New York City Automated Speed Enforcement Program

2024 Report

NEW YORK CITY DOT

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Ydanis Rodriguez
Commissioner

Letter from the Commissioner

One life lost to traffic violence is one too many, and that it is why my top priority as commissioner of the New York City Department of Transportation (NYC DOT) is to prevent traffic deaths. At NYC DOT, we are using every tool in our toolbox to achieve this goal, and speed cameras have proven to be a highly effective tool to manage the one factor that plays a role in the most traffic deaths—a driver's excessive speed.

In my travels and discussions with fellow transportation officials, I have learned that New York City's speed camera program is the envy of most American cities, where pedestrian fatalities have in recent years surged to four-decade highs. On the other hand, here in New York City, with hard and clear evidence that speeding in our camera zones fell by an average of 94 percent, we have been at or near record-low pedestrian deaths.

Speed cameras have been a big part of that progress. The effectiveness of these cameras has in fact helped us build a more general case for automated enforcement, a fair way to enforce traffic laws that frees law enforcement to fight other crime. In 2022, with mounting evidence that crashes were surging during overnight hours, a strong push by advocates and Mayor Eric Adams moved the state to allow us to turn on all those cameras 24/7. During our first-year of 24/7 enforcement, speeding, injuries, and fatalities all showed declines in camera-protected areas. Last year, the New York State legislature, again at the behest of Mayor Adams, allowed New York City to quadruple the reach of our red-light cameras, which this year will come to 600 intersections citywide from the prior 150.

This official report from the NYC DOT, mandated by our colleagues in the legislature, tells the story of the speed-camera program. Over more than a decade, the program has steadily grown, even as it has faced challenges. In 2019, our leaders in Albany saw fit to instead expand the program to its current size: we now operate over 2,200 cameras in 750 school speed zones city-wide—by far the largest in the nation.

I would like to offer thanks to the amazing NYC DOT staff who have made the impressive results in this report possible, including from our Policy, Intergovernmental, and Transportation Planning & Management units. But a special thanks must go to Deputy

Commissioner Joshua Benson and his team in Traffic Operations, who manage all the agency's automated enforcement systems, including speed cameras. The addition of these cameras to our streets marked a big cultural change and was not easy. (The important things never are!) This team has consistently shown how a program managed fairly and responsibly can become very popular among usually-skeptical New Yorkers —who now know how much safer their streets are with these cameras.

We look forward to continuing to work with our Albany partners this year as the speed-camera program faces reauthorization. Together, we can keep up those positive results for years to come.

Ydanis Rodriguez

Executive Summary

Speeding continues to be one of the most dangerous driving behaviors, accounting for about a quarter of New York City's traffic fatalities each year. From 2021 to 2023, more than 200 people were killed in crashes in New York City where speeding was a major factor. In 2013, the New York State Legislature decided to target this problem by enacting Section 1180-b of New York State's Vehicle and Traffic Law (VTL), which granted New York City the authority to pilot an automated speed enforcement program to deter speeding in 20 school speed zones. The first speed camera violation was issued in January 2014. Six months later, the pilot was expanded to a total of 140 school speed zones in support of the City's Vision Zero goal of eliminating traffic deaths and serious injuries.

In 2019, the New York City Department of Transportation (NYC DOT) was given state authorization to expand this program to 750 school speed zones, with speed camera enforcement limited to weekdays between 6 AM and 10 PM. The legislation allowed cameras to be placed at any location within a quarter-mile radius of a school building. This change also codified into law NYC DOT's practice of using data to inform the siting of cameras, so that the program can most effectively deter dangerous speeding and prevent injury and death. NYC DOT completed installation of at least one camera in all 750 zones by June 2020 and, as of 2023, there were over 2,200 cameras operational in New York City.

In the summer of 2022, in response to an increase in speeding and fatalities brought on by the COVID-19 pandemic, particularly in the overnight hours, New York State granted authorization for speed camera violations to be issued 24 hours a day, seven days a week at all camera locations. This expansion has brought critical safety benefits for New Yorkers whenever they are out and about in the city, including decreases in speeding and injuries from speed-related crashes.

Overall, the speed camera program has proven effective and efficient in its goal of reducing both dangerous speeding and its consequences. Drivers have shown that they quickly change behavior after one or two violations. Since the start of the program, speeding at camera locations has dropped on average by 94 percent, meaning that cameras now issue 94 percent fewer violations per day.

This report is submitted to satisfy the reporting requirements of VTL section 1180-b, as well as to demonstrate the benefits of the program and to propose ideas to further enhance its effectiveness. This report will discuss the role that speeding plays in traffic crashes and injuries, the tools employed by NYC DOT to reduce speeding across the City, the history of the speed camera program, and the key findings for 2023, which include:

- Daily violations at speed camera locations have decreased 94 percent since the start of the program in 2014.
- 74 percent of vehicles that receive violations receive no more than one or two per year.
- Locations with cameras installed in 2022 showed 14 percent fewer injuries and fatalities between 2021 and 2023 compared to control corridors without cameras.
- Violations in the overnight and weekend hours decreased 40 percent in the two years since August 2022 when these expanded hours first went into effect.
- Following the expansion to overnight and weekend enforcement, locations with speed cameras saw 9 percent fewer injuries compared to control locations without cameras during the overnight and weekend hours.

New York City Automated Speed Enforcement Program Review

Background

In 2013, the New York State Legislature passed Vehicle and Traffic Law (VTL) section 1180-b granting New York City the authority to pilot an automated speed enforcement program to deter speeding. This new program allowed for speed enforcement cameras to be placed in 20 school speed zones—within 1,320 feet along the road with a school's entrance or exit—for an hour before, after, and during school, or a half hour before, after, and during school activities. In June 2014, the pilot authorization was expanded to a total of 140 school speed zones, an expansion the City pushed for as part of its Vision Zero program.

Several years after this initial successful deployment, state law was amended in 2019 to expand both the number of school speed zones and the program's hours, authorizing NYC DOT to deploy speed cameras in 750 school speed zones on weekdays between 6 AM and 10 PM. The definition of a school speed zone was expanded as well to allow cameras to be located on any street within a quarter-mile radius of a school, which allows NYC DOT the discretion to place the devices where they are most needed. NYC DOT installed at least one camera in each of the 750 zones by June 2020 and placed more than 2,200 cameras citywide by the end of 2023. In June 2022, the State Legislature further amended VTL section 1180-b to permit NYC DOT to operate the cameras 24 hours a day, seven days a week. These new hours went into effect on August 1, 2022.

Because speed cameras do not photograph the driver of a vehicle, each violation, or Notice of Liability (NOL), is sent to the registered owner of the vehicle requiring them to pay a $50 fine. Owners are then given an opportunity to contest these NOLs through a hearing with the New York City Department of Finance (DOF). This report is submitted to satisfy the reporting requirements of VTL section 1180-b. In accordance with this section of law, NYC DOT must report on the locations, dates, and NOLs issued for each camera, a comparison of crashes between school speed zones with cameras and school speed zones without cameras, the number of school speed zone w violations adjudicated and the results, and the cost of the program and revenue generated.

