

2007

Bridges & Tunnels
ANNUAL
Condition Report



New York City
Michael R. Bloomberg
Mayor



New York City
Department of Transportation
Janette Sadik-Khan
Commissioner



NEW YORK CITY DEPARTMENT OF TRANSPORTATION DIVISION OF BRIDGES 2007 BRIDGES AND TUNNELS ANNUAL CONDITION REPORT



Manhattan Bridge in October 2007. (Credit: Michele N. Vulcan)

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Brooklyn Bridge Flag in October 2007. (Credit: Peter Basich)

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A Message from the

Commissioner

Dear Friends,

On behalf of the many dedicated professionals who staff the Division of Bridges, it is my pleasure to present the 2007 Edition of the New York City Department of Transportation's Annual Bridges and Tunnels Condition Report, as mandated under New York City's Charter. This report provides DOT with an opportunity to display the many achievements, innovations and improvements that were realized by the Division of Bridges during the 2007 calendar year.

The City's bridges are safe and in their best condition in generations. Our bridges are extremely well managed, they are being rebuilt and upgraded by experts and are subject to one of the strongest inspection systems in the United States. We have a very strong bridge capital investment program, which has turned overall City bridge conditions around and will continue to bring more bridges into good repair. DOT has been an early adopter of high-tech bridge monitoring equipment and techniques, and DOT's Division of Bridges is now further enhancing its inspection capabilities with additional technology and expertise.

The Division of Bridges includes 809 DOT employees, who manage the City's capital bridge program and conduct bridge inspections, monitoring and maintenance. Our bridges include, among many others, the notable East River and Harlem River Bridges, the Belt Parkway Bridges, and pedestrian bridges and elevated roadways located City-wide.

Since 2000, the City has invested about \$3 billion in bridge capital reconstruction projects which has included a number of projects to rehabilitate the East River Bridges, namely the Brooklyn, Manhattan, Williamsburg and Queensboro Bridges. Over the last few years DOT has also completely replaced other major bridges, including the Third Avenue, Macombs Dam and 145th Street spans over the Harlem River.

Looking forward over the next two years we will be investing more than \$2 billion in additional capital reconstruction projects on our bridges, including the Willis Avenue Bridge, the Brooklyn Bridge ramps and painting, the Manhattan Bridge, the Belt Parkway bridges, the ramps at the St. George Ferry Terminal and the 153rd Street Bridge in the Bronx, a new vehicular cable-stayed bridge and the first of its kind in New York State. Over the next ten years, DOT has \$5.8 billion in the Ten Year Capital Strategy plan to spend on bridge reconstruction projects, including \$309 million provided as part of PlaNYC 2030 for bridge infrastructure state of good repair.

The City has been at the forefront of utilizing new technology to assist us in the monitoring of our bridges. For example, utilizing strain gauges to monitor the orthotropic deck of the Williamsburg Bridge and crack propagation on the Manhattan and Brooklyn Bridges and X-ray diffraction to test stresses in critical steel members on the East River bridges. We are also using fiber optic sensors to monitor the forces in suspenders on the Manhattan Bridge and stresses in girders on the Paerdegat Bridge. Ultrasonic testing is another technology that we are applying on the eyebars of the Queensboro Bridge to examine the condition of the critical details in the top chord of the truss. Lastly, a new package of technologies will be tested for effectiveness on monitoring the condition of the high-strength wires in the Manhattan Bridge cables.

Preventive maintenance is essential to preserve the City's multi-billion dollar investment in its bridges. These steel and concrete structures must be protected from the stresses of weather, traffic, deterioration and neglect. In the last year alone, 22,247 square feet of concrete were used to renew sidewalks, curbs, and road decks; some 9,363 cubic yards of debris were removed; 1,316 bridge drains were cleaned; and crews eliminated 6,611,453 square feet of graffiti. DOT crews also eliminated 452 safety flag conditions that presented clear vehicle or pedestrian traffic hazards. Also, in the Department's ongoing attempts to minimize construction disruptions, we consistently used incentive and disincentive clauses in contracts to reward contractors who finish work early and penalize contractors who finish work late.

The Division's proud tradition of design and engineering excellence was recognized with awards from various entities, including:

- The American Council of Engineering Companies of New York's Platinum Award for the rehabilitation of the Metropolitan Avenue Bridge over English Kills.
- The New York Tri-State Metro Chapter of the Design Build Institute of America selected the re-decking project on the Belt Parkway Bridge over Mill Basin as the Transportation (Highways/Bridges) Project of the Year. In addition, NYCDOT was selected as the Owner of the Year, acknowledging our being at the forefront in developing and fine-tuning our Design-Build process.

New York City has a rich tradition of bridge design, construction, maintenance and administration. The Department of Transportation appreciates the importance of its duties and responsibilities, and the Division of Bridges is proud to shoulder the task of maintaining and rehabilitating our city's vital bridge infrastructure.

Sincerely,

A handwritten signature in black ink, appearing to read 'Janette Sadik-Khan', followed by a period.

Janette Sadik-Khan
Commissioner

EXECUTIVE SUMMARY

Inventory

In calendar year 2007, the inventory of bridges under the jurisdiction of the Division increased to 789. NYCDOT owns, operates, and/or maintains 758 non-movable bridges, 25 movable bridges, and six tunnels. Over the past 10 years, there has been a mostly steady decline in the number of bridges rated "Poor," and a somewhat steady increase in the number of bridges rated "Very Good," as shown below.

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Poor	24	16	13	9	8	4	6	4	3	3
Fair	516	507	481	459	451	429	456	458	456	459
Good	154	160	180	196	202	209	212	210	210	215
Vgood	75	81	85	88	94	111	116	118	118	111
Closed										1
	769	764	759	752	755	753	*790	790	787	789

* In 2004, 32 Department of Parks and Recreation structures, 1 Department of Education structure, and 7 Division of Ferries structures were absorbed into the inventory. 30 of these additions (22 from Parks, 6 from Ferries, and the 1 from Education) are rated "Fair," which accounts for the increase in Fair rated bridges. 1 of the Parks additions is rated "Poor."

