

NEW YORK CITY DEPARTMENT OF TRANSPORTATION

Urban Freight Initiatives



June 2015
nyc.gov/dot



Bill de Blasio
Mayor



Polly Trottenberg
Commissioner

OVERVIEW

NEW YORK CITY DEPARTMENT OF TRANSPORTATION

NYC DOT's mission is to provide for the safe, efficient, and environmentally responsible movement of people and goods in the City of New York. This includes maintaining and enhancing the transportation infrastructure, crucial to the economic vitality and quality of life of our primary customers - City residents.

Our agency's work is guided by: Sustainable Streets, the Strategic Plan for the New York City Department of Transportation. We are customer-driven in all our activities. We seek opportunities to create partnerships in the provision of transportation services through appropriate relationships and alliances. To accomplish our mission, the Department works to achieve the following goals:

- Provide safe, efficient, and environmentally responsible movement of pedestrians, goods, and vehicular traffic on the streets, highways, bridges, and waterways of the City's transportation network;
- Improve traffic mobility and reduce congestion throughout the City;
- Rehabilitate and maintain the City's infrastructure, including bridges, tunnels, streets, sidewalks, and highways;
- Encourage the use of mass transit and sustainable modes of transportation; and
- Conduct traffic safety educational programs.

NYC DOT has jurisdiction over the transportation infrastructure throughout the five boroughs of New York City. However, the New York State Department of Transportation (NYS DOT) leads the building and maintaining processes for federal and state highways which traverse the city.

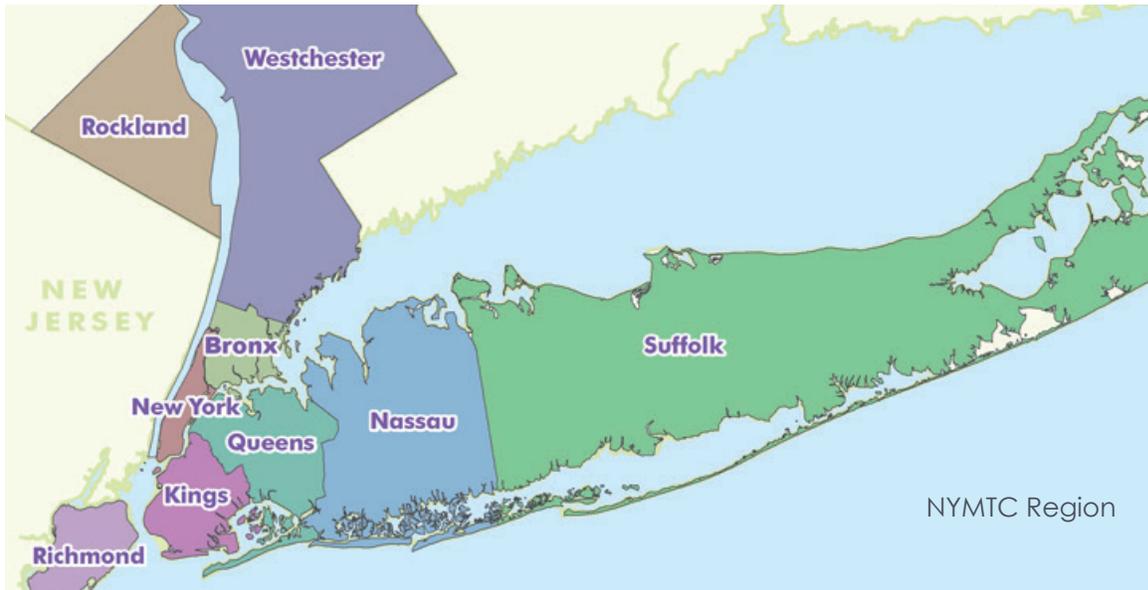
The over 4,500 employees of NYC DOT oversee one of the most complex urban transportation networks in the world. Staff manage an annual operating budget of \$900 million and a five-year \$6.3 billion capital program, 6,000 miles of streets and highways, over 12,000 miles of sidewalk, and 789 bridges and tunnels. Installation and maintenance are conducted for over one million street signs, 12,700 signalized intersections, over 315,000 street lights, and 69 million linear feet of markings. NYC DOT promotes the use of sustainable modes of transportation and also designs bicycle facilities, bus lanes, and public plazas.

NYC DOT operates the Staten Island Ferry, which serves over 22 million people annually and oversees ferry operations on City-owned piers. Education is provided Citywide to students and adults about street safety. Staff issue parking permits to people with disabilities, not-for-profit agencies, and governmental entities. Commercial vehicle permits for are issued trucks alongside construction permits; and Staff also manage the City's Adopt-a-Highway program.