Speeding is a Leading Cause of Serious Crashes

Excessive speed is the leading cause of fatal crashes in New York City. The faster a vehicle is traveling, the more time and space a driver needs to react in order to prevent a crash. A driver at 40 miles per hour (MPH) needs 165 feet to perceive, react, and brake in the face of an unexpected event—twice as far as a driver at 25 MPH, who only needs 85 feet.[1] Not only does speeding make it more difficult to avoid a crash, but it also increases the damage caused upon impact when a collision happens. Even a small difference in vehicle speed makes a big impact in terms of safety—a pedestrian who is struck by a vehicle traveling at 30 MPH is twice as likely to be killed as a pedestrian struck by a vehicle traveling at 25 MPH.[2]

The Insurance Institute for Highway Safety found that in 2021, 29 percent of traffic fatalities in the United States occurred in speeding related crashes.[3] That amounted to 12,151 lives lost due to speeding nationwide. In New York City, 209 people lost their lives in speeding related crashes between 2021 and 2023.

When New York City initiated its Vision Zero street safety program in 2014, controlling speed was a primary focus of its efforts. The City uses a variety of approaches aside from speed cameras, including increased installation of speed reducers, focused NYPD enforcement, signal retiming, reduced speed limits, and street redesigns to combat speeding. Unfortunately, despite early progress, a post-2020 spike in reckless driving has once again increased concerns over the prevalence of dangerous speeding. In fact, speeding related fatalities doubled from 78 deaths in 2018-2019 to 148 deaths in 2020–2021. Speeding often goes hand in hand with other reckless driving behaviors. For example, motorists who are speeding are much more likely to run red lights because vehicles traveling faster need more time and take a longer distance to come to a complete stop and the yellow phase of a light is designed to give drivers who are traveling at the speed limit adequate time to stop.

1. https://nacto.org/docs/usdg/vehicle_stopping_distance_and_time_upenn.pdf
2. https://aaafoundation.org/wp-content/uploads/2018/02/2011PedestrianRiskVsSpeedReport.pdf
3. https://www.iihs.org/topics/speed#:~:text=Dangers%20of%20speed&text=It%20increases%20the%20distance%20a,result%20in%20loss%20of%20control.

New York City's Speeding Solutions Toolkit

The City uses a variety of methods in addition to automated enforcement to encourage people to drive at safe speeds. DOT and NYPD frequently assess the speeding conditions in neighborhoods across the city and identify the appropriate solutions for each area.

Speed Limits

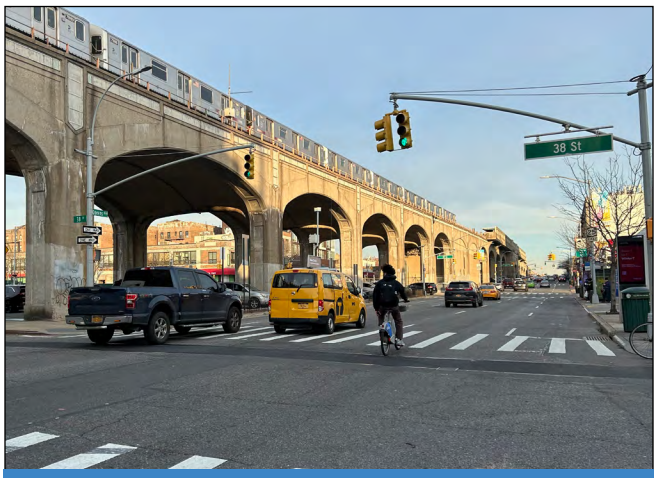
Speed limits are designed to promote road safety by setting an appropriate upper speed limit based on the street's design, vehicle volume, and pedestrian density. On November 7, 2014, New York City reduced the citywide default speed limit from 30 MPH to 25 MPH, and has since installed over 8,400 speed limit signs, each with a note alerting motorists to the use of Photo Enforcement. Nearly ten years later, on May 9, 2024, Governor Kathy Hochul signed "Sammy's Law" allowing the City to further reduce speed limits to 20 MPH on individual streets with signs and to 10 MPH on streets with additional traffic calming measures. Named for 12-year-old Sammy Cohen Eckstein, who was fatally struck by a van in October 2012 while retrieving a ball from Prospect Park West, Sammy's Law will allow the City to focus on areas where speeding continues to create the greatest threat to safety. In June 2024, the NYC DOT announced the first 60 locations that would receive this treatment, including areas around schools, high-crash corridors, and new regional slow zones, with one in each borough. The first of these slow zones will be Lower Manhattan below Canal Street, which encompasses the entire Financial District and is characterized by narrow, irregular streets left over from the city's original settlement in 1624.

NYPD Enforcement

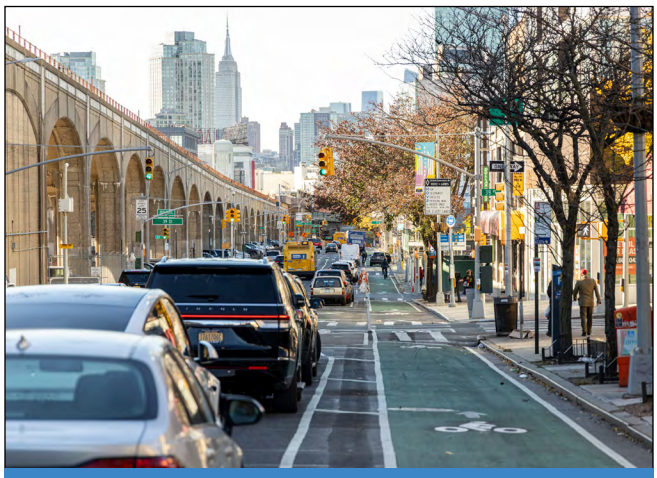
The officers of the NYPD also enforce the speed limit to deter dangerous driving. In contrast to speed camera notices of liability, traditional speeding summonses carry significant financial penalties, along with points on the driver's license and consequences for the driver's insurance. From 2019, the number of NYPD speeding summonses issued fell by 39 percent and has not yet recovered. To maximize the effectiveness of its enforcement resources, in the year 2024, NYPD focused on high visibility enforcement efforts on ten priority corridors with the highest numbers of serious injury and fatal crashes. NYPD increased the number of Vision Zero-related summonses issued, including speeding, by 100 percent (55,597 vs. 27,781) on these corridors, leading to a 12 percent (3,650 vs. 4,148) reduction in total collisions, 17.5 percent (2,336 vs. 2,832) reduction in total injuries and a 45 percent (11 vs. 20) reduction in fatal collisions along these corridors for the year 2024.

Speed Humps and Cushions

Speed humps are a raised area of a roadway, typically four inches high, which compel drivers to travel at speeds of 10-15 MPH. They have a lasting impact on vehicle speeds, as drivers are forced to slow down every time they cross over a speed hump. On bus routes, truck routes, and key emergency corridors where a traditional speed hump is unsuitable, a speed cushion may be used instead. These raised rounded or flat-topped sections of roadway have cutouts spaced for large vehicle tires but still require passenger vehicles to slow down. From 2014 through 2023, NYC DOT has installed nearly 3,000 standard speed humps. Speed cushion installations became part of NYC DOT's toolkit in 2018 and by the end of 2023, the agency had built 84.



Before:
Queens Boulevard and 38th Street



After:
Queens Boulevard and 38th Street

Street Improvement Projects

Street redesign strategies that reduce speeding include removing excess width from existing traffic lanes or converting a lane to use for pedestrians or cyclists. As a result, drivers naturally slow down to make sure they are able to comfortably navigate the narrower roadway. This traffic calming is a context-dependent approach to reducing excessive speeding. The City has completed more than 1,000 total safety engineering projects since the start of Vision Zero. The majority of these projects have taken place at Vision Zero Priority Locations — the intersections, corridors, and areas with disproportionately high pedestrian deaths and severe injuries.