The City has three bridges that were rated "poor" after their last inspections. A poor rating means that there are components of the bridge that must be rehabilitated; it does not mean that the bridge is unsafe. If a bridge was deemed unsafe, it would be closed. The term "structural deficiency" is an engineering term-of-art used by the Federal government to indicate a defect requiring corrective action. According to the FHWA, "'structurally deficient' means there are elements of the bridge that need to be monitored and/or repaired. The fact that a bridge is 'deficient' does not imply that it is likely to collapse or that it is unsafe. It means they must be monitored, inspected, and maintained." Because we use the New York State rating system, we do not use that term and instead use the terms "very good", "good", "fair" and "poor". As with the Federal term, the terms "fair" and "poor" describe the condition of bridge elements and whether they are functioning as designed. Although these elements are not considered hazardous, the ratings are used to determine whether the elements require repair or rehabilitation. Again, any bridge deemed unsafe would be shut to the public.

The three City bridges that are rated "poor" include the movable Belt Parkway Bridge over Mill Basin, which is scheduled to be replaced with a fixed structure with a 60-foot clearance over Mean High Water, obviating the need for opening and closing the structure to accommodate tall vessels. This bridge is part of the seven-bridge Belt Parkway Program. Group 2 (Gerritsen Inlet and Mill Basin Bridges) is expected to start in summer 2010, and to be complete in summer 2014.

The second is a pedestrian bridge at 78th Street over the FDR Drive. The columns on this bridge have been shored and there is shielding under the concrete to protect against spalling. As a result, the bridge remains safe until its reconstruction which is expected to begin in about a year.

The third bridge is the Brooklyn Bridge. It was given a "poor" rating during its last inspection because there are certain elements of the bridge that need to be rehabilitated. While the main spans are in good condition, the decks on both the Manhattan and Brooklyn ramps to the bridge are aging and will be replaced during a rehabilitation project beginning in 2010. It should be noted that of the 75 spans of the bridge, only 6 spans contribute to the low condition rating. None of them are among the three suspended spans (i.e. between the anchorages).

Contract Acceleration

Acceleration measures are a contract provision used in some reconstruction projects that is implemented through a contract pay item. This contract provision provides a mechanism to implement measures to accelerate the contractor's work to maintain critical path milestones. This provision does not apply to measures undertaken by the contractor to make up for time it lost in the progress schedule. Only the NYCDOT representative invokes this provision when the contract schedule is compromised due to unforeseen conditions during construction that are out of the contractor's control, and when it is deemed in the City's interests to accelerate.

Incentive and disincentive clauses are another contract provision used in some reconstruction projects that is implemented through a contract pay item. Under this provision, the contractor is compensated a certain amount of money for each day if the identified work in a critical milestone is completed ahead of schedule and is assessed a deduction for each day the contract overruns the allocated time. The amounts for the I/D clauses are based upon such items as traffic safety, maintenance and road user delay costs, Resident Engineering & Inspection (REI) expenses and cost of traffic enforcement agents. These amounts are implemented in accordance with guidelines established by Federal Highway Administration (FHWA).

2007 was a year in which the use of incentives/disincentives resulted in the early completion of one bridge project:

Contract #11 on the Manhattan Bridge - The roadway was reopened on October 1, 2007. The contractor will be paid the maximum incentive of \$3.9 million for early completion of the work related to the opening of the lower roadway.

East River Bridges Anti-Icing Program

The Division's Anti-Icing Program uses the liquid chemical potassium acetate and aggregate chemical sodium acetate. The anti-icing fleet consists of twenty-two spray trucks, six plow trucks and several smaller plows. Ten of the spray trucks are combination spray/plow trucks with a 1,000 gallon tank capacity, and five are spray-spreader/plow trucks with a 360 gallon spray capacity, and a nine cubic yard spreader capacity. There are twenty chemical storage tanks, with a total storage capacity of 114,250 gallons.

In the winter of 2006-2007, a total of 51,300 gallons of potassium acetate and 62 tons of sodium acetate were applied on the roadways of all four East River Bridges.

Hamilton Avenue Asphalt Plant Emergency Repairs

In late 2007, the existing support system for the conveyor platform of the Roadway Repair and Maintenance Division's Hamilton Avenue Asphalt Plant exhibited some settlement. This rendered the plant inoperable. Our staff was requested to perform the urgent total design of a new support system. The Surveying Unit conducted field measurements of the damaged structure on December 7, 11, 20, and 21, 2007. Within two weeks, the In-House Design staff designed the system and prepared fabrication drawings for the Bridge Maintenance, Inspections and Operations Bureau. The Division's In-House Repair personnel then fabricated and installed the side frames, bracings, and I-beams necessary to restore operations at the facility. Additional emergency repairs were also made to the drum, conveyor belt, and hopper. Upon completion, Division bridge painters painted the new steel. The plant is now operational and 400 tons of asphalt were processed on January 21, 2008.

Marine Borer Remediation

In October 1999, the Department began a study to assess the present damage caused by marine borers as well as the potential for future damage at several waterfront DOT structures, including the supporting structures of the relieving platforms along the FDR and Harlem River Drives, and the timber piles and structures of the Carroll Street and Ocean Avenue bridges in Brooklyn. The underwater inspection of timber piles supporting the FDR Drive began on May 8, 2000. Inspection of the Brooklyn sites was conducted during the week of October 23, 2000. The inspections were completed in October 2000, and the Marine Borer Evaluation Report was published in June 2001. Using the results of the underwater inspections, preliminary plans were developed for the implementation of repairs and remediation measures to protect the structures from attack. These preliminary plans were completed in December 2001. The final design is in progress. Mitigation work for the impact of the construction on the bodies of water will be done under a separate contract. The construction work is expected to commence in November 2008.

