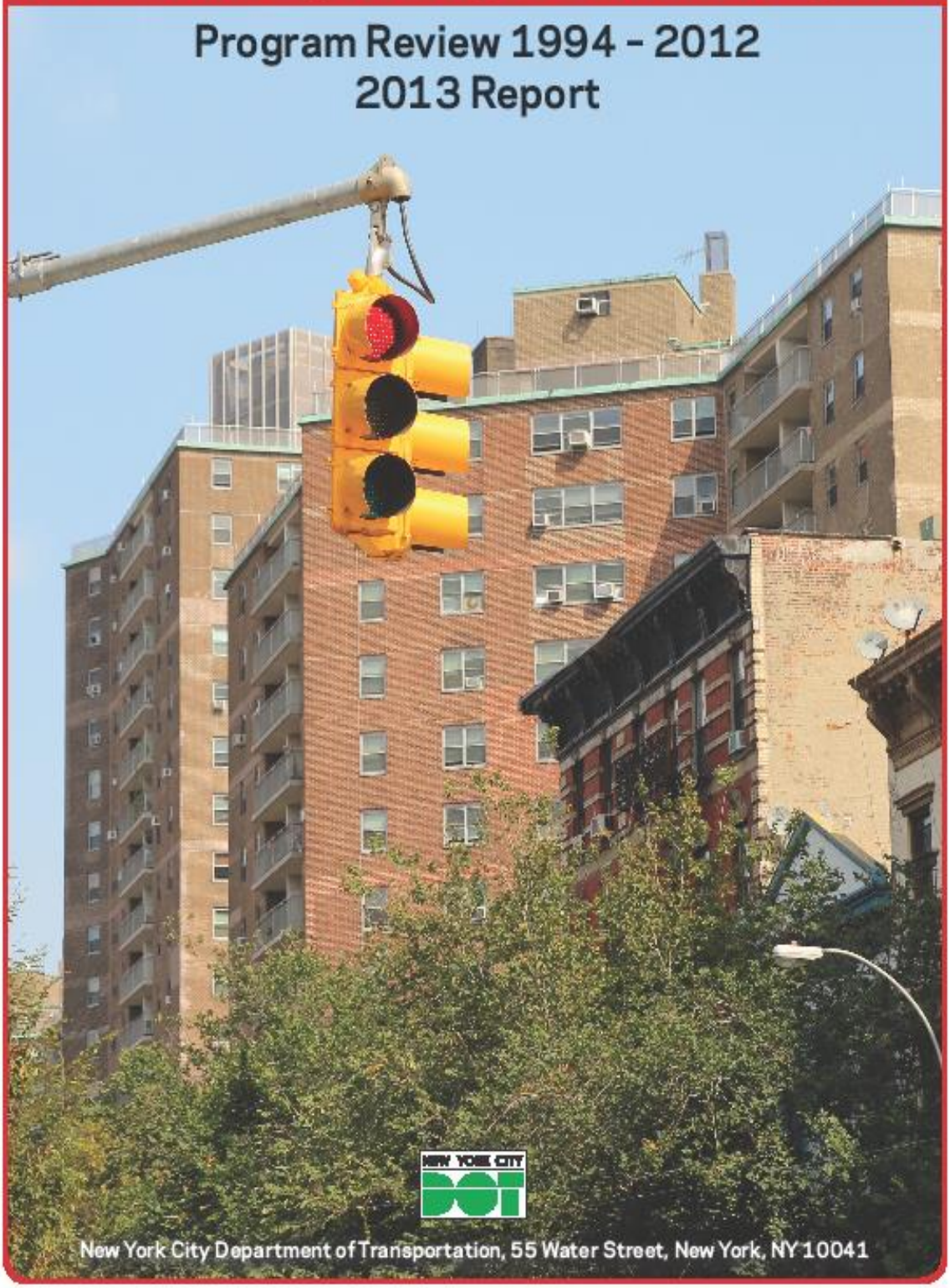
New York City Red Light Camera Program

Program Review 1994 - 2012
2013 Report



New York City Department of Transportation, 55 Water Street, New York, NY 10041

PROGRAM OVERVIEW

In 1988, the New York State Legislature passed a law to allow cities with a population of one million or more to establish a demonstration program to install photo violation-monitoring devices ("red light cameras") to record vehicles going through red light signals at traffic intersections. The State Legislature has since extended the duration of the demonstration program six times, with the current program set to expire in 2014. Legislation in 2009 increased the number of intersections authorized for red light cameras to 150.

Since 1994, New York City's red light camera program has proven to be an enormously effective traffic safety measure that prevents injuries and the loss of life resulting from accidents caused by red light running. Since its inception, over 8 million vehicles have been cited by these traffic-control signal photo violation-monitoring devices for going through red lights. In 2012 alone, 634,088 violations or Notices of Liability ("NOLs") were issued to passenger vehicles, buses, trucks and taxicabs running through red lights. However, the extended use of these devices has dramatically reduced the number of such violations at the intersections being monitored. NOLs have declined by as much as 40% to 60% at intersections where red light cameras have been installed, and the number of violations issued declined by 22% from 2011 to 2012.