Public Education

NYC DOT uses market research to guide its public education campaigns aimed at stopping dangerous driving behaviors. Advertisements on television, social media, radio, billboards, bus stops, taxis, and elsewhere alert aggressive drivers of the consequences of their behavior. In 2022, NYC DOT launched a large-scale public education campaign specifically targeting the increase in speeding seen following the onset of the COVID-19 pandemic. This new campaign, called Speeding Ruins Lives, has proven particularly effective for drivers who had been previously unfamiliar with Vision Zero efforts. After viewing this campaign, 81 percent of all drivers thought the ads encouraged them to be more responsible behind the wheel, 82 percent said they would give more thought to the speed at which they approached crosswalks and intersections, and 84 percent said they would pay more attention to pedestrians and cyclists while driving.

Since 2022, NYC DOT has also placed a greater emphasis on placing safety messaging in ethnic media and focusing market research on a broader and more diverse group of New Yorkers. To reach diverse communities across the five boroughs, ads are translated into 11 languages and more than 50 percent of ad purchases go to ethnic and community media. Several times a year, NYC DOT hosts an Ethnic and Community Roundtable for media vendors and transportation reporters to discuss the agency's campaigns and commitment to enhancing street safety. The roundtable also addresses the important role that ad placement plays

Community Outreach

NYC DOT's Vision Zero Street Teams engage directly with drivers and other street users and work in partnership with NYPD officers, with a focus on the most crash-prone corridors of New York City. In recent years, these included Northern Boulevard and Roosevelt and Atlantic Avenues in Queens, Grand Concourse and Jerome Avenue in the Bronx, portions of Lower First Avenue and Upper Broadway in Manhattan, Hylan Boulevard in Staten Island, and Flatbush, Atlantic, and Fourth Avenue in Brooklyn. Street Teams hand out palmcards focused on safety tips unique to each corridor while NYPD officers focus enforcement on dangerous driving behaviors including speeding.

New York City's Speed Camera Program

NYC's speed camera program uses the same radar and laser technology relied upon by law enforcement to measure a vehicle's speed. If the system's radar finds that the vehicle is exceeding the speed limit by more than ten miles per hour, images of the vehicle are recorded, including the license plate. The violation is reviewed by a trained NYC DOT staff technician for accuracy. If the technician verifies that the identified vehicle was exceeding the speed limit by more than ten miles per hour within a school speed zone, the technician will issue a Notice of Liability (NOL) to the registered owner of the vehicle. Cameras do not capture an image of the individual driving the vehicle. The violation is the responsibility of the owner regardless of who was behind the wheel.

The fine associated with a speed camera violation is $50 regardless of the speed by which the vehicle was exceeding the speed limit or whether it was a repeat offense. This fine is far less than the cost of a summons issued by a police officer for speeding, which could range on the first offense from $90-$600, depending on the motorist's speed above the limit, plus an $88 State surcharge. It will also come with between 4 and 11 points on a driver's license

Ensuring Equity in Automated Enforcement

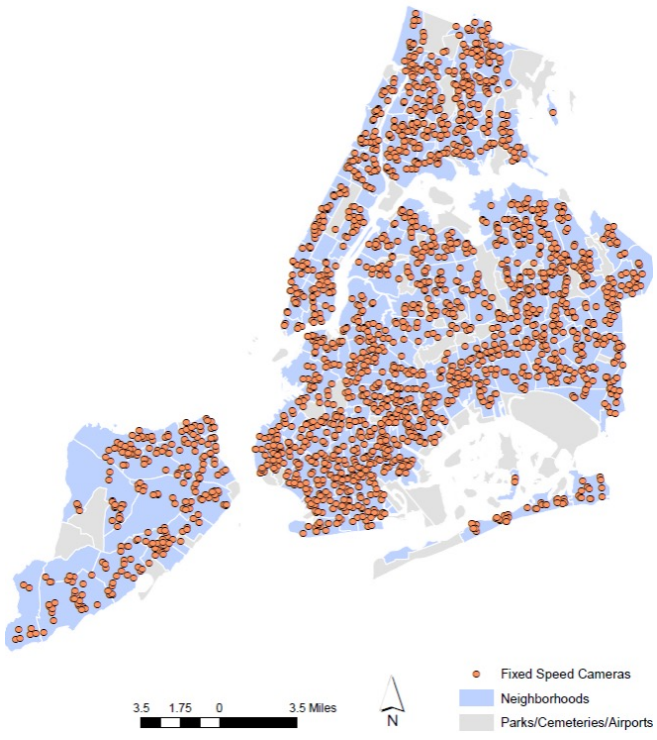
A key aspect of New York City's automated enforcement program is NYC DOT's focus on creating a program that is both effective and equitable. By design, speed cameras enforce against all vehicles that exceed the speed limit. Because speed cameras do not capture images of the person behind the wheel, there is no potential for biased enforcement against drivers based on their race, gender, or other characteristics. However, it is still critical that such programs be designed to avoid placing a disproportionate burden on our most vulnerable communities. It is equally critical that these communities receive the benefits of reduced speeding. NYC DOT examines each element of our program to ensure that it is designed with equity in mind.

When drivers believe that there could be a speed camera anywhere, they are discouraged from speeding everywhere.

Camera Locations

By law, speed cameras must be placed in locations where speed data and crash history show they will have the greatest safety impact. More importantly, the more than 2,200 speed cameras are widely dispersed across every neighborhood in every borough. This distribution allows us to achieve a widespread deterrent effect, generally lowering speeds across the whole city. When drivers believe that there could be a speed camera anywhere, they are discouraged from speeding everywhere. By spreading the cameras across the city, we also ensure that no neighborhood is being disproportionately impacted by fines while also ensuring that this life-saving tool is benefiting the communities that need it most.

Map of Fixed Speed Cameras in New York City



Violation Verification

Every camera violation is reviewed by a trained NYC DOT technician for accuracy. NOLs that cannot be verified due to weather conditions or other interferences are rejected. Although errors are possible, they are rare, and owners have the option to contest their violations in front of an Administrative Law Judge from the NYC Department of Finance (DOF), either online, by mail, or in person. In the absence of a warrant or subpoena, per VTL section 1180-b, camera footage may not be used for any purpose other than speed enforcement.

Fine Levels

Because the goal of the speed camera program is to change driver behavior and not to generate revenue, the cost of a violation is intentionally set at a level that is meant to deter the behavior without causing undue financial burden. Each violation comes with a $50 fine with the possible one-time addition of $25 for failing to pay the fine within 30 days. These fines do not escalate based on the number of violations an owner receives. Violations do not lead to vehicle registration suspensions, points on a driver's license, insurance consequences, or any risk of involvement with the criminal justice system for speeding. This system has proven extraordinarily effective at deterring speeding for the vast majority of drivers without the risk of these significant consequences. 74 percent of vehicles that receive violations receive no more than one or two per year.

74 percent of vehicles get no more than 1 or 2 violations in a year.

Fine Revenue

In some jurisdictions, camera enforcement programs are outsourced to private firms that identify speeders and issue the tickets to violators. These vendors are then paid a percentage of the ticket revenue. This arrangement creates a potential conflict of interest: vendors have an incentive to issue more tickets, so that they can get paid more money. This contributes to the public perception that automated enforcement programs are simply a "money grab" and not a true safety program. Another common kind of conflict of interest arises when a jurisdiction designates revenue generated by their automated enforcement programs for a particular purpose, such as a traffic safety initiative. The hazard of this approach is that these programs become dependent on maintaining the revenue generated by the program. Jurisdictions may seek to keep violation levels high, so they can fund their programs, rather than to reduce speeding and associated violations.