2007 Awards

In 2007, the outstanding work of the Division was recognized by the receipt of several awards. In March 2007, the American Council of Engineering Companies of New York selected the rehabilitation of the Metropolitan Avenue Bridge over English Kills for a Platinum Award (in the structural systems category) in its 2007 Engineering Excellence Awards.

In October 2007, the New York Tri-State Metro Chapter of the Design Build Institute of America selected the re-decking project on the Belt Parkway Bridge over Mill Basin as the Transportation (Highways/Bridges) Project of the Year. In addition, NYCDOT was selected as the Owner of the Year, acknowledging our being at the forefront in developing and fine-tuning our Design-Build process.

The dedication and hard work of all members of the Division ensures that the Department is stronger than ever and more capable than ever to meet the challenges of maintaining a diverse and impressive bridge infrastructure.

DIVISION OVERVIEW

The New York City Department of Transportation's Division of Bridges is comprised of six major bureaus. The **Chief Bridge Officer** is responsible for formulating policy and providing executive direction. He oversees all aspects of the design, construction, rehabilitation and reconstruction, maintenance, operation and administration of the 789 bridges (including 6 tunnels), and 61 culverts presently under the jurisdiction of the New York City Department of Transportation (NYCDOT). In addition to broad supervision, the Chief Bridge Officer also provides overall executive and administrative direction for the Division of Bridges, and ensures that all contractors are promptly paid.

Reporting to the Chief Bridge Officer, the **Community Affairs Unit** maintains liaison with elected officials, community boards, community groups, and civic/neighborhood associations. The Unit takes a pro-active approach in addressing roadway closures and detours by reaching out to communities prior to the onset of construction. This enables the Division to proceed with its rehabilitation program with community input, and allows the Agency and its contractors to co-exist in a more harmonious manner with the community surrounding the project. Issues and problems of concern to the communities are brought to the attention of the appropriate Division personnel and addressed.

The **Specialty Engineering and Construction Bureau** is responsible for all **Component Rehabilitation** activities, **Emergency Declarations/Specialty Engineering Services**, **Bridge Painting**, and the **When and Where Unit**.

Component Rehabilitation is the revamping or replacement of damaged, worn or defective bridge components. This type of work is performed primarily on those structures not classified as being "deficient," but which contain specific components that have low condition ratings. By rehabilitating these components, the Division can ensure that these bridges remain in "good" or "very good" condition; usually extending the bridge's useful life by up to 10 years. Section Heads or Engineers-in-Charge (E.I.C.'s) report to the Director of Component Rehabilitation. Each is assigned a specific bridge, or bridges, for which they are responsible for all component rehabilitation activities. In addition, the Component Rehabilitation Unit will be administering a new capital When and Where contract. The When and Where Unit will be responsible for the active construction and daily monitoring and supervision of the contract.

The **Emergency Declarations/Specialty Engineering Group** provides technical and procurement expertise related to the following areas: preparing Emergency Declarations for unsafe conditions that require immediate remediation; assisting the Chief Bridge Officer in the contractor selection process for declared emergency situations; providing technical expertise related to the development, procurement and administration of Design-Build contracts throughout the various areas of the Division; preparing and administering Design-Build agreements; and supervision of Design-Build project design, construction, and inspection services.

The **Bridge Painting** section's function is to maintain the protective coating of the City's bridges. The section is divided into two programs, the in-house (expense) program and the capital program. The capital program oversees total paint removal and repainting, performed by contractors; this is done at twelve-year intervals on bridges measuring more than 100,000 square feet of painted area, and bridges over railroads. In-house personnel provide the inspection services on East River Bridge preventive maintenance contracts for quality control purposes. The in-house program is responsible for full steel painting of bridges measuring less than 100,000 square feet, and bridges that are not over railroads. This includes local surface preparation of deteriorated areas and overcoating of the entire bridge. In addition, the in-house program is responsible for salt splash/spot painting. Spot painting was eliminated in Fiscal Year 2008. In the old cycle, salt splash/spot painting was performed five years after full steel painting, and spot painting was performed four years after salt splash/spot. Three years after spot, we once again performed full steel painting. The interval between full steel applications was twelve years.

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In the new cycle, salt splash/spot painting is performed four years after full steel painting, and again four years later. After another four years, we once again perform full steel painting. The interval between full steel applications remains twelve years.

It was determined that the painters were performing salt splash/spot even if the cycle only called for spot. The interval from full steel to salt splash/spot was shortened due to a shorter than expected durability of the paint in the salt splash zone after full steel painting.

Members of the in-house program respond to emergency flag repairs alongside the in-house repair forces, to perform surface preparation prior to, and painting upon completion of, the steel work. In-house painting personnel also perform environmental clean-up after the iron workers finish their repair work.

The engineers and inspectors of the ***When and Where Unit*** supervise the contractors' repairs of structural and safety flags citywide under both marine and general repair contracts, as well as a new capital contract. The use of these contracts allows the unit greater flexibility in deploying the contractors' resources as necessary, and in obtaining a variety of construction equipment and materials that are not readily available to in-house forces. In addition, the unit responds to bridge emergencies, providing on-site inspection to verify field conditions, taking measurements for repairs and providing emergency lane closures. The section also supervises the repair work performed during night hours to reduce the impact on traffic and on public safety.

The Deputy Chief Engineer for Specialty Engineering and Construction also acts as the **Deputy Chief Bridge Officer**, assuming the responsibilities of the Chief Bridge Officer in that person's absence.

The **East River and Movable Bridges Bureau** is responsible for all design and construction activities for all rehabilitation/reconstruction work that is planned, or currently taking place on the four East River Bridges, as well as all City-owned movable bridges and tunnels. This involves overseeing and supervising design consultants who prepare plans and specifications for bridge rehabilitation/reconstruction projects on the four East River Bridges and all Movable Bridges, as well as overseeing and supervising contractors, Resident Engineers and Inspection Consultants, and Construction Support Services Consultants during the construction phase.