OVERVIEW

PORT AUTHORITY OF NEW YORK & NEW JERSEY

The Port Authority's area of jurisdiction was initially called the Port District in 1921, a region within a radius of approximately 25 miles of the Statue of Liberty. It was created to promote and protect the commerce of the district and to undertake port and regional improvements. The Port Authority of New York & New Jersey (PANYNJ) conceives, builds, operates and maintains infrastructure including America's busiest airport system, marine terminals and ports, the PATH rail transit system, six tunnels and bridges between New York and New Jersey, the Port Authority Bus Terminal in Manhattan, and the World Trade Center.



NEW YORK METROPOLITAN TRANSPORTATION COUNCIL

Since the 1970's, Federal transportation legislation has mandated that all urbanized areas with a population over 50,000 must have a designated Metropolitan Planning Organization (MPO) in order to qualify for federal transportation funding. Created in 1982 as the MPO for New York City, Long Island, and the lower Hudson Valley, the New York Metropolitan Transportation Council (NYMTC) provides a collaborative planning forum to address transportation-related issues from a regional perspective; undertakes studies for transportation improvements; forecasts future conditions and needs; pools the resources and expertise of its member agencies to plan for transportation and development in the region; and makes decisions on the use of Federal transportation funds. The NYMTC planning area covers 2,440 square miles and a population of 12.4 million as of 2010, which was approximately 64% of New York State's population at the time.



REGIONAL AND STRATEGIC PLANNING

The Regional & Strategic Planning sub-division of the Division of Transportation Planning and Management is led by an Assistant Commissioner and tasked with generating, assessing and supporting innovative strategies, policies and programs for sustainable safe and efficient transportation system operations in the City of New York, including coordination related to OneNYC, sub-regional planning, resiliency planning, freight mobility initiatives, alternative fuels, environmental sustainability programs, and strategic policy analyses on priority issues for the agency. Examples of statutorily mandated research publications include the Mobility Management Resource Guide, the Urban Mobility Report (formerly named: Sustainable Streets Index), the Freight Mobility Report, etc. The sub-units consist of:

The Metropolitan Planning & Grants (MP&G) Unit ensures integration of the Agency's plans with the Regional Planning framework of the Metropolitan Planning Organization; manages the agency's Traffic Information Management System (TIMS) in coordination with the Modeling & Data Analysis Unit and the Division of Traffic Operations; manages the Agency's Mobility Management Program to improve access to transportation programs; services for persons with disabilities and older adults; and coordinates grant-funding activities.

The Office of Freight Mobility is responsible for advancing policies and programs that mitigate the adverse impacts of trucks on infrastructure and communities, while also improving truck delivery efficiency with an overall mission of supporting the City's economic competitiveness.

The Alternative Fuels Program develops incentives, policies, and funding mechanisms, education, and outreach to increase adoption of clean vehicles and fuels in support of NYC laws and Mayoral Executive Orders, with conscious attention to environmental justice communities.

The Special Projects unit manages a variety of programs and planning initiatives, including transportation demand management (TDM) programs, neighborhood transportation studies, Safe Routes to Transit initiatives, and provides policy support to the division and agency on sustainability, resiliency, and related multi-modal transportation program issues.

PLANNING

TRUCK ROUTES

During the past fifty years, plans and regulations have been developed to accommodate commercial vehicles on New York City streets and highways in an efficient manner, while trying to minimize the impacts to local citizens, and rationalizing the efficient movement of these vehicles. The primary result of these initiatives is the New York City Truck Route Network, which covers nearly 10 percent of the City's Streets and has been in place for nearly a quarter of a century. The existing Truck Route Network and the regulations in place today are nearly identical to those put in place in 1981 at the end of the Citywide Truck Studies. Over the past 25 years, there have been some amendments to the route system, although these are localized in nature and impact.

The laws governing the movement of trucks and commercial vehicles within New York City are found in the **Traffic Rules of New York City**. Although this document applies to all roadways and street users within the City, there are several key sections which focus on commercial vehicles and truck regulations. These include definitions; restrictions on movement; rules pertaining to parking, stopping and standing; along with designation of truck routes and limitations upon dimensions and weights of vehicles. Educating truck drivers about the proper routes is one of DOT's top priorities. Each year the agency distributes approximately 80,000 copies of the truck route map which is also posted on the **agency's website**. DOT has produced a new map in collaboration with other city, state, and federal agencies. Feedback from the trucking industry was also incorporated, including requests for translations into other languages which is currently underway.



