors violations occurring on the southbound approach of the intersection
- RLR Photo Enforcement System installed: October 28, 2008
- RLR Photo Enforcement System suspended for safety improvement: August 3, 2009
- RLR Photo Enforcement System re-activated: January 21, 2015





**US Rte. 6 (159<sup>th</sup> Street) at Dixie Hwy, Northbound Approach**



**US Rte. 6 (159<sup>th</sup> Street) at Dixie Hwy, Southbound Approach**





**US Rte. 6 (159<sup>th</sup> Street) at Dixie Hwy, Eastbound Approach**



**US Rte. 6 (159<sup>th</sup> Street) at Dixie Hwy, Westbound Approach**





## Average Daily Traffic

Data was obtained from the Illinois Department of Transportation's website [www.gettingaroundillinois.com](http://www.gettingaroundillinois.com).

US Rte. 6 (159<sup>th</sup> Street) at Dixie Hwy (Northbound)

- 10,000 (2014)



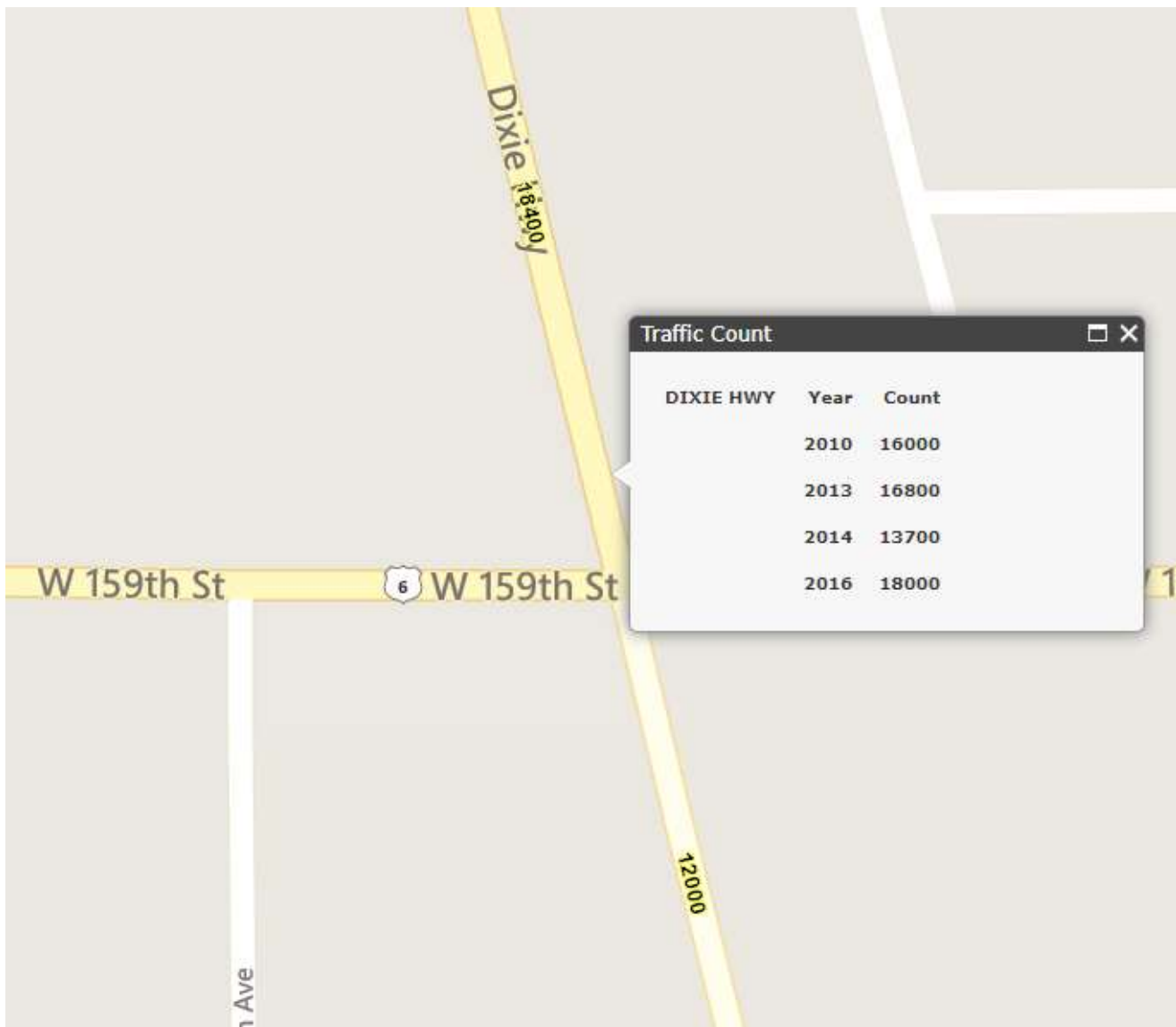


## Average Daily Traffic

Data was obtained from the Illinois Department of Transportation's website [www.gettingaroundillinois.com](http://www.gettingaroundillinois.com).

US Rte. 6 (159<sup>th</sup> Street) at Dixie Hwy (Southbound)

- 16,000 (2010)
- 16,800 (2013)
- 13,700 (2014)
- 18,000 (2016)