This Bureau consists of two major areas: ***East River Bridges***, and ***Movable Bridges***. Each of these areas is headed by a Director to whom Section Heads or Engineers-in-Charge (E.I.C.'s) report. Each is assigned a specific bridge, or bridges, where they are responsible for all design and construction activities. The Directors, in turn, report to the Deputy Chief Engineer of the Bureau.

The **Bureau of Roadway Bridges** is responsible for both design and construction activities for all rehabilitation/reconstruction work that is planned, or currently taking place on all City-owned, non-movable bridges, with the exception of the four East River Bridges. This involves overseeing and supervising design consultants who prepare plans and specifications for bridge rehabilitation/reconstruction projects, as well as overseeing and supervising contractors, Resident Engineers and Inspection Consultants, and Construction Support Services Consultants during the construction phase.

This Bureau covers two major geographic areas; ***Brooklyn and Manhattan Bridges***, and ***Bronx, Queens and Staten Island Bridges***. In each geographic area, the workload is divided by Community Board. Engineers-In-Charge report to the Directors of each major area, who, in turn, report to the Deputy Chief Engineer of the Bureau.

DIVISION OVERVIEW

The **Engineering Review and Support Bureau** is responsible for providing Division-wide engineering support services. The following areas make up this Bureau: ***In-House Design, Engineering Support, Engineering Review, and Quality Assurance***.

In-House Design staff prepare plans and specifications for bridge rehabilitation/reconstruction projects that enable the Division to restore bridges considered “structurally deficient,” to a “very good” condition rating. This unit also handles urgent Division projects, as well as special projects under construction by the **Bureau of Bridge Maintenance, Inspections and Operations**. The Electrical Group reviews and/or prepares contract documents for the electrical and street lighting work for all projects in the Division’s capital program. They further review plans and specifications prepared by consultants.

The ***Engineering Support Section*** is comprised of three units: *Specifications, Surveying and Load Rating, and Records Management*.

The *Specifications Unit* prepares and reviews specifications for all City-let in-house and consultant-designed bridge construction projects, processes the contracts for bidding, prepares and transmits addenda, maintains and updates City bridge construction boiler plates, and maintains an inventory of all NYC and NYS special specifications used in City-let bridge projects.

The *Surveying and Load Rating Unit* performs the survey, inspection and load rating of bridges, monitoring of cracks and movements in bridge structures and settlement of foundations. This unit also performs corrosion potential testing in all bridge resurfacing projects.

The *Records Management Unit* establishes drafting, microfilming, and digital media standards for the archiving of bridge records. It reviews design, as-built and shop drawings prepared by consulting firms, as well as digital CDs, microfilm and indexes. This unit maintains original plan files, upgrades the records database and converts original drawings into electronic media formats. It also answers requests for information regarding records of City-owned bridges.

The ***Engineering Review Section*** consists of five units: *Engineering Review and Estimates, Utilities, Land Acquisition, Geotechnical Engineering, and Scope Development*.

The *Engineering Review and Estimates Unit* reviews all City-let bridge construction contract drawings; reviews drawings from other Agencies and entities, as well as State and private companies; and ensures that the work to be performed conforms to NYCDOT requirements. This unit establishes design standards, including seismic requirements, and oversees estimates prepared by consultants. It is involved in the preparation of Total Design Packages for the rehabilitation/reconstruction of poorly rated bridges. This unit also reviews superload truck permit applications, performs load analyses for the City’s bridges, reviews load postings for City owned bridges and provides architectural review of various projects. It is also responsible for inspecting City-owned retaining walls, identifying walls in poor condition, and creating an inventory of all City-owned retaining walls. Retaining walls in poor condition requiring immediate attention are referred to in-house repair staff or When and Where contractors. Information on poorly rated retaining walls is also forwarded to the New York City Department of Design and Construction (DDC) for permanent rehabilitation. Walls of questionable ownership are researched for ownership and jurisdiction. Thus far, 617 City owned retaining walls (along major streets) have been inspected and inventoried; 25 of which have been found to be in poor condition. DDC has been requested to accelerate the rehabilitation of these walls. A consultant has been assisting the unit in the inspection, condition assessment, temporary repair design, inventorying and budgeting for the permanent rehabilitation of the retaining walls.

The unit currently provides engineering review supervision of private developers’ projects supervision such as the Atlantic Yards Project, the Eastside Access Project, the Riverside South Project, and the Yankee Development Project. In addition, the unit conducts other, non-bridge engineering projects, such as the annual balloon wind study for the Macy’s Thanksgiving Day Parade.

The *Utilities Unit* coordinates all issues related to utility design as they affect City-owned bridge projects and related projects.

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The *Land Acquisition Unit* reviews and maintains a database of easement issues, right-of-way, and Uniform Land Use Review Procedures (ULURP). This unit also reviews Design reports and Environmental Impact Statement (EIS) of various other Agency projects with respect to their impact on City-owned bridges.

The *Geotechnical Engineering Unit* provides geotechnical-engineering services and oversees seismic design requirements for City-let contracts for bridge projects.

The *Scope Development Unit* reviews inspection reports and structural condition ratings to develop the scope of work for the rehabilitation of deficient bridges, and initiates the procurement of Design Consultant contracts.

The ***Quality Assurance Section*** ensures that materials installed for the Bridge Rehabilitation Program meet contractual requirements and are incorporated in strict compliance with plans and specifications. This section operates under its own formulated Quality Assurance Plan that is based on NYSDOT requirements and procedures. Quality Assurance has contractually retained the services of private inspection/testing firms. The provision of services required for various projects is better coordinated through this centralized method, which is also timely and cost effective.