2015

New York City Truck Route Map

Free
Updated 3/2015

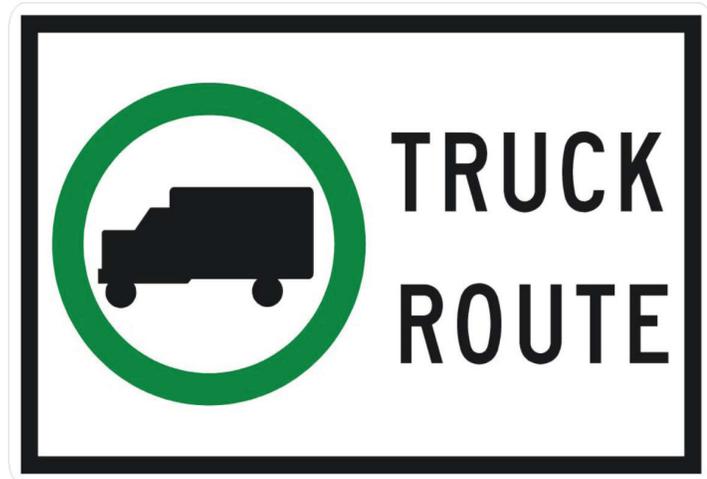
Five Boroughs. One Map.



PLANNING

TRUCK ROUTE SIGNAGE

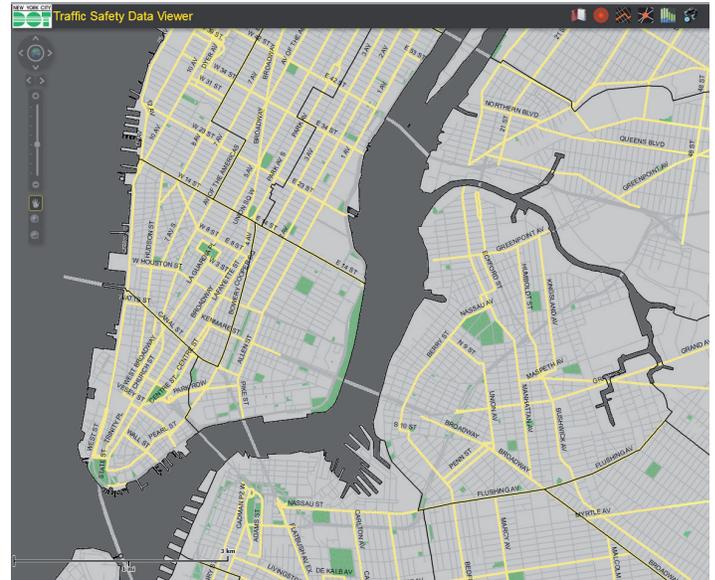
In 2003, NYC DOT embarked on its first comprehensive investigation into the truck route system in nearly 20 years. This federally funded study sought to develop an improved management framework to improve the operation, efficiency of truck movements, and quality of life for residents. One of the initiatives from this effort was a truck route signage pilot. NYC DOT coordinated with FHWA on an easily identifiable sign that allowed for improved identification of the Truck Route Network. The pilot was launched and completed in the Hunts Point area of the Bronx. A control site adjacent to Hunts Point was used to compare compliance with existing truck route signage. The conclusion of the study is that the color green, universally associated with positive guidance, furthers the recognition of (and adherence to) the truck route sign.