The design of NYC DOT's speed camera program—and all of its automated enforcement initiatives—avoids both of these pitfalls. The agency's vendors do not receive any portion of the revenue generated by violations nor is the revenue designated for any particular purpose. Instead, it goes into the City's general fund. This results in both the vendor and the agencies involved having no incentive to increase revenue through violations. In addition, because NYC does not tie traffic safety improvements to automated enforcement revenue, there is an entirely separate budget devoted to traffic safety. In fact from 2014 to 2023, New York City spent nearly six times more on Vision Zero initiatives than it raised in speed camera enforcement revenue. In the end, the number one goal of our speed camera program is for no driver to ever receive a single violation, resulting in zero revenue.

Neither the vendor nor the agencies involved have an incentive to increase revenue through violations.

Demographics of Drivers and Violators

As part of our commitment to equity, NYC DOT looks closely at the people and communities that are most impacted by our automated enforcement program. The goal is to ensure that every community is receiving the benefit of careful speed management, while also being mindful of how that enforcement impacts community members. To begin, 50 percent of violations are sent to vehicles with registrations that are outside of New York City and not to local residents.

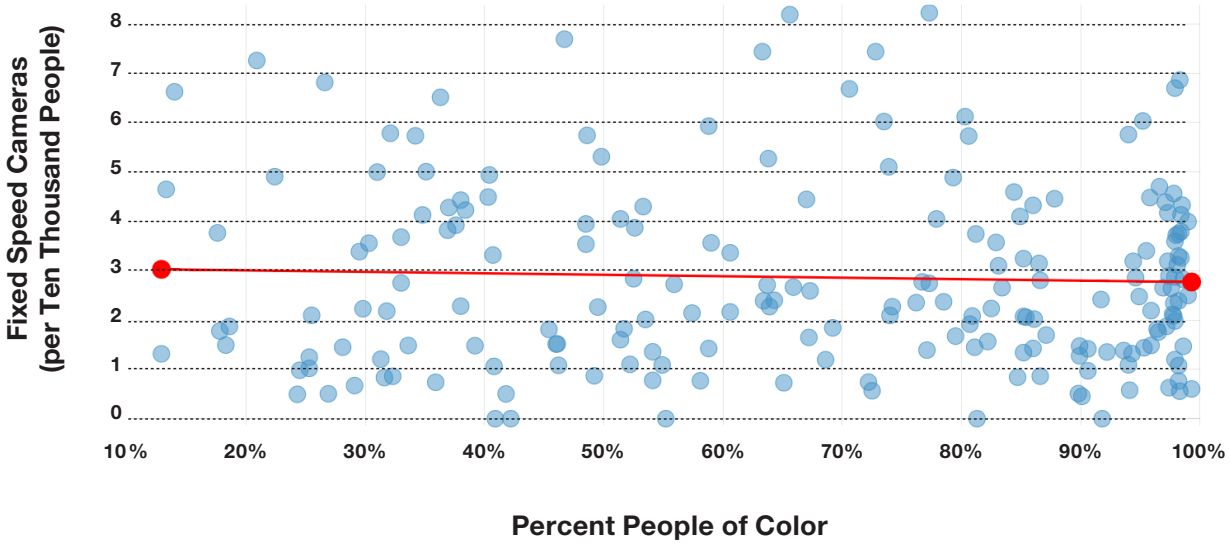
2023	Notices of Liability	Percent
Total NYC:	2,968,218	50.1%
Total Non-NYC:	2,950,605	49.9%
Total NOLs:	5,918,823	

Within the city, the greatest number of speed camera NOLs go to the communities with the highest levels of car ownership.[4] Those who are subject to speed camera violations—car owners—are on average higher income and more likely to be white. In the Bronx, for example, only 19 percent of households with an income at $25,000 or below own a car and only 35-40 percent of Black or Hispanic households own cars. At the same time, in the Bronx, 79 percent of households with an income above $200,000 own a car and 62 percent of White households own a car.[5]

4. American Community Survey 1-Year Estimates Public Use Microdata Sample 2022
5. Ibid.

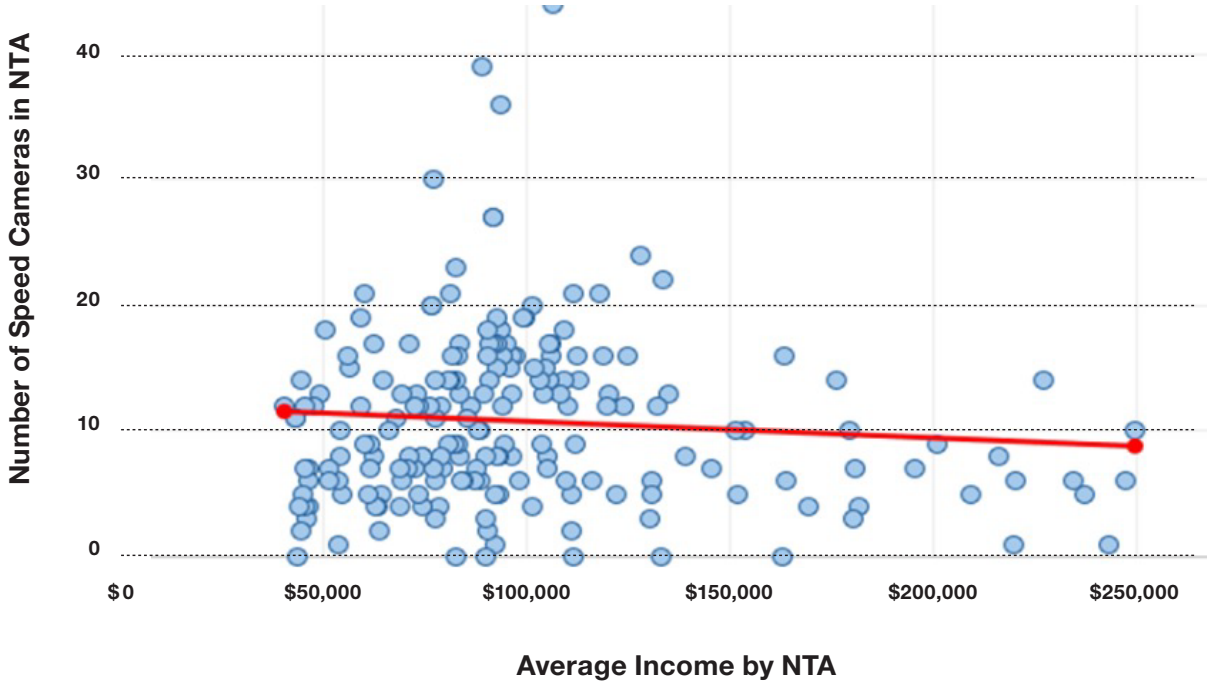
As shown in the chart below, there is no correlation between the percentage of residents of color in a given neighborhood and the number of speed cameras in that area. Each dot in the chart represents a neighborhood tabulation area (NTA) and is placed on the chart based on the average percentage of people of color in that NTA along with the number of speed cameras within the NTA. The trend line indicates that there is no difference between the number of speed cameras in areas with a low percentage of people of color and areas with a high percentage of people of color.

Distribution of Speed Cameras Across NTAs by Percent People of Color



Throughout the city, speed cameras have a relatively even distribution across communities of different income levels, with a small increase in areas with an average income around $100,000. This is reflected in the chart below where each dot represents the average income of an NTA. Because the average income across the city is approximately $80,000, the vast majority of NTAs are clustered around that income level. New York city has a unique income distribution in that the very wealthiest areas of the city tend to have the lowest car ownership and the highest traffic congestion with the slowest speeds. The two wealthiest NTAs, Tribeca and the Upper East Side, have very few speed cameras because their crash history and speed data do not warrant it. These two areas have been removed from the chart below so as not to skew the results.