Off-site Quality Assurance services relative to a wide variety of basic and manufactured construction materials including concrete, asphalt, soils, reinforcing steel, bridge bearings, structural steel and precast/prestressed structural components for all bridge projects, irrespective of the funding source, are handled by this section. Through its engineers at bridge construction sites, Quality Assurance ensures that only acceptable materials are incorporated into rehabilitation/reconstruction work in strict accordance with plans, specifications and acceptable construction practice. Current major projects include the Manhattan, Williamsburg, 145th Street, Willis Avenue, Roosevelt Island, 20th Avenue, Hamilton Avenue, and Grand Concourse Bridges, as well as the Brooklyn Bridge travelers.

Through its *Environmental Engineering Unit*, Quality Assurance also oversees the implementation of the Final Environmental Impact Statement (FEIS) on bridge construction projects involving the removal and disposal of lead-based paint. The unit's active involvement in training the supervisors and overseeing the abrasive blasting operations has resulted in the successful completion of various paint removal projects. This unit also oversees the proper and safe disposal of other hazardous waste and regulated waste encountered during construction activities.

In addition to enforcing the lead paint removal protocols, the unit handles other environmental concerns. Typically, the unit participates in the design stage to ensure that any environmental issues are addressed during the construction phase of the project. These issues include, but are not limited to, asbestos abatement, soil sampling, groundwater sampling, remediation of contaminated soils and groundwater, worker exposure to environmental contaminants, management of waste oil, storage of hazardous waste, site safety, and OSHA compliance. The role of this unit in ensuring public safety has been recognized and commended by the community.

The unit continues to monitor waste water discharge for numerous projects involving the generation and disposal of waste water, such as the Willis Avenue and Roosevelt Island bridges. The unit is responsible for discharge monitoring in conjunction with the NYS SPDES Discharge Permits for discharges at the Eastern Boulevard Bridge, Hunters Point Avenue Bridge, Greenpoint Avenue Bridge, Cropsey Avenue Bridge, Hamilton Avenue Bridge, Manhattan Plaza Underpass, Battery Park Underpass, and the Metropolitan Avenue Bridge. The unit continues to provide environmental oversight and compliance on major capital projects such as the Willis Avenue Bridge, Hamilton Avenue Bridge, Roosevelt Island Bridge, Manhattan Bridge, Williamsburg Bridge and the Queensboro Bridge, as well as Component Rehabilitation, Roadway Bridge, and Design/Build projects.

DIVISION OVERVIEW

The **Bureau of Bridge Maintenance, Inspections and Operations** employs almost 500 engineering, professional, administrative, and skilled trades employees in the maintenance and smooth operation of New York City's elevated infrastructure; it is composed of five major sections:

The ***Flag Engineering*** section is an engineering group that reviews, routes, and tracks hazardous or potentially hazardous safety and structural conditions ("flags") in or on the city's 789 bridges (including 6 tunnels). The Flags staff is on call 24 hours a day to respond to bridge emergencies. The section can be alerted to flag conditions by city and state inspectors and other sources, such as the Communications Center. All conditions undergo an evaluation involving review of the flag report, photographs of condition, and, if necessary, a visit to the site. Subsequently, a "flag packet" describing the type of repair or response that is required is created and routed to an appropriate group, in-house or contractor, for elimination. Flags engineers supervise repair work performed by contractors. The section monitors the status of each flag, and reports on all activities on a monthly basis.

The in-house engineers and skilled trades personnel of the ***Bridge Repair Section*** perform repairs to address flagged conditions. Flag repairs include structural and safety work, such as the repair of steel members damaged by corrosion or accident impact, the replacement of box beams and bridge railings, the replacement of roadway gratings, repairs to traffic control devices, and the rebuilding of wooden walkways. Much of this work is performed in the off-hours, either to accommodate traffic or in response to emergencies.

This section also rehabilitates and replaces damaged, worn, or defective components whose failure can affect service. This type of work, known as *Corrective Repair*, primarily involves the electrical, mechanical and operational control systems for the twenty-five movable bridges, as well as the travelers (movable underdeck access platforms) on the four East River bridges. The Bridge Repair Section is also responsible for the lubrication of the movable bridges as well as the mechanical components and the main cables of the East River bridges. In addition, this section administers federally funded contracts for the preventive maintenance of the four East River Bridges.

The ***Inspections and Bridge Management*** section performs three essential functions: *Bridge Inspections, Bridge Management, and Research and Development*.

The *Inspections Unit* inspects the city's bridges in accordance with state and federal standards; monitors bridge conditions with a high hazard potential, such as temporary repairs, outstanding flags, and fire hazards; responds to emergency inspection requests from NYCDOT and external sources; recommends repairs and remedial measures for hazardous conditions; generates flag and inspection reports for the Division; engages in special programs such as non-destructive monitoring of sensitive bridge components by advanced techniques; supervises inspections by consultants working for the Division; conducts inspections and inventories of expansion joints; conducts acoustic emission monitoring; and inspects non-structural cladding.

The *Bridge Management Unit* develops and maintains the database for the City's bridge inventory, condition ratings, and inspection information. The unit is also responsible for maintaining records of privately-owned bridges in the City. The database is the source of information used in a variety of reports, including the present Bridges and Tunnels Annual Condition Report. This unit uses the bridge and span condition database to determine current and future needs for bridge rehabilitation, bridge component rehabilitation, flag forecasting, inspections and monitorings.

This Section is also responsible for investigating new materials and methods to improve existing bridge conditions. It sponsors a series of lectures by experts on subjects relevant to design, construction, and maintenance, such as seismic retrofitting of bridges, salt substitutes, cathodic protection against corrosion, concrete patching materials, new paint strategies, non-destructive bridge testing, and deck resurfacing. The unit also participates in research programs with interested transportation and infrastructure entities. The unit contributed to the 1999 update of the Preventive Maintenance Manual for NYC bridges. In conjunction with the Port, MTA Bridges

DIVISION OVERVIEW

and Tunnels, and NYS Bridge Authorities, it sponsored a report on suspension bridge cables that led to a federal project for the entire United States. A number of articles on bridge management are published by the unit in technical journals in the United States, Japan, France, and elsewhere. This section created the system for generating bridge inspection reports with portable computers; a similar system is now being adopted by the NYSDOT.