PLANNING

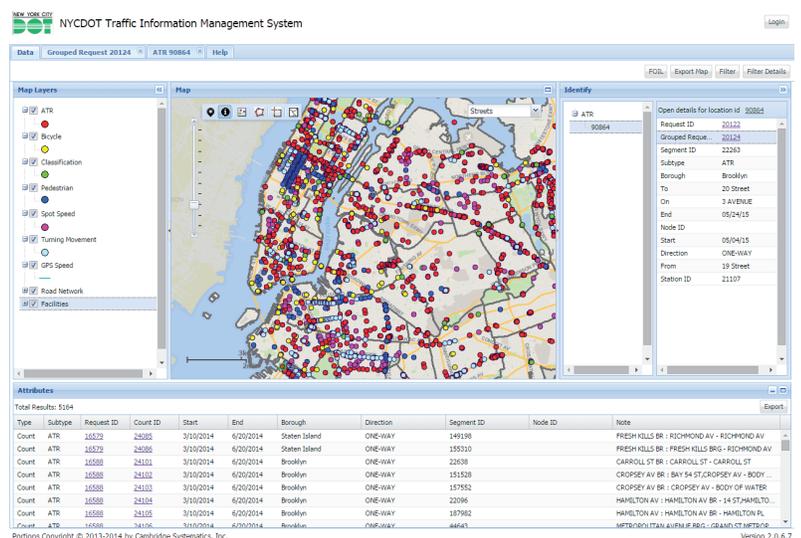
CRASH DATABASE

NYC DOT maintains a comprehensive crash database in a variety of formats. In coordination with NYSDOT, NYS Department of Motor Vehicles (NYSDMV), NYC Department of Finance, and the New York City Police Department (NYPD), NYC DOT compiles and records incidents, accidents, and fatalities, for those which are transportation-related. Records are separated by the NYC DOT's Research, Implementation and Safety Team (RIS), for those that are pedestrian, cycling, bus, and freight-related. A Traffic Safety Data Viewer provides statistical breakdown relative to boroughs and specific street corridors. Users can pinpoint potentially affected areas, and incorporate databases into their work to obtain a firmer understanding of current incident, accident, and fatality rates. Data is broken apart into injury, fatality, street segment, severity, and those specifically reported by the NYPD. Current automatic exports provide data from 2001 to 2014 .



TRAFFIC INFORMATION MANAGEMENT SYSTEM (TIMS)

NYC DOT routinely collects high volumes of traffic count data to serve many diverse project and analytical needs. The Traffic Information Management System (TIMS) is designed to standardize how the agency processes and posts data, help reduce time consuming searches, and eliminate the collection of duplicate data. TIMS is a real-time, centralized, standardized and expandable data warehouse, with fast and graphical user interface for access of existing traffic counts and planned/scheduled counts.



PLANNING

MODELING

NYC DOT's Modeling & Data Analysis Unit supports the agency's internal planning, project development, analysis, and technical review processes, while also coordinating with external agencies on regional projects and planning. Support work includes but is not limited to:

- Analytical support focusing on traffic flow and capacity;
- Static and dynamic simulation;
- Statistical analysis;
- Collection and evaluation of historic and real-time ITS data; and
- The development of analytical techniques.

The Modeling & Data Analysis Unit also manages and analyzes historic and real-time traffic datasets to support and advance the agency's planning activities. In this role, the unit uses sophisticated traffic simulation tools and statistical software packages to provide detailed analyses and guidance to other agency units.



Aimsun

Vissim

Synchro/
SimTraffic

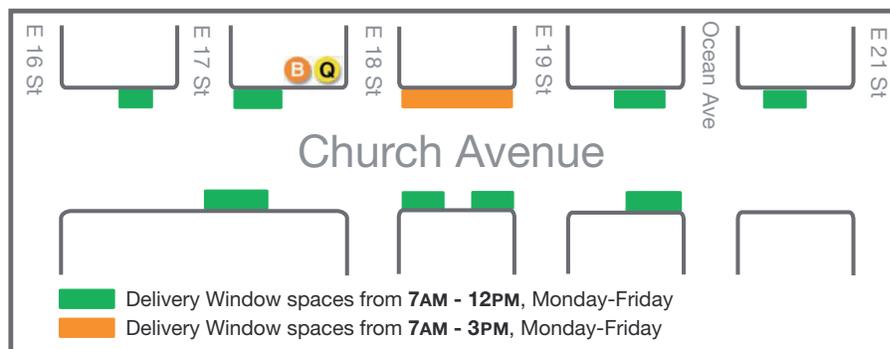
Data Analysis
Methods

SAFETY AND OPERATIONS

DELIVERY WINDOWS

Many of the City's commercial corridors lack adequate curb space for deliveries. Most retailers and grocery stores do not have off-street loading docks and on-street parking is typically occupied by passenger vehicles. The objective of delivery windows is to make curb space available for delivery trucks and thus reduce double parking and traffic congestion, and support the City's economy by improving the efficiency of truck deliveries.

Development of delivery windows includes public outreach to merchants and through curb utilization surveys. The data is used to determine the peak demand time and duration for truck deliveries. It also aids in developing curb regulations that balance passenger vehicle parking and commercial deliveries. Typically, these initiatives are developed alongside other NYC DOT efforts to manage curb access reduce conflicts between trucks, bicycles and pedestrians. These initiatives include but are not limited to: Bus Rapid Transit (Select Bus Service), curbside bike lanes, Park Smart peak-rate parking programs, plazas and congested corridors programs.



"Whole Foods Market Union Square has enjoyed the ability to take deliveries in overnight, serve our customers better and enhance our commitment to the environment through more efficient trucking operations."