Distribution of Speed Cameras Across NTAs by Income*

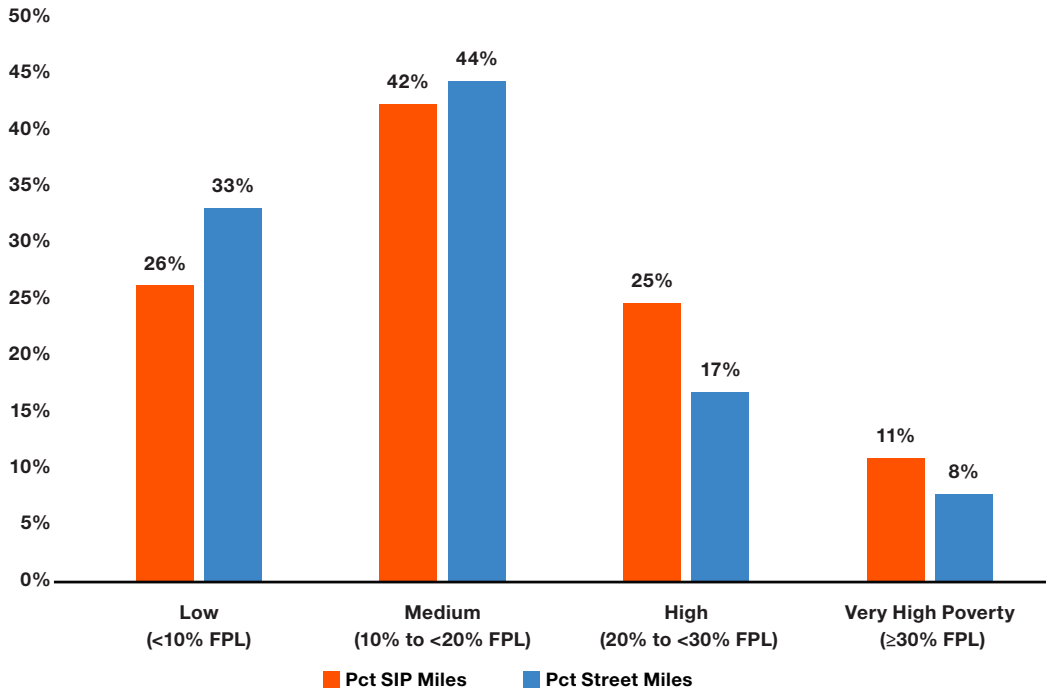


*Excludes outlier NTAs Tribeca and Upper East Side which skew correlation results.

Distribution of Street Improvement Projects (SIPs)

As described above, automated speed camera enforcement is not a speed management solution on its own. While effective in reducing speeds, it is critical that speed cameras are not used as a substitute for roadway redesigns, particularly in low-income communities that may suffer from historic underinvestment. NYC DOT strives to ensure that our robust street improvement projects are distributed to the communities with the greatest need. When comparing the number of street miles that have received safety improvements since 2014 to the total number of street miles citywide, high and very high poverty neighborhoods received more investment per mile than higher income communities. Thirty-six percent of street improvement miles since 2014 have gone into high and very high poverty neighborhoods, while these areas contain only 25 percent of total road miles. In contrast, medium poverty and low poverty communities contain 77 percent of total road miles, but only 68 percent of the street improvement miles.

SIP Miles and Street Miles by Poverty Group*



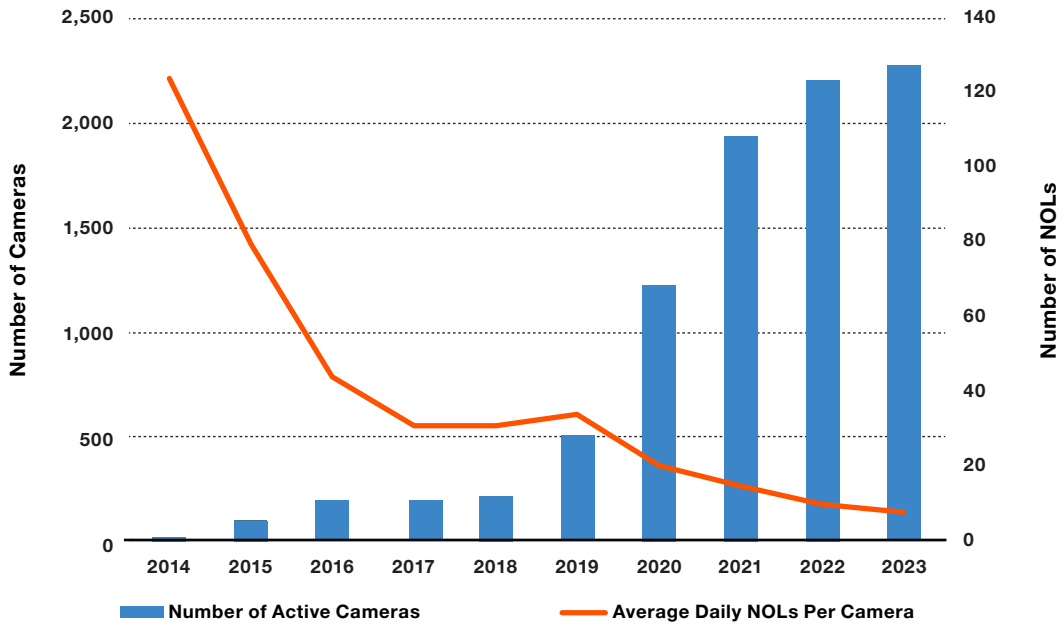
* Notes: Street Improvement Projects (SIPs) denotes projects completed between 2014–2023.
https://www.nyc.gov/html/dot/downloads/pdf/equity-and-street-safety.pdf

Results of Automated Speed Enforcement

Despite recent increases in reckless driving, NYC DOT's speed camera program continues to have a significant positive impact on street safety. Overall, in 2023, New York City's speed cameras issued a total of 5,918,823 NOLs across 2,277 cameras. From the beginning of the program through 2023, the average number of violations issued each day by each camera has steadily declined by 94 percent. This astonishing change in the amount of speeding occurring at camera locations is true even taking into account short term spikes in violations each time the program has expanded, proving the enormous efficacy of automated enforcement. This year's report examines the effectiveness of the most recent expansion of the program to include overnight and weekend hours in enforcement. It also takes a closer look at drivers who pose the greatest risks to traffic safety either through persistent speeding or extremely high speeds.

The average number of violations issued each day by each camera has steadily declined by 94 percent.

Change in Daily Notices of Liability Per Camera



Injury Data

The significant changes to travel behavior since the onset of the Covid-19 pandemic make a conventional before and after analysis of injuries on all camera corridors less useful, as the results simply reflect this overall trend. Since 2020, the city has experienced a dramatic rise in reckless driving behaviors, leading to a significant increase in fatalities on our roadways. In addition, the pandemic coincided with an explosion in the use of micromobility devices, including e-bikes, e-scooters, and mopeds, which led to increases in injuries and fatalities among the users of these devices.