The success of red light cameras in enhancing public safety throughout the five boroughs has led to the City's continued interest in additional expansion. While the Program has been very effective in reducing unsafe driving on the City's streets, the current limitation of 150 intersections, which is less than 2% of the City's 12,700 signalized intersections, prevents NYC DOT from implementing a broader—and much needed— application of this important public safety initiative. By further increasing the limit on the total number of red light cameras allowable, the City will be able to install this successful accident reduction tool at many more high accident locations.

HOW THE PROGRAM WORKS

In 2012 there was an average of 186 red light cameras operating 7 days per week, 24 hours per day at 150 intersections in New York City. When a vehicle runs through a red light, sensors embedded in the roadway trigger a digital camera, which is situated approximately fifty to one hundred feet back from the stop-line, to take a sequence of photographs showing the vehicle before the stop-bar and passed the stop-bar, with the traffic signal displaying a red light in each photo. The resulting photo shows the vehicle, the intersection, and the traffic signal all in one frame.

A technician from the program's contractor visits each red light camera on a nightly basis to perform maintenance and retrieve the CD ROM, which is brought to a lab for development and quality control inspection. The CD ROMs are then delivered to a specially trained team of NYC DOT City Review Technicians that review each and every photo and determine if the photos provide adequate evidence to issue an NOL.

Upon identifying a pair of photos clearly depicting a vehicle passing through a red light, a City technician will enlarge the first photo in order to make the license plate clearly legible. An NOL includes three photos: the vehicle before the stop bar when the traffic signal is red, the same vehicle after the stop bar and cross walk while the traffic signal is still red, and the clear and readable enlargement of the vehicle's license plate.

The NOLs are issued to the registered owner of the vehicle. An NOL, the equivalent of a parking ticket, charges the vehicle owner with a fine, but points are not assessed against their driver's license. The current red light camera fine is $50 with a $25 late fee.

PROGRAM STATISTICS 1994–2012

The table on the following page represents data collected during the program's nineteen year history. The number of violations (Notices of Liabilities, or NOLs) issued annually is down from 2011 to 2012, and a strong downward trend can be seen in the number of violations issued per camera per day over the life of the program. This data indicates that the Program has enhanced public safety by serving as an effective deterrent to red light running.

The overall increase in the Number of Events captured and NOLs issued evident in the raw data in 1998 and in 2001 are as a result of the Program's expansion from 18 to 30 cameras and from 30 to 50 cameras in those respective years. In addition, the advent of digital technology in 2001, along with having a total of 50 cameras for entire calendar years also added to the subsequent increase in the Number of Events captured and NOLs issued. Similar results were found in 2006 and 2007 when the program was expanded from 50 to 100 locations, and additional locations were equipped for red light cameras. In 2011, the Program was expanded to incorporate 190 cameras at 150 intersections.

These statistics evidence an increasing reluctance by motorists to risk running a red light and is a further testament to the success of the Program as a means of changing motorist behavior in order to enhance overall safety.

PROGRAM STATISTICS FOR 1994–2012

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Active Cameras	15	18	18	18	30*	30	30	50*	50	50	50	50	100*	100	100	121*	169*	188*	186*
# Events Captured	438,622	381,601	319,720	258,424	417,747	391,693	414,030	453,005	492,678	444,529	455,048	409,489	554,846	1,248,896	1,094,847	1,057,463	1,455,540	1,167,969	908,801
# NOLs Issued	168,479	146,812	140,751	119,397	215,242	198,324	207,260	226,642	338,572	292,614	325,024	306,117	384,993	947,341	791,734	745,241	1,053,268	821,483	634,088
% Change in Events	NA	-13.00	-16.22	-19.17	61.65	-6.24	5.70	9.41	8.76	-9.77	2.37	-10.01	35.50	125.09	-12.33	-3.41	37.64	-19.76	-22.10
Events / Camera / Day	80.11	58.08	48.53	39.33	47.69	35.77	37.71	42.50	27.07	24.42	24.93	22.58	29.41	34.53	29.91	23.91	23.62	17.49	13.37
NOLs / Camera / Day	30.80	22.30	21.40	19.20	19.70	18.10	18.90	21.30	18.59	16.08	17.81	16.82	20.41	26.19	21.63	16.85	17.08	12.30	9.33
# Appealed	8,103	7,908	7,748	5,968	7,799	7,832	6,967	6,898	9,506	11,323	8,739	8,690	8,376	20,813	22,990	17,824	25,414	27,376	11,266
% Guilty	86%	87%	89%	89%	88%	85%	84%	84%	84%	85%	85%	86%	88%	92%	92%	92%	96%	94%	94%

*Represents the average number of cameras active per day. In 1998, 2001, 2006, and 2009 through 2012, the number of active cameras increased throughout the year.