Mary Show Thurber, Director of Receiving
Whole Foods Market Northeast Region

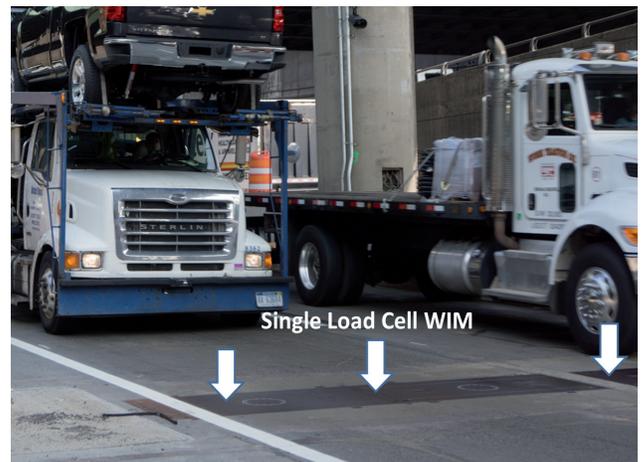
OFF-HOUR DELIVERIES

The program is a win-win solution that benefits carriers, receivers, and urban communities, enhancing quality of life, economic development, and environmental sustainability. A recent initiative resulted in more than 400 businesses across Midtown and Lower Manhattan shifting portions of their deliveries to the off hours. The estimate includes businesses of various sizes that shifted after the 2010 pilot and through the implementation phase. It is estimated that 40-50 daily delivery tours in Manhattan have switched as a result of this project, for a total carrier savings of over \$2,250,000/year.

SAFETY AND OPERATIONS

WEIGH IN MOTION

The New York City Truck Impact Study recommended use of weigh in motion devices to collect and analyze truck weight data. The information will be used to inform future policies and regulations impacting the City's truck route management. NYC DOT in cooperation with NYSDOT and PANYNJ has installed a single load cell weigh in motion site within the \$415 million project to rehabilitate the Alexander Hamilton Bridge. The project is the first single load cell weigh in motion site in the State of New York. 190,000 vehicles travel daily over this bridge, which acts as a prime feeder of the George Washington Bridge incline, to and from New York and New Jersey. Communication cables and wireless devices will be used to connect equipment along with hard line conduit cables.



POLICY

PlaNYC

In 2007, Mayor Michael R. Bloomberg released the first PlaNYC, which focused on responsibly meeting the city's growing population and infrastructure needs. Titled 'A Greener, Greater New York', it included the City's initial sustainability strategy, and became a model for other large global cities. PlaNYC outlined measures to address the city's aging infrastructure, support parks, improve the quality of life and health for New Yorkers, and for the first time ever, commit to a goal for reducing greenhouse gas emissions. In 2013, in the aftermath of Hurricane Sandy of October 2012, the City released PlaNYC: A Stronger, More Resilient New York, which documented the lessons learned from Sandy, developed a strategy for the city to build back, and developed recommendations to adapt the city to the projected impacts of climate change, including rising sea levels and extreme weather events.

OneNYC

On Earth Day, April 22, 2015, Mayor Bill de Blasio launched OneNYC. OneNYC differs from PlaNYC in that it focuses on equity, sustainability, and resiliency. With regards to freight, OneNYC supports the growth of a greener trucking sector, and the expansion of freight movement via rail and water. It also aims to reduce the impacts of trucks that must bring 'last mile' freight to the market through the use of alternative fuels, clean technologies, off hour deliveries, mobile applications, a Smart Fleet Rating System, and the facilitation of delivery of construction-related cargo by water. Expanding John F. Kennedy Airport's air freight activity is also noted through interagency efforts with the Port Authority, as well as improving the physical infrastructure across city spans.