To account for these complications, a comparison of injury trends between new camera corridors and a control group without cameras allows NYC DOT to better isolate the effects of the speed camera program. This report examines the specific effect of speed cameras that were installed in 2022 by taking a before and after look at the number of injuries and fatalities that occurred along those corridors.[6] For this analysis, DOT compared the number of injuries and fatalities on these corridors in 2021, before the cameras were installed, with the number of fatalities and injuries in 2023, after the cameras had been installed for a year or more. This change is then compared to control corridors, which have no cameras, during those same time periods. To remove the effects of the expansion to 24-hour enforcement, this analysis looks only at crashes occurring between 6am and 10pm. A camera corridor is defined as the quarter mile of street before and after the camera's location. A control corridor is a stretch of road along the same corridor that is more than a quarter mile from any camera.

NYC DOT's analysis indicates that the corridors on which cameras were installed in 2022 showed a greater decline in total injuries than corridors without cameras. Corridors with cameras showed a 3% decline in injuries and fatalities compared to control corridors which experienced an 11% increase in injuries and fatalities when comparing 2021 to 2023. Overall, camera locations saw 14% fewer injuries and fatalities than control locations without cameras. As expected, fatalities and injuries for users of other motorized vehicles, which include e-bikes, e-scooters, and e-mopeds, increased at both the camera and control locations. Overall, results continue to show a safety benefit to having speed cameras, and a future multi-year analysis will provide a clearer picture.

Changes in Injuries in New School Speed Zones Added in 2022

	New Camera Corridors*			Control Corridors**		
	2021	2023	Change	2021	2023	Change
All Injuries						
All Modes	1,085	1,052	-3.04	3,068	3,415	11.31
Pedestrians	228	232	1.75	654	761	16.36
Cyclists	145	153	5.52	350	468	33.71
Motor Vehicle Occupants	593	520	-12.31	1627	1655	1.72
Other Motorized	119	147	25.53	437	531	21.51

** Locations within 0.25 miles of a speed camera on the same corridor as a speed camera.

** Locations on the same corridor as a speed camera, but further than 0.25 miles away from a speed camera.

Expansion to 24/7 Cameras

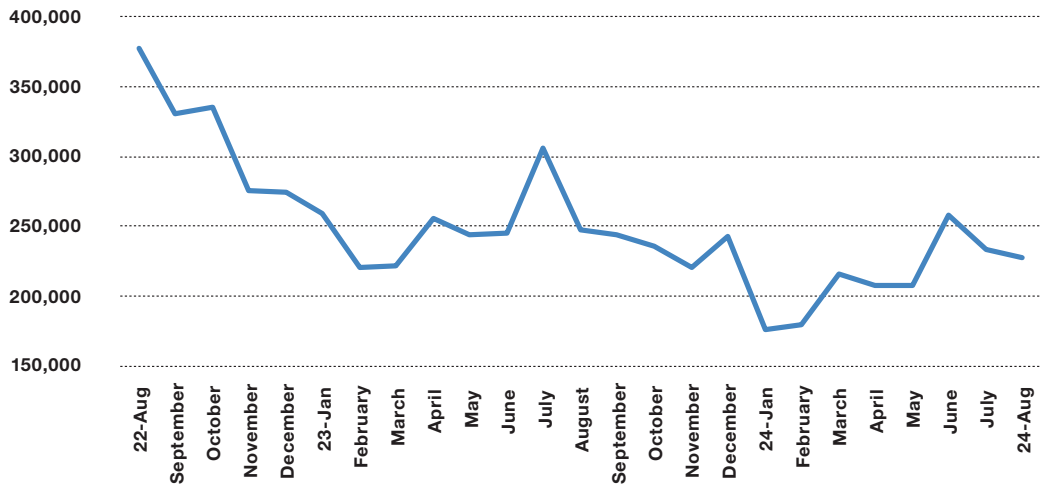
Prior to August 2022, speed cameras were not permitted to operate in the overnight hours from 10 PM through 6 AM on weekdays and for the entirety of weekends, leaving road users especially vulnerable to peak times of reckless driving. In general, reduced visibility and higher speeds due to lack of traffic make it more dangerous to travel in the evening and overnight hours. Although only 13 percent of pedestrian travel occurs after the sun has set, on average 45 percent of pedestrian fatalities occur in the dark. For all road users, 30 percent of overall fatalities occur between midnight and 6 AM. A similar story can be told for weekend travel where, although only 17 percent of pedestrian travel occurs on the weekend, 29 percent of pedestrian fatalities occur on the weekend.

Looking specifically at 2021 as an example, about 30 percent of the 217 non-highway traffic fatalities in New York City took place in school speed zones with cameras, but at times when those cameras were not legally permitted to operate. Of the 143 fatal crashes that took place within school speed zones with fixed cameras, approximately 24 percent (35 crashes) happened on weekends, and another 22 percent (31 crashes) happened overnight on a weekday.

Given the clear demonstrated need, New York City was authorized to issue speed camera violations during the weekend and overnight hours beginning in August 2022. In the first month of this expansion, overall violations nearly doubled from the previous month. However, in the two years since this expansion, violations in the overnight and weekend hours have decreased an average of 40 percent, clearly demonstrating a dramatic change in driver behavior during those times. The graph below looks exclusively at NOLs issued during the expanded overnight and weekend hours for the first two years after expansion.

The most significant result, however, is the impact this expanded enforcement had on the number of people injured at these locations. To isolate the specific impact of the

Notices of Liability Issued During Weekend and Overnight Hours



Changes in Injuries in the Year Right Before and After 24/7 Expansion

	Speed Camera Locations: Night/Weekend	Speed Camera Locations: Day	Control Locations: Night/Weekend	Control Locations: Day
All Injuries	**-7.6%**	+3.7%	+1.4%	+5.6%

increased camera hours, DOT compared the change in injuries at these locations both to control locations without cameras and to the change in injuries experienced in the same locations during the daytime hours where the cameras had already been in effect. By looking at the daytime hours as well, we can better understand how injuries overall may have been rising or falling during that same time period.

Comparing the year immediately before to the year immediately after the expansion to 24 hour-a-day and seven day-a-week operation, speed camera locations saw a 7.6 percent decrease in all injuries during the new overnight and weekend hours. This decrease is particularly remarkable when compared to control locations and to camera locations during daytime weekday hours, both of which saw increases in injuries during this time period.

Extreme Speed

The speed camera program is designed so that drivers do not receive a violation unless they are going at least 11 miles per hour over the speed limit. This is a significant amount of leeway, particularly when the citywide speed limit is 25 miles per hour. It means that drivers need to be going more than 30 percent over the speed limit before they can receive a violation. Very few drivers exceed 20 miles per hour over the speed limit and even fewer exceed 40 miles per hour over the speed limit. However, the difference between getting struck by a vehicle going 25 mph or going 36 mph still greatly increases the likelihood of pedestrian death by 20 percent.[7] In 2023, 97.3 percent of tickets were issued to drivers going between 36 mph and 45 mph.