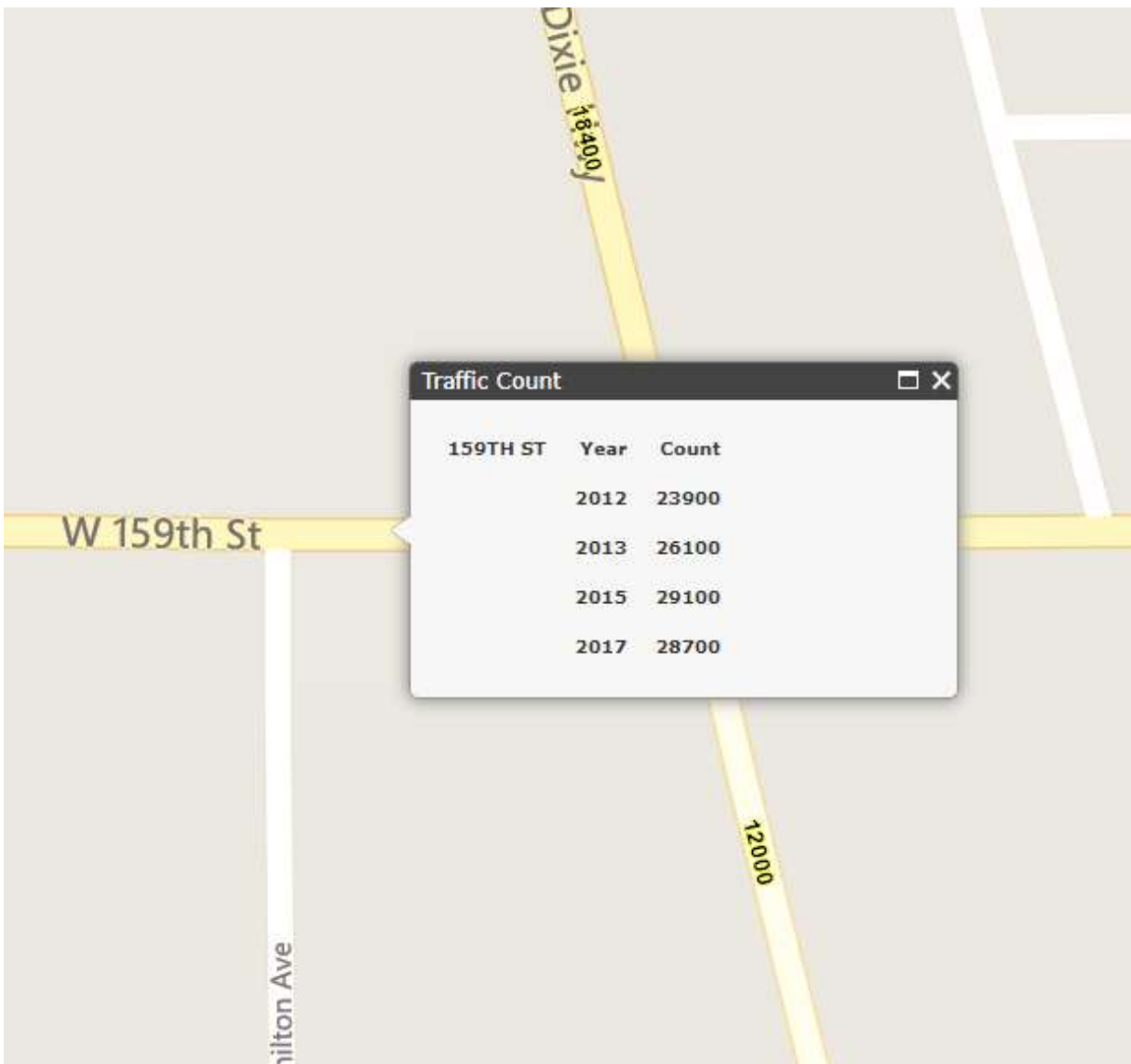


## Average Daily Traffic (continued)

Data was obtained from the Illinois Department of Transportation's website [www.gettingaroundillinois.com](http://www.gettingaroundillinois.com).

US Rte. 6 (159<sup>th</sup> Street) at Dixie Hwy (Eastbound/Westbound)

- 23,900 (2012)
- 26,100 (2013)
- 29,100 (2015)
- 28,700 (2017)





## Adjudication Experience

RLR camera violations are contested and adjudicated through an administrative hearing conducted each month. Adjudication data for the City’s Automated Enforcement Program is shown below in Table 1. Data compiled is not intersection specific, rather totals for the program as a whole.

<b>CITY OF MARKHAM ADJUDICATION FOR AUTOMATED PHOTO ENFORCEMENT PROGRAM</b>		
<b>YEAR /TOTALS</b>	<b>LIABLE</b>	<b>NOT LIABLE</b>
2008	121	1
2009	1,855	231
2010	544	82
2011	358	60
2012	323	48
2013	190	17
2014	298	44
2015	1,637	319
2016	1,091	169
2017	636	357
2018	688	183
2019**	362	51
<b>YEAR TO DATE TOTAL:</b>	<b>8,103</b>	<b>1,562</b>

\*Adjudication totals include contested violations for entire program (all RLR cameras).

\*\*2019 totals through September 2019.

Table 1

The high-quality video footage and photographic evidence produced by the enforcement system is a contributing factor in a majority of the contested RLR violations being upheld by the Hearing Officer. The police officers assigned to review and approve/reject potential violations are vigilant in applying the same officer discretion and criteria they would if issuing an in-person citation, resulting in only highly prosecutable violations being mailed out.





## Crash History and Analysis

- Table 2 includes crash data obtained from the Illinois Department of Transportation, detailing angle, turning, rear-end, and other type crashes occurring at the intersection pre/post RLR Photo Enforcement System installation.

### ALL INTERSECTION APPROACHES

	Crashes								