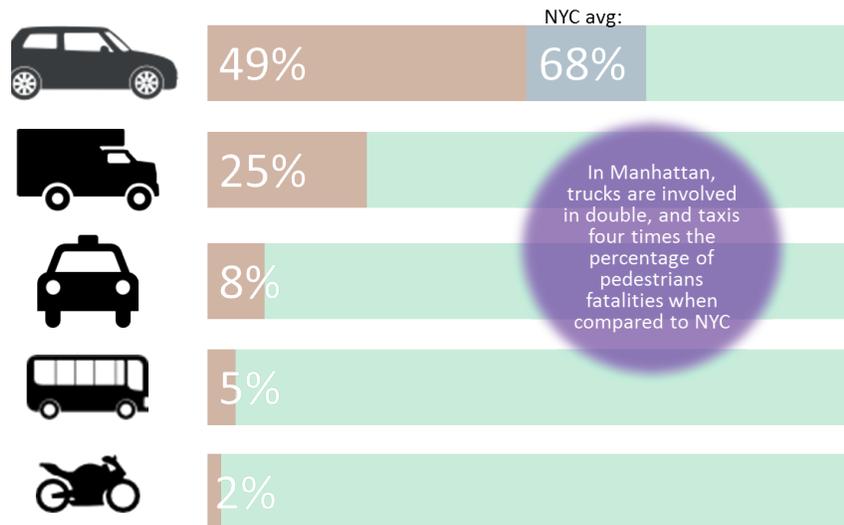
POLICY

VISION ZERO

The elimination of traffic fatalities within ten years is an ambitious goal but Mayor de Blasio, intentionally set that bold target in order to compel immediate action and deliver quality results. In response, NYC DOT launched a Vision Zero Truck Safety Task Force to focus on improving safety with respect to crashes that involve commercial vehicles. The task force includes city, state, federal agencies, and trucking industry partners.

The New York City's Vision Zero Action Plan outlined 63 separate initiatives that the Mayor's Office and a number of City Agencies are undertaking, to reduce fatalities and serious injury on our streets. Vision Zero initiative has been working in communities across New York City. Pedestrian safety plans have been developed in each borough. Ongoing forums and workshops provide New Yorkers with

Passenger vehicle are involved in half of fatal and severe pedestrian injuries in Manhattan



a chance to learn about the Vision Zero action plan, to provide recommendations, to improve intersections and streets in their boroughs, and to ask questions about Vision Zero.

The first year of Vision Zero in New York City proved successful; after two years of increases, the city experienced the lowest number of pedestrian fatalities since record keeping began in 1910. In 2014, the city lowered its speed limit to 25 MPH, completed 62 major safety engineering projects, and expanded traffic enforcement dramatically.