Preventive Maintenance is a vital part of the overall bridge program. This section is responsible for functions including debris removal; mechanical sweeping; pointing of masonry brick and block; and emergency response, such as snow removal, oil/cargo spills, and overpass hits. The section also performs some corrective repair work such as asphalt and concrete deck repairs, sidewalk patching, fence repair, and brick and masonry repairs. Preventive Maintenance is responsible for conducting the Department's anti-icing operations on the four East River bridges.

Bridge and Tunnel Operations is responsible for operating the 25 City-owned movable bridges that span city waterways. This section operates under a variety of federal mandates that call for 24-hour coverage at many locations; its mission is to provide safe and expedient passage to all marine and vehicular traffic under and on movable bridges. In calendar year 2007 Bridge Operations effected a total of 5,552 openings, 4,652 of which allowed 8,176 vessels to pass beneath the bridges. The remaining 900 openings were for operational and maintenance testing. The section also operates the city's six mechanically-ventilated tunnels, performing electrical maintenance and arranging for roadway cleaning.

The overall mission of the Bureau of Bridge Maintenance, Inspections and Operations is to maintain the structural integrity of elevated structures and tunnels and to prolong their life by slowing the rate of deterioration. While our objective may be seen as "maintaining the status quo" of the infrastructure, we continue to take a new look at our methods, procedures, and general focus as we formulate our operational plans for the next several years.

As more bridges are rehabilitated, it becomes incumbent upon us to protect the government's investment in the infrastructure by developing and implementing a more **substantive preventive maintenance program** to keep these bridges in good condition.

The **Bureau of Management and Support Services** provides essential administrative and analytic services to each of the operational bureaus of the Division of Bridges. The Bureau is divided into six primary sections: **Office of the Executive Director, Administrative, Budget, Capital Procurement, Capital Coordination and Truck Sections**. Each highly-specialized section is designed to address those issues and requirements that are critical to the operation of the respective Bureaus within the Division.

In addition to the Division-wide responsibility for conflict resolution, Equal Employment Opportunity (EEO) enforcement, confidential investigations, Bridges' Engineering Service Agreements, space allocation, mail delivery, and special projects, the **Executive Director** oversees, on an executive level, the following areas and functions:

The **Director of the Administrative Section** oversees and administers all administrative/personnel-related functions for the Division, acting as a liaison with the Central Personnel Coordinator in NYCDOT Personnel including, but not limited to, recruiting for vacancies (this includes reviewing for completeness and submitting the necessary paperwork, and reviewing and distributing candidates' resumes); maintaining all Managerial Position Descriptions; maintaining all Division organization charts; scheduling EEO training; confidential investigations; maintaining records of IFA-funded positions; initiating and assisting in resolving disciplinary/grievance actions; serving as Conflicts of Interest and Financial Disclosure Officer; collecting and reviewing managerial and non-managerial performance evaluations; absence control; providing interpretive advice to Division management regarding City and Agency policy and procedures; and overseeing telephone and facility-related issues for personnel located at Two Rector Street and 59 Maiden Lane in Manhattan. The Director of Administration also serves as the Deputy Director of the Bureau of Management and Support Services, and assumes the responsibilities of the Executive Director in that person's absence.

DIVISION OVERVIEW

The Director of the Administrative Section also oversees the following two units:

The *Analytic Unit* prepares comprehensive bi-weekly and monthly reports that address major issues confronting the Division; compiles statistical data detailing the Division's productivity; processes and monitors all FOIL requests; frames issues in which oversight assistance is required for use by the Division, NYCDOT Executive Management and the Mayor's Office; and prepares the City Charter-mandated ***Bridges and Tunnels Annual Condition Report***.

The *Vehicle Coordination Unit* tracks the placement and condition of all vehicles under the jurisdiction of Bridges. It maintains a database and prepares reports containing this information; provides information and reports to appropriate inquiring Divisions and Agencies such as the Auditor General's Office, NYCDOT Legal Department and NYCDOT Litigation Support Services; coordinates the assignments of vehicles and their movement throughout various borough field locations and job sites; prepares reports on Vehicle Status and replacement; prepares reports for the purpose of tracking Overnight Vehicle Assignments for all Division vehicles; receives and routes vehicle Accident Reports, Police Reports and Security Incident Reports relating to vehicle accident, theft and/or vandalism; coordinates priorities for vehicle and equipment repair with Fleet Services; prepares reports and memoranda regarding vehicle safety issues and communication procedures for NYCDOT Communication Center; and collects required documentation from field personnel for checking Driver Certifications with the Department of Motor Vehicles (DMV).

The ***Director of the Budget Section*** oversees the Division's entire expense budget process including, but not limited to, base-line preparation, spending plans, overtime control, financial plan changes, and budget modifications. The unit further oversees all Division-wide fiscal activities, including the establishment and monitoring of all IFA-related project budgets, while simultaneously ensuring that the budget and plans represent the Division's priorities.

The ***Capital Procurement Section*** serves as a liaison between the Division of Bridges and the Office of the Agency Chief Contracting Officer (ACCO). The duties of this unit include: overseeing the Division's capital consultant contracts from inception to completion; acting as liaison between engineers and the consultant programs unit, handling all engineering questions and answers; preparing status reports; and coordinating Railroad Force Account Agreements for Division construction projects.

Railroad Force Account Agreements are a vital component in the rehabilitation/reconstruction program since train traffic affects 325 (41%) of City-owned bridges. Careful cooperation between the NYCDOT and the various railroad agencies that service the metropolitan area is required. The Railroad Coordinator provides a single point of contact for all railroad issues. This coordination includes the use of railroad personnel for track safety, approval of reconstruction design drawings, track shutdowns and reductions in train service for bridge construction work. The coordinator informs managers of "typical" railroad problems and attempts to avoid them through proactive measures.