	Rear-End (% of Total)		Angle (% of Total)		Turning (% of Total)		Other (% of Total)		Total
2005	10	47.6%	0	0.0%	9	42.9%	2	9.5%	21
2006	15	57.7%	1	3.8%	9	34.6%	1	3.8%	26
2007	10	47.6%	2	9.5%	5	23.8%	4	19.0%	21
Total	35	51.5%	3	4.4%	23	33.8%	7	10.3%	68
2005-2007 Average:	11.7		1.0		7.7		2.3		22.7

RLR Camera Installation: 10/28/2008									
2008	9	52.9%	0	0.0%	6	35.3%	2	11.8%	17
RLR Camera Suspended for Safety Improvement: 8/3/2009									
2009	6	35.3%	1	5.9%	5	29.4%	5	29.4%	17
RLR Camera Inactive: 8/3/2009 – 1/21/2015									
2010	7	28.0%	3	12.0%	14	56.0%	1	4.0%	25
2011	7	58.3%	1	8.3%	3	25.0%	1	8.3%	12
2012	5	50.0%	0	0.0%	3	30.0%	2	20.0%	10
2013	3	30.0%	0	0.0%	6	60.0%	1	10.0%	10
2014	4	44.4%	1	11.1%	4	44.4%	0	0.0%	9
RLR Camera Re-Activated: 1/21/2015 → Camera Active: 1/21/2015 - 2017									
2015	4	40.0%	0	0.0%	4	40.0%	2	20.0%	10
2016	7	50.0%	0	0.0%	4	28.6%	3	21.4%	14
2017	9	47.4%	2	10.5%	7	36.8%	1	5.3%	19
Total	20	46.5%	2	4.6%	15	34.9%	6	13.9%	43
2015-2017 Average	6.7		0.7		5.0		2.0		14.3

- Other indicates the following: Pedestrian, Pedal Cyclist, Fixed Object, Sideswipe, Head-On and Unknown

Table 2

**DISCLAIMER:** The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation, based upon information derived from multiple sources. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s). Additionally, for coding years 2015 to present, the Bureau of Data Collection uses the exact latitude/longitude supplied by the investigating law enforcement agency to locate crashes. Therefore, location data may vary in prior years, since the data prior to 2015 was physically located by bureau personnel. Given the subjective nature of the reporting process, the modifications in the incident locating protocols and the changes to the crash reporting thresholds effective 2009, the City of Markham acknowledges the potential for discrepancies in the final conclusions drawn.