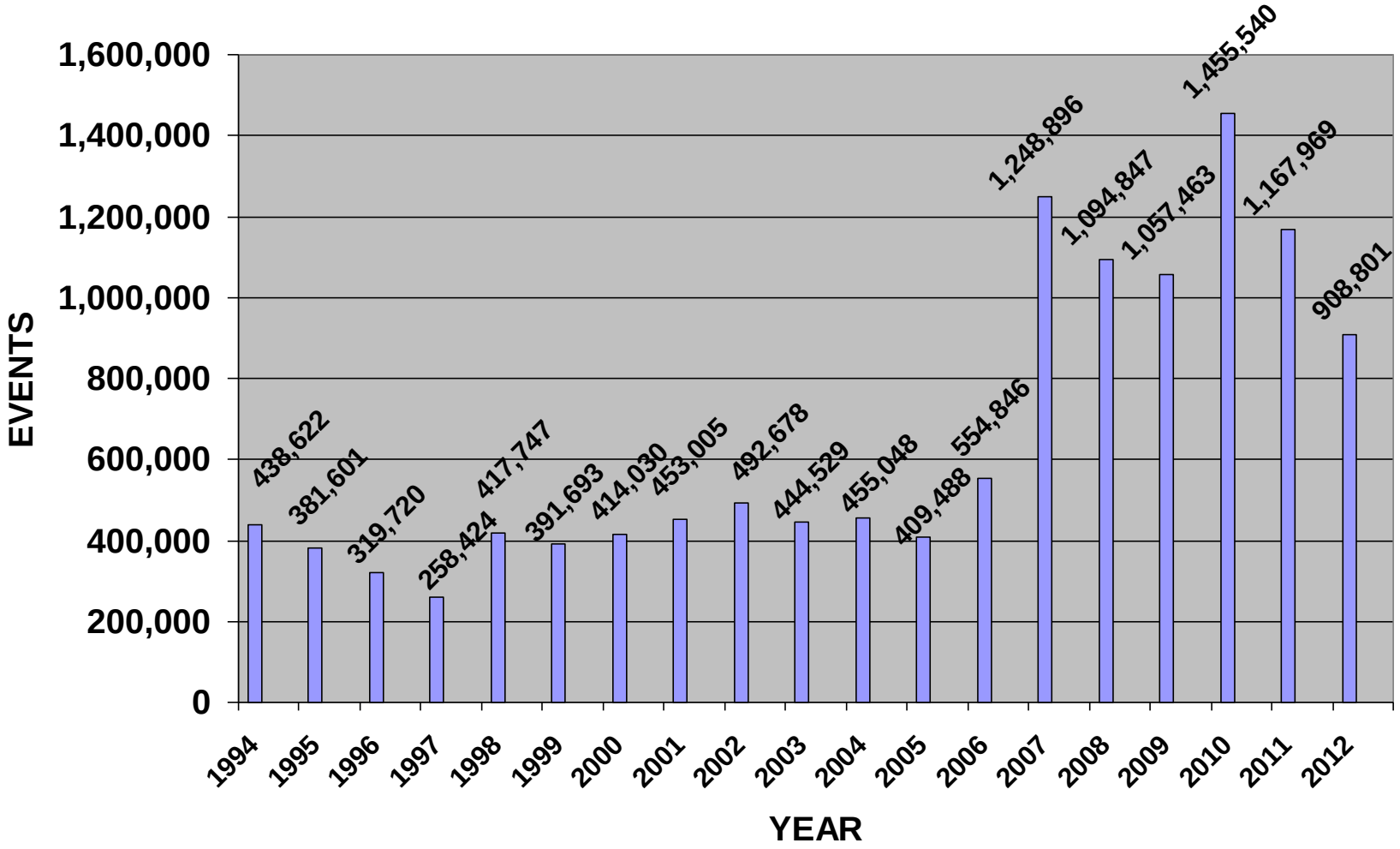
NUMBER OF EVENTS

Events are the true measure of the worth of the Program as it relates to public safety. The purpose of the Program is to reduce the number of possible occurrences for accidents to happen. Therefore, as the Number of Events go down, the Program is achieving its goal, that is reducing accidents and saving lives.

The following graph shows the Number of Events per Year since the Program's inception. The spike in 1998 represents the addition of 12 more cameras (to 30) into the Program, and again in 2001 when the number was increased to 50 cameras, the maximum number allowed by law at the time, and again in 2002 the first full year of the 50 camera increase. Also, contributing to the spikes in 2001 and 2002 was the introduction of digital cameras.

In 2012 the Number of Events decreased in comparison to the previous year. This illustrates the effectiveness of red light cameras in reducing red light running.