FOR A SAFER NYC

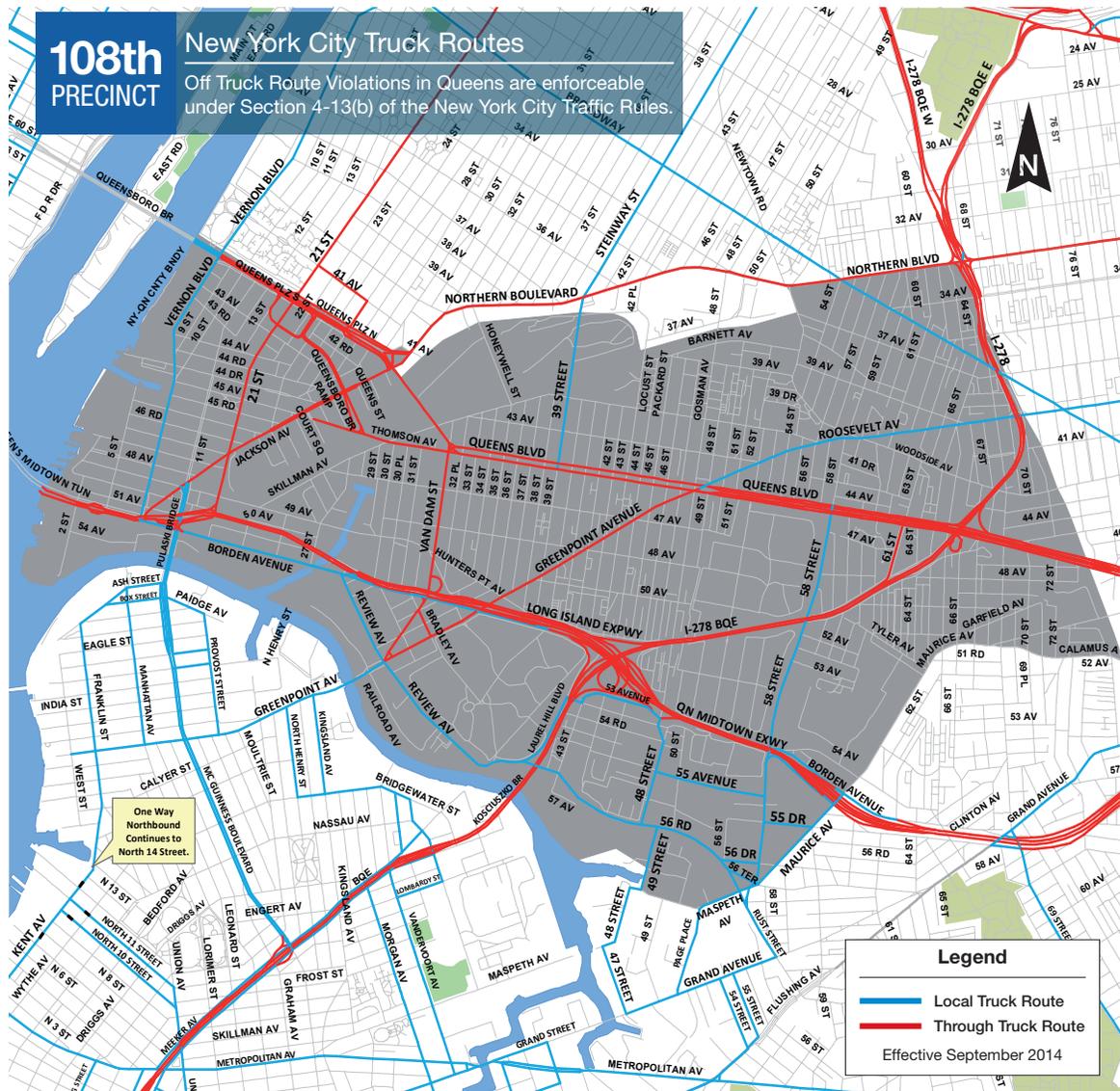
SPEED LIMIT 25

VISION ZERO

ENFORCEMENT

NEW YORK POLICE DEPARTMENT MEMO INSERTS

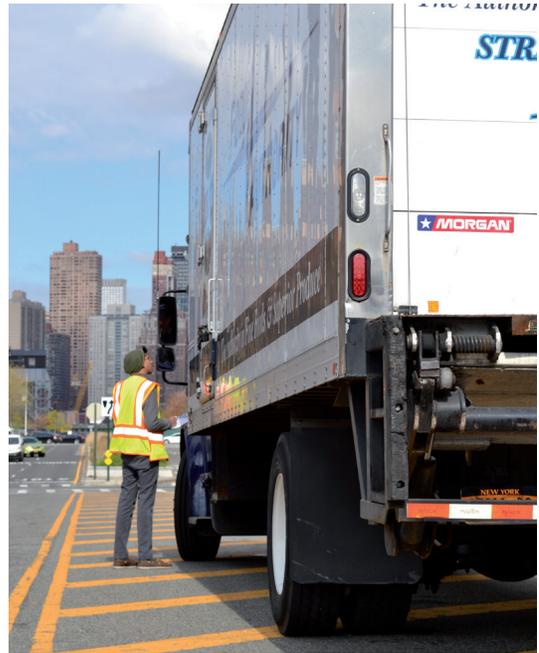
NYC DOT promulgates the City's Traffic Rules including rules on truck routes, truck size and weight, and parking of commercial vehicles. The NYPD is responsible for enforcing all of these rules. To improve the efficiency and effectiveness of truck route enforcement, NYC DOT developed an insert to the NYPD officers' memo books for all police precincts, detailing truck route rules, regulations, and the routes on a precinct-by-precinct basis. Developed in 2008, the NYPD Memo Insert Program heightened awareness of officers' understanding of the truck route system. Also, the NYPD added truck route summoning to their TrafficStat program as well and these efforts together have contributed to an increase in truck route enforcement.



ENFORCEMENT

NYPD BLITZES

In 2015 NYC DOT, NYPD, and NYS DOT teamed up to conduct several truck enforcement blitzes focused in Brooklyn. Additional blitzes in Brooklyn and Queens will continue throughout the year. Focus is on strategic areas of concern raised by the community and as a result of inter-agency data collaborations. Generally, the State focuses on inspections of the vehicles, while the NYPD focuses on illegal route usage. NYC DOT focuses on garnering information from freight users and companies, to understand origin-destination patterns, while also obtaining feedback about the existing truck route network infrastructure.



CCTV CAMERAS



DOT's Traffic Management Center, located in Long Island City, Queens, receives feeds from Closed Circuit Television Cameras (CCTV) trained on major arteries, allowing operations staff to monitor traffic conditions at key locations in the City. DOT's traffic cameras can be seen 24 / 7 across various local news networks. The cameras are an aid in decisions to activate Variable Message Signs (VMS) for temporary rerouting of traffic such as in response to over-height trucks striking a bridge, and also to identify trucks traveling in non-designated Truck Routes.