**Crash History and Analysis (continued)**

- Table 3 includes crash data obtained from the Illinois Department of Transportation, detailing angle, turning, rear-end, and other-type crashes occurring at the intersection on the southbound approach only, pre/post RLR Photo Enforcement System installation.

**SOUTHBOUND APPROACH ONLY  
 (PHOTO ENFORCED APPROACH)**

	Crashes								
	Rear-End (% of Total)		Angle (% of Total)		Turning (% of Total)		Other (% of Total)		Total
2005	4	50.0%	0	0.0%	3	37.5%	1	12.5%	8
2006	2	50.0%	0	0.0%	2	50.0%	0	0.0%	4
2007	3	50.0%	1	16.7%	2	33.3%	0	0.0%	6
Total:	9	50.0%	1	5.5%	7	38.9%	1	5.5%	18
2005-2007 Average:	3.0		0.3		2.3		0.3		6.0

RLR Camera Installation: 10/28/2008									
2008	4	57.1%	0	0.0%	2	28.6%	1	14.3%	7
RLR Camera Suspended for Safety Improvement: 8/3/2009									
2009	4	50.0%	1	12.5%	1	12.5%	2	25.0%	8
RLR Camera Inactive: 8/3/2009 – 1/21/2015									
2010	2	22.2%	1	11.1%	5	55.5%	1	11.1%	9
2011	1	50.0%	1	50.0%	0	0.0%	0	0.0%	2
2012	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
2013	1	33.3%	0	0.0%	1	33.3%	1	33.3%	3
2014	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
RLR Camera Re-Activated: 1/21/2015 → Camera Active: 1/21/2015 - 2017									
2015	1	33.3%	0	0.0%	1	33.3%	1	33.3%	3
2016	0	0.0%	0	0.0%	2	66.7%	1	33.3%	3
2017	3	37.5%	2	25.0%	3	37.5%	0	0.0%	8
Total	4	28.6%	2	14.3%	6	42.8%	2	14.3%	14
2015-2017 Average	1.3		0.7		2.0		0.7		4.7

- Other indicates the following: Pedestrian, Pedal Cyclist, Fixed Object, Sideswipe, Head-On and Unknown

Table 3

**DISCLAIMER:** The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation, based upon information derived from multiple sources. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s). Additionally, for coding years 2015 to present, the Bureau of Data Collection uses the exact latitude/longitude supplied by the investigating law enforcement agency to locate crashes. Therefore, location data may vary in prior years, since the data prior to 2015 was physically located by bureau personnel. Given the subjective nature of the reporting process, the modifications in the incident locating protocols and the changes to the crash reporting thresholds effective 2009, the City of Markham acknowledges the potential for discrepancies in the final conclusions drawn.



Comparison of annual averages shows the total number of crashes decreasing by 37.0% at the intersection for all approaches and by 21.7% on the southbound (photo enforced) approach post-safety improvement, for the time period of 2015-2017 as compared to pre-camera installation averages (2005-2007).

The US Department of Transportation Project Development and Design Manual states that turning, angle or head-on crashes have a number of probable crash causes, to include:

- Large volumes of left /right turns
- Large total intersection volume
- Excessive speed on approaches
- Inadequate traffic control devices
- Poor visibility of signals

While red light cameras cannot truly decrease the volume of cars entering the intersection, speed and proximity of vehicles entering an intersection or the amount of turning traffic volume, red light cameras and red-light camera photo enforcement warning signs have the ability to reduce traffic crashes and improve compliance with traffic control devices.

Analysis of all available data indicates the City's RLR Photo Enforcement Program has made a positive impact on safety at the intersection. The City of Markham feels that continued enforcement will be beneficial in the years to come.