EVENTS PER YEAR

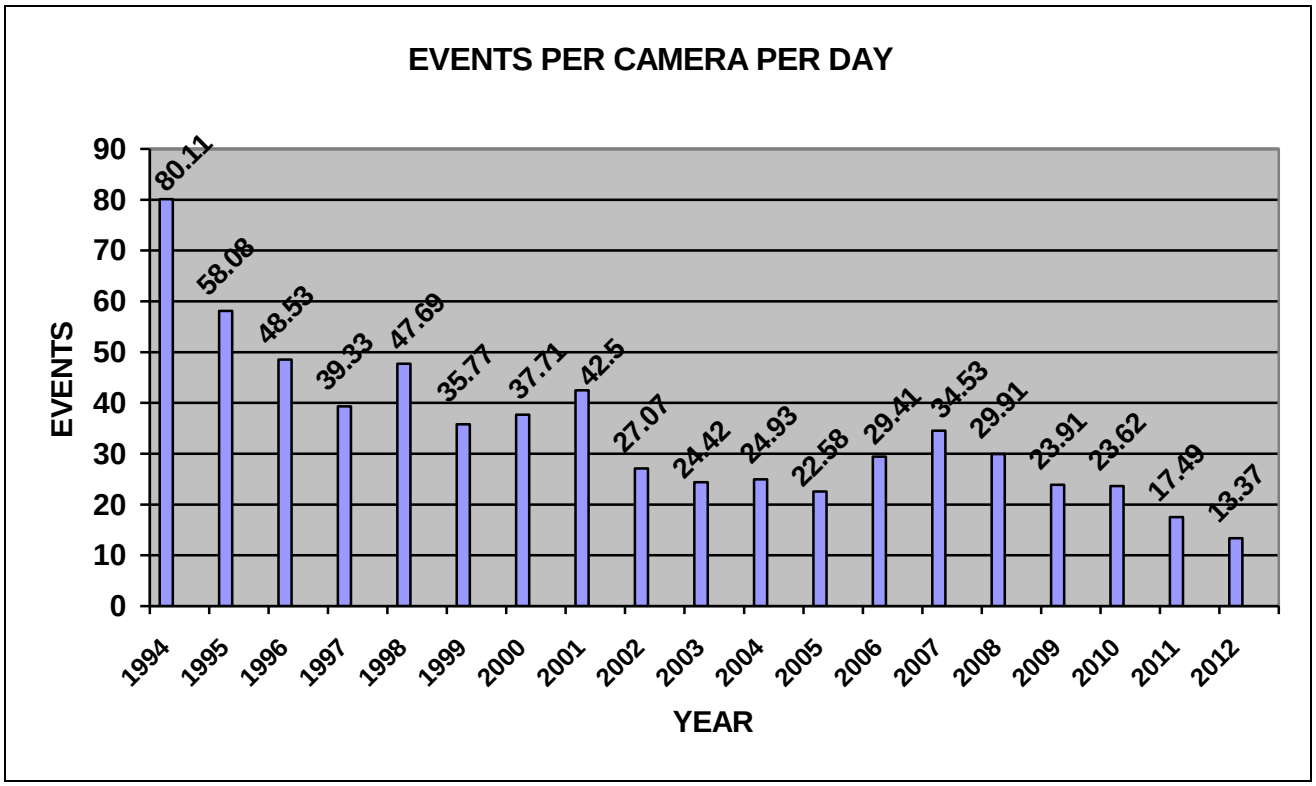


In 2011 the Program was expanded to 190 cameras at 150 intersections

NUMBER OF EVENTS PER CAMERA PER DAY

The graph below depicts the Number of Events per Camera per Day.

In 2012, the Number of Events per Camera per Day decreased from 17.49 to 13.37.