Our Legal Department and Division engineering staff work together to clarify force account language in an attempt to avoid ambiguity. New agreements are being designed to specify clearly when notices for outages or flagging protection are required, who will be responsible when outage/flagging is canceled, and specify those documents that can be audited to expedite reimbursement of bills. These additions will streamline payment processing.

NYCDOT bridge designers make every effort to prepare accurate and complete contract documents. Unfortunately, in many instances, the original design drawings for the deteriorating bridges no longer exist, and previous records of modifications and repairs are not available. When the contract documents for the bridge reconstruction projects do not accurately address conditions found in the field, Contract Change Requests (CCR) are needed. Change order work can not proceed until the CCR is registered. Due to the nature of bridge construction projects, change order work is often on the critical path. Any delay in the issuance of a change order affects the overall project, and adds substantial overruns to the final cost.

A tracking process for change orders has been implemented that significantly reduces the time for the approval process.

DIVISION OVERVIEW

The **Capital Coordination Section** is responsible for preparing, coordinating and updating the capital budget and capital program initiative within the Division of Bridges. Currently, the Division's Ten Year Capital Plan is worth approximately \$5 billion. This plan is designed to rehabilitate the City's bridges. Responsibilities include: administering and participating in the development and implementation of planning capital projects; acting as liaison with oversight agencies, DOT Administration and all responsibility centers within Bridges; developing and maintaining criteria by which the City's involvement in joint City/State projects is analyzed and evaluated; and determining applicability of projects for funding through the Federal Inter-modal Surface Transportation Efficiency Act (ISTEA).

The **Truck Section** issues Annual Overweight Load Permits (renewals only), Annual Self-Propelled Crane Permits, and Daily Oversize/Overdimensional/Supersize Truck Permits, all in accordance with the New York City Department of Transportation Policy and Procedures and the New York City Traffic Rules and Regulations.



In February 2007, a Permit Was Issued for the Move of a Boiler to Co-op City in the Bronx. The Boiler was Unloaded From a Barge at the Agency Conner Street Facility, and Was Later Delivered by Truck to Its Final Destination. The Total Weight of the Vehicle With the Boiler was Approximately 380,000 Pounds.



In April 2007, Permits Were Issued for the Visit of the New Orleans Streetcar "Desire" to New York City. The Streetcar Was Featured on "Good Morning America," and Was Available for Touring For Several Days Thereafter. (Credit: David Paul Gerber)



Child Exiting the Streetcar "Desire."

JANUARY

Springfield Boulevard Bridge over Belt Parkway (Queens)

Cleaning and painting of the bridge, which began in December 2006, was completed on January 11, 2007.

Hamilton Avenue Asphalt Plant (Brooklyn)

From January 16 through January 20, 2007, Division ironworkers repaired the plant's conveyor belt and hoppers, and installed plates.

Anti-Icing

Anti-icing crews were deployed on the East River bridges on January 18, 20, 21, and 22, 2007. During the January 20 deployment, seven applications of anti-icing chemicals were made. Icicle patrols monitored the Cross-Bronx Expressway, the Brooklyn-Queens Expressway, the FDR Drive, the Battery Park Underpass, and the Division's other tunnels.

State Assemblymember John Lavelle Tribute

The American flags on the Brooklyn Bridge, which had been lowered to half-mast by Division painters on December 27, 2006 in tribute to former President Gerald R. Ford, remained at half-mast in tribute to State Assemblymember John Lavelle, who died on January 24, 2007. Mr. Lavelle, 57, served in the Assembly for the 61st District since 2001. The flags remained at half-mast through January 29, 2007.



Brooklyn Bridge Flag at Half-Mast.

Anti-Icing

Anti-icing crews were deployed on the East River bridges on January 27, 28, and 30, 2007. During the January 28 deployment, five applications of anti-icing chemicals were made; during the January 30 deployment one application was made. Icicle patrols monitored the Cross-Bronx Expressway, the Brooklyn-Queens Expressway, the FDR Drive, the Battery Park Underpass, and the Division's other tunnels.

130th Avenue Bridges over Laurelton Parkway (NB & SB) (Queens)

Cleaning and painting of these bridges began and was completed in January 2007.

FEBRUARY

145th Street Bridge over Harlem River (Bronx/Manhattan)

The float-in of the swing span was successfully performed on February 9, 2007.



Moving the New 145th Street Swing Span From South of the Third Avenue Bridge to the Site. Passing Under a Metro-North Railroad Bridge.



Floating In the New 145th Street Span in February 2007. (Close-up Credit: Bojidar Yanev)

Grand Concourse Bridge over East 161st Street (Bronx)

Stage IIB reconstruction began on February 10, 2007 with the commencement of work on the east side of the Grand Concourse from 161st to 166th Streets.

Anti-Icing

Anti-icing crews were deployed on the East River bridges on February 1 and 2, 2007, and bridge decks were checked during the February 7 flurries; no applications of chemicals were made during this period. Icicle patrols monitored the Cross-Bronx Expressway, the Brooklyn-Queens Expressway, the FDR Drive, the Battery Park Underpass, and the Division's other tunnels.

Anti-Icing

Anti-icing crews were deployed on the East River bridges on February 12 and again on February 13 and 14, 2007. During the latter period, 27 applications of anti-icing chemicals were made. Priority overpasses and pedestrian walkways were cleared, and icicle patrols monitored the Cross-Bronx Expressway, the Brooklyn-Queens Expressway, the FDR Drive, the Battery Park Underpass, and the Division's other tunnels.

Anti-Icing

Anti-icing crews were deployed on the East River bridges the night of February 17, 2007; no application of chemicals was necessary. Icicle patrols monitored the Cross-Bronx Expressway, the Brooklyn-Queens Expressway, the FDR Drive, the Battery Park Underpass, and the Division's other tunnels.