Violations by Speed Over Limit, 2023

Speed of Vehicle Over the Posted Limit	Number of Violations, 2023	Percentage of Violations, 2023
>=11 And <=20	5,769,803	97.3%
>=21 And <=30	145,591	2.5%
>=31 And <=40	13,235	0.2%
>=41	3,142	0.05%
TOTAL	5,931,771	100%

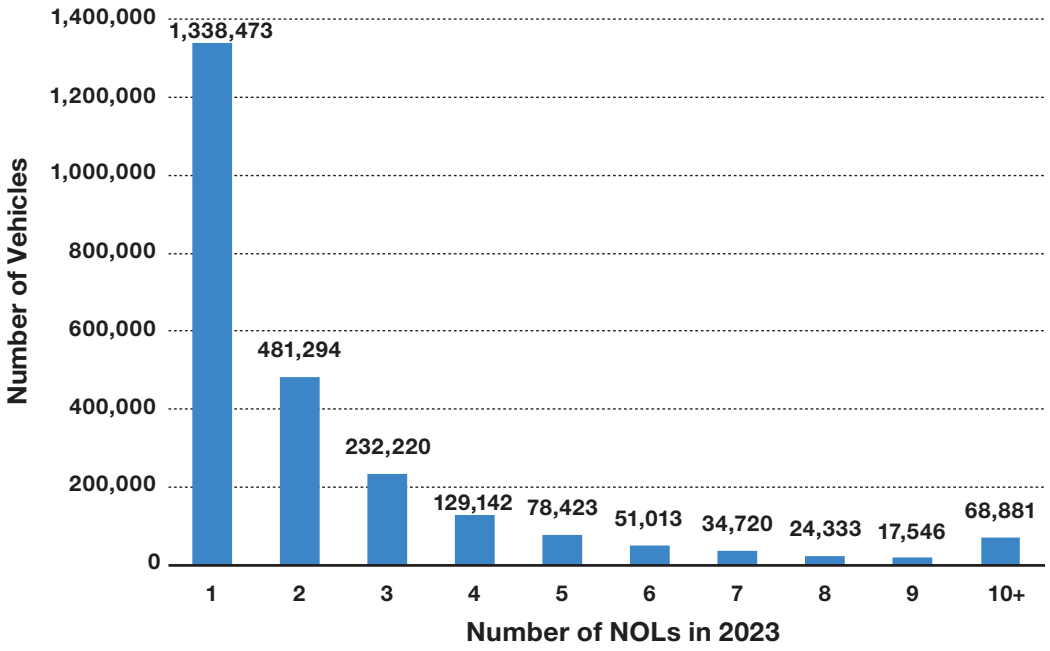
Source: New York City Department of Transportation

7 https://nacto.org/docs/usdg/relationship_between_speed_risk_fatal_injury_pedestrians_and_car_occupants_richards.pdf

Extreme Recidivists

The consistent and predictable enforcement provided by speed cameras leads to drivers quickly learning to change their behavior. In 2023, 74 percent of vehicles who received a speed camera violation did not receive more than one or two. This is true even though the risk of being caught has increased dramatically as both the number of cameras and the number of days and hours of operation have increased over the life of the program.

Number of Notices of Liability Issued to Vehicles in 2023



Unfortunately, while the majority of drivers are deterred from speeding by one or two camera violations, there is a group of recidivist speeders who continue to drive recklessly despite receiving multiple violations. These drivers have made clear that a $50 fine is not a sufficient penalty to change their behavior.

Creating solutions to address these extreme recidivists is essential to ensuring safety on our roadways. In a review of dangerous driving behaviors across New York City from 2017 to 2022, vehicles that had acquired more than 20 speed camera violations over the course of one year were 5 times more likely to be in a crash that resulted in death or severe injury than the ordinary driver. In 2023, that was nearly 12,000 vehicles.

The City of New York supports alternative penalties beyond fines and fees to combat recidivist speeders who need a greater incentive. One such idea would require that a speed limiter, called an Intelligent Speed Assist (ISA) device, be placed on the vehicles of extreme recidivists for a period of time. The ISA device would prevent the vehicle from exceeding whatever the posted speed limit is on a particular road. This intervention serves the dual purpose of providing a significant deterrent to drivers who do not want such a device installed. But it also serves the public safety benefit of removing the ability of drivers to speed regardless of their determination to do so. This intervention has the additional benefit of being targeted at the vehicle itself just like the original NOLs so regardless of who or how many people drive a particular vehicle, it will still be prevented from speeding on our roadways.

Vehicles that receive more than 20 violations in one year are 5 times more likely to be in a serious crash.

Relative Risk of Being Involved in a Fatal or Severe Injury Crash

Number of Violations	Relative Risk	Number of Vehicles in 2023
16	Twice as likely	3,147
19	3 times as likely	1,796
20	4 times as likely	1,543
21	5 times as likely	1,347
23	10 times as likely	1,014
25	15 times as likely	746
30	50+	374

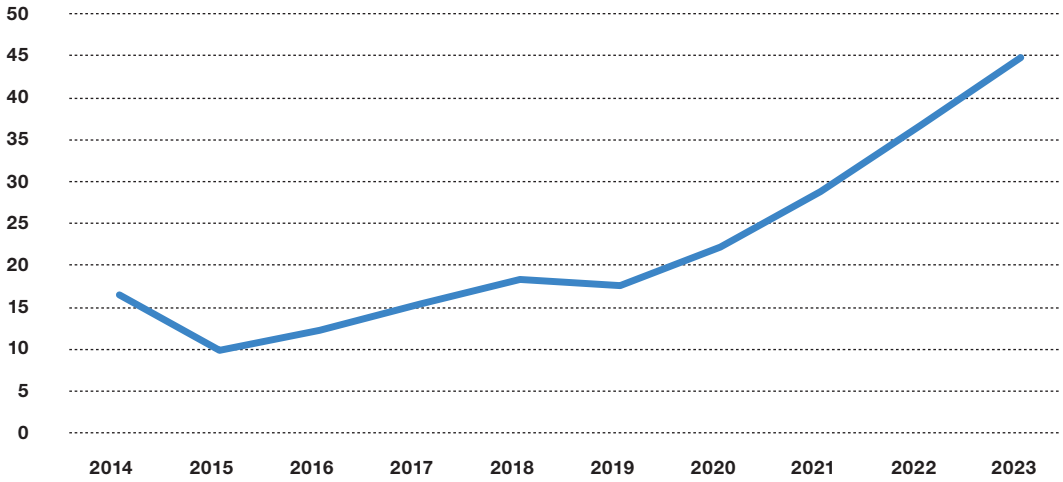
Extreme Evaders (Ghost Cars)

An emerging trend that threatens the efficacy of the speed camera program is the rise of license plate fraud. Drivers who attempt to evade automated enforcement and toll cameras by defacing or covering their license plates, using fake license plates, or having no plates at all now result in the rejection of more than 3 million speed camera events a year. An “event” occurs any time the cameras attempt to photograph something. Some percentage of rejections are expected each year due to weather interference, ambulances, fire trucks, or simply when speed cannot be determined which frequently happens with long buses. At the start of the speed camera program, approximately 10 percent of events were rejected. As license plate fraud has grown, so have the number of total rejections. In 2023, 45 percent of events were rejected, of which 65 percent were due to license plate fraud.

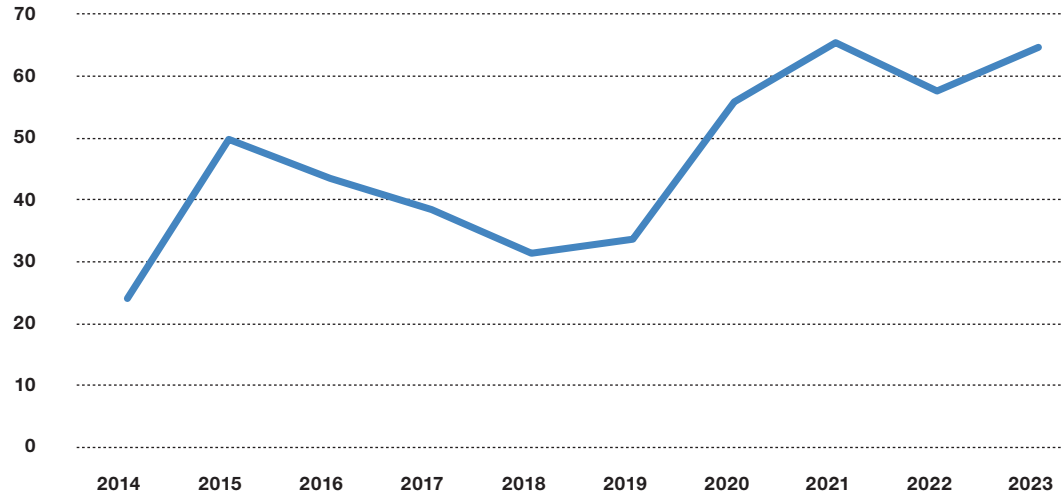
In 2024, the State Legislature passed new laws substantially increasing the penalties for committing license plate fraud. These new rules expand the descriptions of behaviors that constitute license plate fraud and allow for New York City to increase the fines associated with these actions.