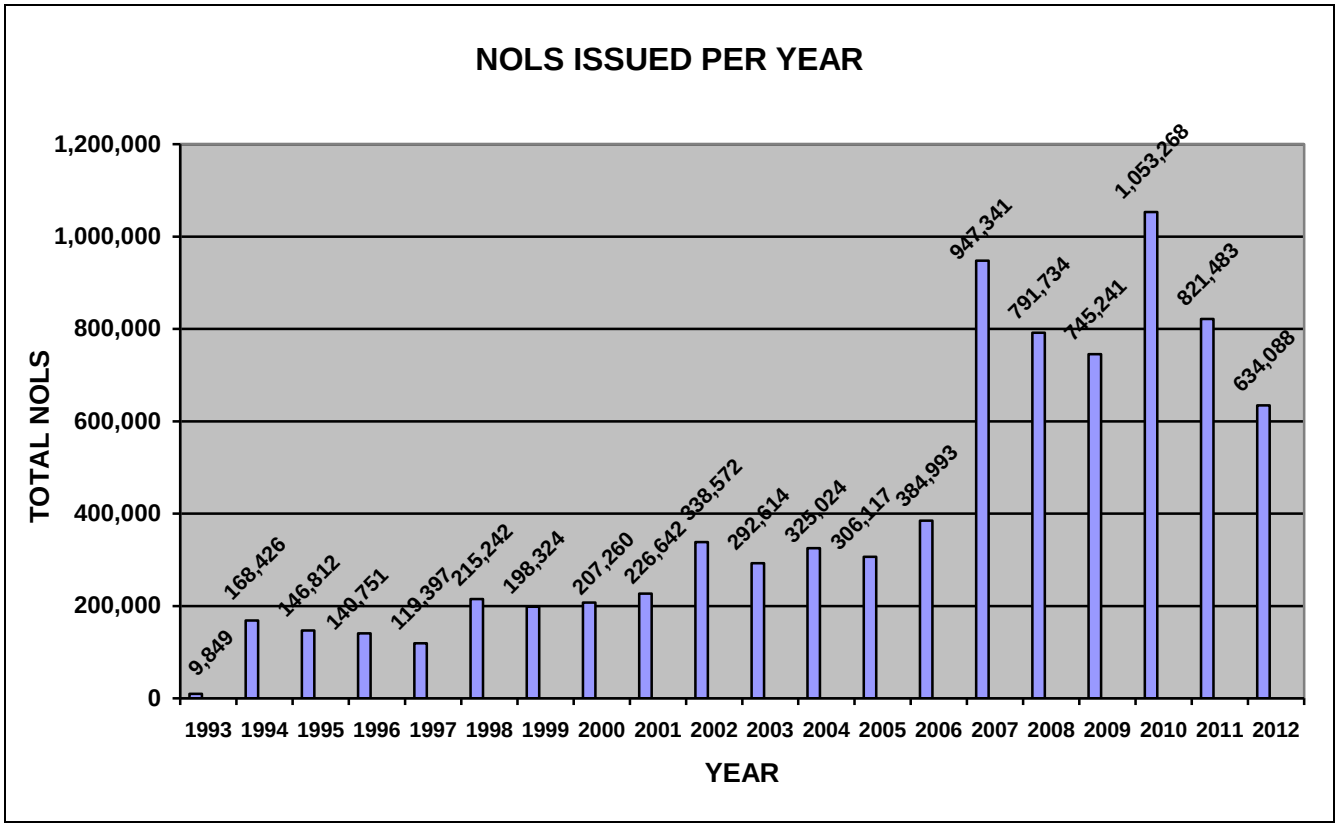


NUMBER OF NOTICES OF LIABILITY ISSUED PER YEAR

The Program has proven to be an effective traffic safety measure by preventing injuries and the loss of life due to accidents caused by red light running.

The graph below represents the total Number of NOLs Issued per Year during the Program's eighteen year history.

In 2012, the number of NOLs per year decreased from 821,483 to 634,088. This was an expected result and continues to demonstrate the effectiveness of the program in reducing red light running.



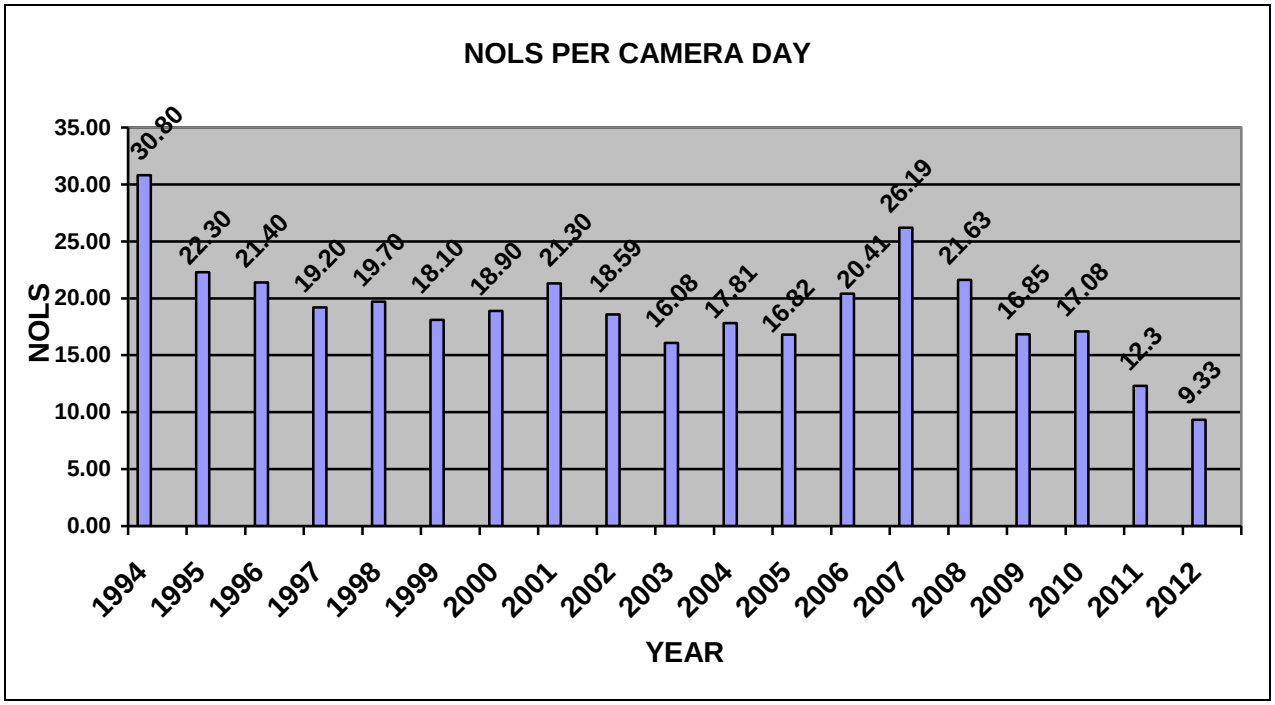
NUMBER OF NOTICES OF LIABILITY ISSUED PER CAMERA PER DAY

As with the data representing the yearly change in the Number of Events over the course of the Program, the true value of the Program as a means of changing motorist behavior in order to enhance overall safety is best illustrated by showing an average breakdown of NOLs Issued per Camera per Day.

Unlike the previous chart showing a raw increase in the number of NOLs issued over the course of the Program, the chart below indicates a very strong downward trend when the number of NOLs is averaged by the number of red light cameras in operation. When taking into consideration the years that additional cameras were introduced into the Program (1998, 2001 and 2006) the data shows an overall decrease in the Number of NOLs per Camera.