SAFETY

SIDEGUARDS

Mayor Bill de Blasio announced in 2015 that New York City will begin retrofitting 240 City trucks with side guards, which are rails between the front and rear tires of a truck that can protect pedestrians and bicyclists from being caught under the vehicle in case of a turning incident / crash. Widespread adoption of side guards in the United Kingdom is credited with reducing fatalities and severe injuries in side impacts by 61 percent for bicyclists, and 20 percent for pedestrians. If the initial rollout goes as expected, every new City truck will be designed to include a sideguard before 2024, tied to the replacement cycle for the municipal and private sector fleet operating within NYC.

TRUCK'S EYE VIEW

NYC DOT facilitates an education opportunity, called 'Truck's Eye View', where focus is placed on creating mutual understanding between road users, particularly trucks, cyclists, and pedestrians. The goal of the Truck's Eye View program is to provide education on the limited visibility and blind spots commonly found in and around freight vehicles. Participants sit in the driver's seat of a truck and share safety experiences with a professional truck driver, who explains the vehicle's blind spots. Taking a seat in a truck allows participants to better understand the visibility constraints in a truck and the complex nature of driving large vehicles.



CROSS-OVER MIRRORS

Due to the height of large trucks, it can be difficult for truck drivers to see what is happening directly in front of their vehicles. Cross-Over Mirrors, installed in front of the cab of a truck, are a simple way of eliminating a truck driver's front 'blind spot' and allowing the driver to see any person at least three feet tall and passing one foot in front of the vehicle. They are now required by New York State Law.

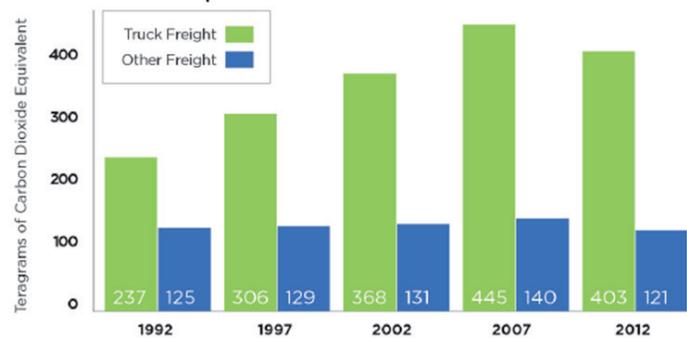


ENVIRONMENTAL

AIR AND NOISE

New York City seeks to reduce air and noise impacts through its diverse Urban Freight Initiatives and Alternative Fuels Programs. The New York State Energy Research and Development Authority (NYSERDA) has provided funding to develop a low noise truck demonstration for NYC. NYC DOT is exploring noise monitoring technologies to be used in areas where the expansion of Off Hour Deliveries is planned.

Freight Transportation Greenhouse Gas Emissions



USDOT, Beyond Traffic

ALTERNATIVE FUEL PROGRAMS

New York City Alternate Fuel Programs promotes the use of clean transportation technologies and alternative fuels vehicles in the movement of goods and people within the public and private sectors of New York City. The Program began in 1992 in the municipal fleet with 'percent of vehicle purchase' requirements and in 2005 graduated to 'cleanest in class' requirements through successive legislation. A concurrent program goal is to assist private



fleet early adopters to help reduce costs through grant programs and give operational support when the fleet switches to newer advanced technology. It's mission includes the development of incentives and funding mechanisms to assist with the procurement of clean technologies. NYC DOT is expanding the use of biodiesel, compressed natural gas and hybrid electric vehicle technology throughout our fleet. Nearly 700 of our 3,000 vehicles use this technology already.

RESEARCH

Improving freight access across the region is a key initiative for the City and our regional partners. NYC DOT is actively engaged in research and analysis related to freight movement and hosts delegations from around the world for peer exchanges on traffic management and urban freight. NYC DOT is currently supporting urban freight research alongside a number of academic partners with focus on cargo cycles for last-mile freight delivery, urban freight consolidation centers, curbside management, remote sensing, and off hour deliveries.

NYC DOT is conducting the Off Hour Deliveries Program in cooperation with the Rensselaer Polytechnic Institute (RPI), which began as a small research idea in 2003 with funding from NYSDOT, in response to a request from a logistic trade association in New York City. In 2006, the support of the NYC DOT helped catapult the project to a new level. NYC DOT is a core city partner for the VOLVO Center of Excellence (COE) on Sustainable Urban Freight Systems (SUFS). The COE consists of an international network of cities and researchers who play key roles in fostering systemic and long lasting changes on the way urban deliveries are made.



Peer Exchange with New York City and delegation from Brazil



NEW YORK CITY



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