One possible solution to this challenge would be to expand the legal authority to use speed camera photos for the investigation of license plate fraud by allowing those photos to be shared across agencies with similar camera enforcement programs such as tolling. With a large database of vehicles across agencies and locations, it may be possible to successfully identify many more of these vehicles.

Percentage of Total Events That Are Rejected



Percentage of Rejects Caused by License Plate Fraud



Adjudication of Speed Camera Violations

All individuals who receive an NOL are entitled to request a hearing online, by mail or in person to contest a violation believed to have been issued in error. The notice itself provides instructions about how to request a hearing. From 2014-2021, 2.4 percent of NOLs led to requests for a hearing, and the other 97.6 percent were issued to individuals who declined the opportunity and accepted the violation. In both 2022 and 2023, roughly 3 percent of NOLs were contested.

Pursuant to Section 1180-b of the VTL and through its Parking Violations Bureau, the New York City Department of Finance (NYC DOF) is authorized to conduct hearings, either online, by mail or in person, at any of its five Borough Business Centers. Once the Administrative Law Judge (ALJ) determines the NOL presents a prima facie case, the ALJ will conduct a hearing on the merits of any defense presented. The ALJs review witness statements, as well as other types of documentary evidence, to afford the vehicle owner the opportunity to refute the basis for the violation. ALJs are even permitted to consider hearsay evidence, and other evidence which may not be admissible in a traditional court of law, in order to provide a vehicle owner with the opportunity to establish a meritorious defense.

In 2023, NYC DOF conducted 138,970 hearings on contested speed camera violations. Of those hearings, 86 percent were upheld with a ruling of either guilty or guilty with a fine reduction. The result is that of all the NOLs issued, 99.7 percent were found guilty either by plea or adjudication in 2023.

	Speed Camera NOLs Issued	Hearings Requested	Percentage of NOLs Contested
2022	5,756,597	180,047	3.13%
2023	5,931,771	167,295	2.82%

	2022	Percentage	2023	Percentage
Total Adjudicated at Hearing	157,661	100%	138,970	100%
Number found guilty by hearing	120,409	76%	110,385	79%
Number found not guilty by hearing	20,500	13%	18,801	14%
Number found guilty with reduction by hearing	16,752	11%	9,784	7%

Revenue and Expenses

In total, from January 2014 through June 2025, the City of New York has spent or has committed to spend almost $3.7 billion in capital and expense funds in furtherance of Vision Zero. From 2014 to 2023, New York City has already spent nearly six times more on Vision Zero initiatives than it has raised in speed camera enforcement revenue.

In calendar year 2023, the City of New York collected approximately $309,894,234 in fines from 5,925,166 speed camera notices of liability. This includes violations from previous years that were paid in 2023 and does not include those violations issued in 2023 that were not paid by the end of the year.

As required by State law, all net revenues from the speed camera program are directed to the General Fund.

Speed Camera Program Summary
(Fiscal Year 2014–2023)

Operating Costs	$472,899,963
Capital Costs	$185,799,467
Total Costs	$658,699,430
Speed Camera Revenue	$1,060,345,924
Net Revenue	$401,646,494

Vision Zero Program Summary, City of New York*
(Fiscal Year 2014–2023)

Expense Costs	$891,856,000
Capital Costs	$1,489,314,000
Total Costs	$2,381,170,000

Appendix

	Number of Active Cameras	Number of Events	NOLs Issued	Percent of Events Issuing NOLs	Average # Events per Camera	Avg NOLs per Camera	Percent Change (NOLs)	Average Daily NOLs Per Camera	Percent Change Daily NOLs Per Camera
2014	21	309,026	257,956	83.47	14,716	12,284	-	124	
2015	101	1,017,702	917,382	90.14	10,076	9,083	255.64	79.6	-35.8
2016	198	1,387,833	1,218,736	87.82	7,009	6,155	32.85	44.1	-44.6
2017	197	1,329,354	1,123,801	84.54	6,748	5,705	-7.79	30.9	-29.9
2018	218	1,158,404	945,339	81.61	5,314	4,336	-15.88	31	0.3
2019	509	2,792,958	2,303,478	82.47	5,487	4,525	143.67	34	9.7
2020	1,227	5,631,780	4,381,997	77.81	4,590	3,571	90.23	20.4	-40.0
2021	1,938	6,124,625	4,358,859	71.17	3,160	2,249	-0.53	15	-26.5
2022	2,207	9,061,040	5,741,248	63.36	4,106	2,601	31.71	10	-33.3
2023	2,277	10,718,867	5,918,823	55.22	4,707	2,599	3.09	8	-20.0

State law requires the City to report on injuries in speed camera enforced school speed zones using New York State-issued data to the extent to which such data is available from the New York State Department of Motor Vehicles (NYS DMV). Due to delays in the DMV processing of this data, the most recent data available is from 2020 (and was included in our last report). The data that the DMV relies upon originates in motor vehicle collision reports compiled by New York City Police officers at crash scenes. NYC DOT receives these reports directly from NYPD in real time and is accurate up to the day. In the absence of state-issued data, this report relies directly on the data provided by NYPD to NYC DOT.

Number, Type, and Severity of Crashes, Fatalities, Injuries, and Property Damages in 2021–2023

	2021		2022		2023	
	All School Speed Zones	School Speed Zones With Cameras Active Prior to 2021	All School Speed Zones	School Speed Zones With Cameras Active Prior to 2022	All School Speed Zones	School Speed Zones With Cameras Active Prior to 2023
Injuries	36,617	23,819	36,763	25,569	39,401	27,936
Fatalities	178	106	164	119	162	109
Injury Crashes	28,215	18,138	28,622	19,847	30,276	21,355
Property Damage Crashes	54,484	35,486	48,866	33,897	43,436	30,843
Pedestrian Injuries	6,487	4,219	**7,590**	5,261	7,825	5,506
Bicyclist Injuries	4,209	2,504	3,603	2,346	4,449	2,952
Motor Vehicle Occupant Injuries	24,146	16,003	21,220	14,981	25,087	18,021
Other Motorized Injuries	1,775	1,093	4,350	2,981	2,040	1457
Severity A Injuries	2,177	1,382	2,127	1,459	2,277	1,583
Severity B Injuries	5,574	3,551	6,254	4,316	6,499	4,482
Severity C Injuries	28,268	18,472	27,779	19,369	29,945	21,385

*Defined as ¼ mile from a school building.

Class A severe injuries include skull fractures, internal injuries, broken or distorted limbs, unconsciousness when taken from the crash scene, severe lacerations, and inability to leave the scene without assistance.

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

Class C slight injuries include complaints of pain without visible signs injury, momentary loss of consciousness, limping, and nausea.

NEW YORK CITY DOT

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