Moreover, this decease would have been even more dramatic had the improved accuracy due to the introduction of digital technology not been introduced in 2001. This data suggests an increasing reluctance by motorists to risk running a red light and is further testament to the success of the Program.

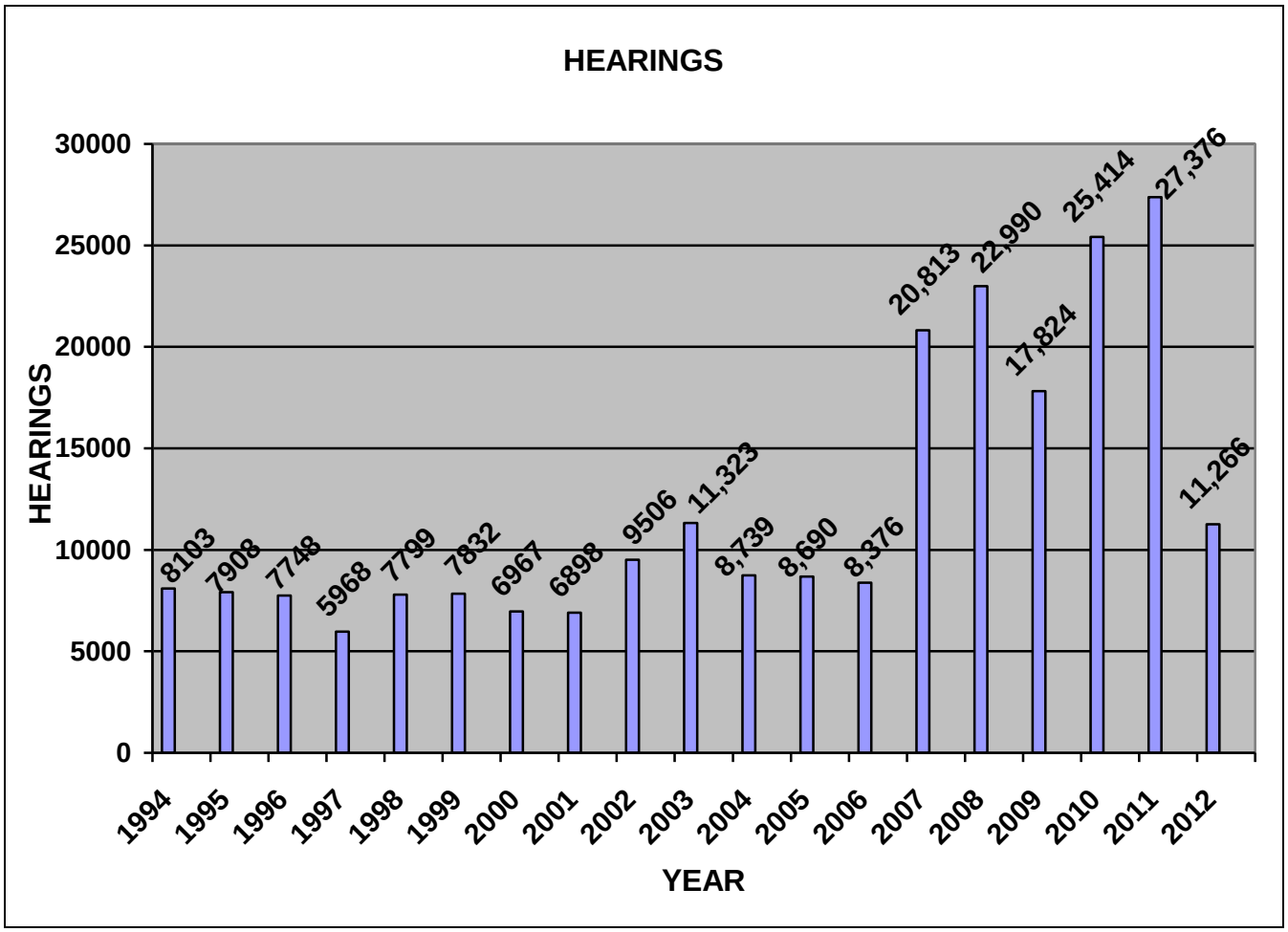
In 2012, the Number of NOLs per Camera per Day decreased in comparison to the previous year. This was an expected result and consistent with previous years.



ADJUDICATION

The graphs below and on the following page further attest to the quality of the Program. An individual who receives an NOL has the right to appeal the violation. Over the first four years, approximately 5% of those individuals receiving an NOL requested a hearing to contest the violation. Over the next five years this number dropped to approximately 3%. While the number of requested hearings increased during the three year period from 2001 to 2003, the percentage of those receiving an NOL remained consistent during this period at 3%.

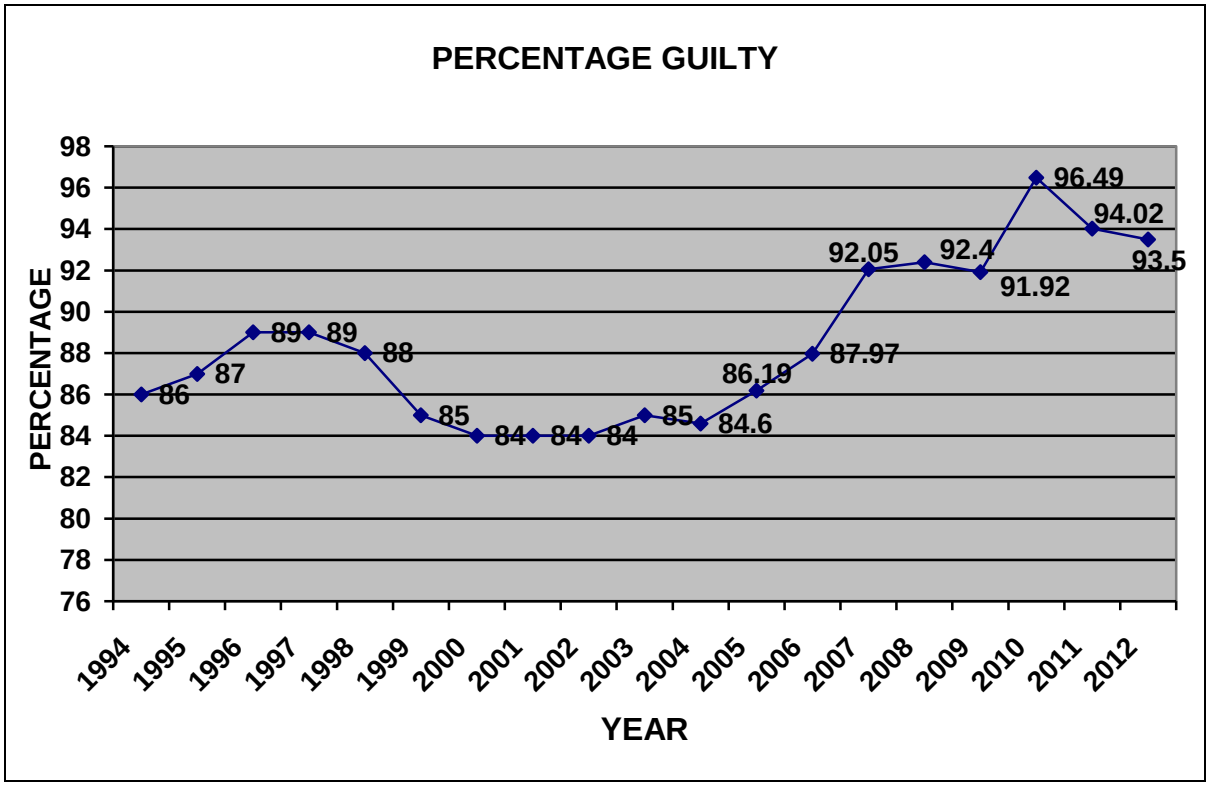
NYCDOF employs Administrative Law Judges to review cases, either by mail (individual mails in letter contesting the ticket) or in person at a Hearing Center. The evidence is usually overwhelming and a guilty verdict is typically upheld.



ADJUDICATION

The graph below shows the percentage of individuals who received red light camera NOLs and were found guilty. In 2012, only 1.7% of the individuals who received an NOL requested a hearing. Of this percentage, 94% were found not to have any substantive evidence to overturn the issuance of the NOL they received. In other words, only 6% of the 1.7% who had asked for a hearing had legitimate pleas that resulted in the dismissal of the NOL.

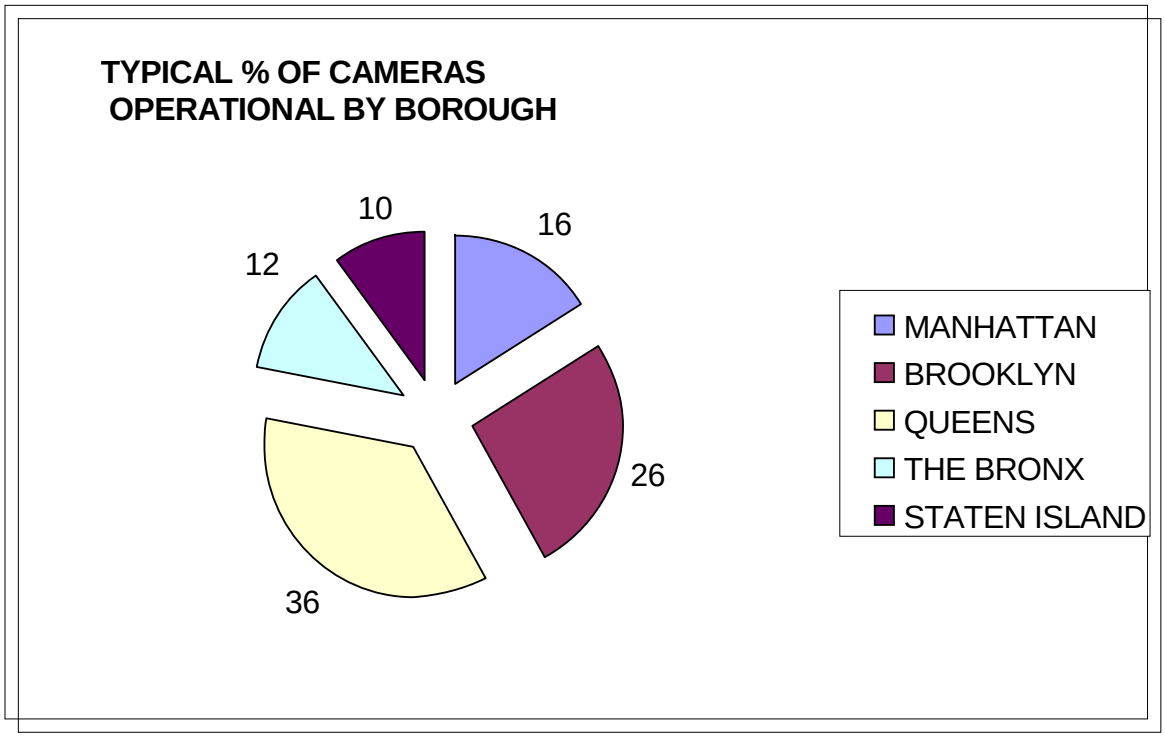
These statistics attest to the quality and integrity of the Program. Both the number of hearings and the low percentage of NOLs successfully appealed contribute to a change in driver behavior -- red light runners are on notice that they will be caught in the act, will be fined and will have difficulty getting their NOL dismissed.



CAMERA LOCATIONS PER BOROUGH

Since its inception, the Program has grown to include 190 cameras located at 150 key intersections throughout the City's five boroughs. Locations are selected based upon a review of several factors including; accident history of the intersection, engineering judgment and community and elected official requests.

The chart below depicts the number of red light cameras operational today by borough. The City has over 200 locations instrumented for cameras, with only 190 cameras operational at only 150 intersections at any one time. The actual break down by borough varies by day and is dependent on maintenance, construction in the area and other concerns. In addition, as a further deterrent, 200 dummy cameras (non-functional shells) have also been installed throughout the City's five boroughs.



ACCIDENT DATA

The following tables show the before and after accident data, disaggregated by injury type and severity, for the camera equipped approaches for the 52 intersections installed between 2010-2011.

Summary Findings:

After the installation of the 52 cameras, there has been a:
1) 20 % decrease in all injuries.
2) 31% decrease in pedestrian injuries
3) 64 % decrease in bicyclist injuries
4) 19 % decrease in motorist injuries
5) 25% decrease in Type A and Type B injuries
6) 17% decrease in Type C injuries.

All Injuries:

BOROUGH	#OF CAMERAS	BEFORE INST. DATE INJURY	AFTER INST. DATE INJURY	CHANGE
BRONX	8	37	24	-13
KINGS	17	124	99	-25
MANHATTAN	5	12	9	-3
QUEENS	13	11	11	0
RICHMOND	9	5	9	4
TOTAL	52	189	152	-37

Pedestrian Injuries:

BOROUGH	#OF CAMERAS	BEFORE INST. DATE PED INJURY	AFTER INST. DATE PED INJURY	CHANGE
BRONX	8	4	5	1
KINGS	17	8	3	-5
MANHATTAN	5	2	1	-1
QUEENS	13	2	2	0
RICHMOND	9	0	0	0
TOTAL	52	16	11	-5

Bicyclist Injuries:

BOROUGH	BEFORE INST. DATE BIKE INJURY	AFTER INST. DATE BIKE INJURY	CHANGE
BRONX	0	0	0
KINGS	8	3	-5
MANHATTAN	1	1	0
QUEENS	2	0	-2
RICHMOND	0	0	0
TOTAL	11	4	-7

Motorist Injuries

BOROUGH	BEFORE INST. DATE MOTORIST INJURY	AFTER INST. DATE MOTORIST INJURY	CHANGE
BRONX	33	19	-14
KINGS	110	93	-17
MANHATTAN	9	7	-2
QUEENS	9	6	-3
RICHMOND	5	9	4
TOTAL	166	134	-32

Injury Severity:

BOROUGH	BEFORE INST. DATE TYPE A & TYPE B	AFTER INST. DATE TYPE A & TYPE B	CHANGE	BEFORE INST. DATE TYPE C	AFTER INST. DATE TYPE C	CHANGE
BRONX	1	4	3	36	20	-16
KINGS	12	7	-5	113	96	-17
MANHATTAN	5	3	-2	7	6	-1
QUEENS	5	4	-1	6	7	1
RICHMOND	1	0	-1	4	9	5
TOTAL	24	18	-6	166	138	-28

Definition of injury Types:

"A" Severe injuries include skull fractures, internal injuries, broken or distorted limbs, unconsciousness, severe lacerations,
and unable to leave the scene without assistance.

"B" Moderate injuries include visible injuries such as a "lump" on the head, abrasions, and minor lacerations.

"C" Slight injuries include hysteria, nausea, momentary unconsciousness, and complaint of pain without visible signs of injury.

REVENUE AND EXPENSES

Red Light Camera Program Since Inception
(December 1993 – June 2012)

Contracts	December 1993 to June 2012	$ 150,242,164
Capital Costs	Inception to June 2012	$ 18,421,659
DOT Staffing	December 1993 to June 2012	$ 19,961,996
DOF Staffing	July 1996 to June 2012	$ 6,328,814
		$ 26,290,810
Total Expenses	Inception to June 2012	$ 194,954,633
Revenues	Inception to June 2012	$ 390,088,011
Net Revenues	Inception to June 2012	$ 195,133,378