Greenpoint Avenue Bridge over Newton Creek (Brooklyn/Queens)

On February 19, 2007, a crane barge in the vicinity broke loose from its mooring and wedged itself under the east leaf of the bridge. At low tide, the bridge was opened and the Coast Guard had the barge removed. The bridge was out of service to marine traffic from 7:20 a.m. to 3:30 p.m. There was only slight damage to the catwalk.



Barge Stuck Under the Greenpoint Avenue Bridge. Coast Guard Arriving to Investigate.

Hamilton Avenue Asphalt Plant (Brooklyn)

On February 24, 2007, Division ironworkers repaired the plant's bin grates, chutes, and shelves.

Anti-Icing

Anti-icing crews were deployed on the East River bridges the nights of February 22 and 25, 2007; during the latter ten applications of chemicals were made. Icicle patrols monitored the Cross-Bronx Expressway, the Brooklyn-Queens Expressway, the FDR Drive, the Battery Park Underpass, and the Division's other tunnels.

MARCH

Award

In March 2007, the American Council of Engineering Companies of New York selected the rehabilitation of the Metropolitan Avenue Bridge over English Kills for a Platinum Award in the structural systems category in its 2007 Engineering Excellence Awards. Founded in 1921, ACEC New York is the oldest continuing organization of professional consulting engineering firms in the United States. The Engineering Excellence Awards Program recognizes engineering achievements that demonstrate the highest degree of skill and ingenuity.

The \$39 million rehabilitation project began on October 10, 2003. The project's scope of work included rehabilitation of the existing bridge superstructure, substructure, and approaches, replacement of the existing mechanical and electrical systems for the bascule span, and reconstruction of the Bridge Operator House.

Onsite construction was carried out in three stages. Stage I reconstruction of the bridge began on March 15, 2004. The bridge was divided in two distinct halves, north and south, with the first stage of rehabilitation commencing on the north half. Stage II reconstruction of the bridge began on February 16, 2005. This stage included the demolition and reconstruction of the south half of the structure and mechanical systems. The bridge was re-opened to all lanes of traffic at 5 AM on November 18, 2005.

Incentives and disincentives were tied to the completion of Stage I and Stage II and the opening of each half of the bridge to traffic. The contractor received the maximum project incentive of \$900,000. The reconstruction of this bridge was substantially completed on September 18, 2006.



Bridge Opening With New Machinery And New Warning And Safety Gates.



Tugboat Pushing a Barge Under the Open Metropolitan Avenue Bridge.



Northeast View of the Metropolitan Avenue Bridge.

Mosholu Parkway Retaining Wall at Major Deegan Expressway (Bronx)

On March 2, 2007, in response to a report of a partial wall collapse, we inspected this State-owned wall. It was determined that the wall itself was sound, and what collapsed was façade. The State later removed the remaining façade and repaired the wall with formliner.



Inspecting the Mosholu Parkway Retaining Wall.

Anti-Icing

Anti-icing crews were deployed on the East River bridges on March 5 and March 7, 2007; during the latter ten applications of chemicals were made. Priority overpasses were cleared, and icicle patrols were active on the Cross-Bronx Expressway, the Brooklyn-Queens Expressway, the FDR Drive, and the Battery Park Underpass.

Hamilton Avenue Asphalt Plant (Brooklyn)

On March 10, 2007, Division ironworkers repaired the plant's scale, drum, and hopper. On March 17, 2007, they repaired the drum and conveyor belt.

Roosevelt Island Bridge over East River/East Channel (Manhattan/Queens)

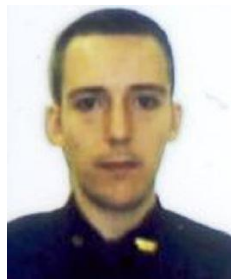
A Notice to Proceed for the reconstruction of this bridge was issued to the contractor with a start date of March 12, 2007.

Anti-Icing

On March 16, 2007, 5.5 inches of snow fell in Central Park, 4.5 inches at La Guardia Airport, and 2.7 inches at JFK Airport. Anti-icing crews were deployed on the East River bridges from 5:00 AM on March 16 until noon the following day; 18 applications of anti-icing chemicals were made. Priority overpasses were cleared, and icicle patrols were active on the Cross-Bronx Expressway, the Brooklyn-Queens Expressway, and the FDR Drive, as well as on selected bridges.

Auxiliary Officers Nicholas T. Pekearo and Yevgeniy Marshalik Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on March 16, 2007, in tribute to 6th Precinct Auxiliary Police Officers Nicholas T. Pekearo, 28, an aspiring writer, and Yevgeniy Marshalik, 19, a New York University student, who lost their lives in the line of duty during a shooting in Greenwich Village, Manhattan on March 14, 2007. They were the sixth and seventh auxiliary officers to die in the line of duty since the auxiliary police force was organized in 1951. Mr. Pekearo had been with the force since 2003, and Mr. Marshalik had been an auxiliary officer for 13 months. Mayor Michael R. Bloomberg granted them the City Award for Heroic Acts, a discretionary award outlined in the New York City Administrative Code. The award is eligible to individuals, other than peace officers, who sustain death or injuries while attempting to prevent the commission of a crime, preserve the peace or prevent public disturbances. The flags were raised on March 19, 2007.



Mr. Pekearo



Mr. Marshalik

Willis Avenue Bridge over Harlem River (Bronx/Manhattan)

On March 27, 2007, after a sizable through-hole developed, it was decided that a portion of the deck needed to be removed and replaced. The repairs were completed at 4:00 PM on March 28. Division crews took advantage of the closure to plate several other developing holes.



Willis Avenue Through-Hole Repairs. (Credit: Mohammad Awal)

Queensboro Bridge

March 30, 2007 marked the 98th anniversary of the opening of the bridge.



Queensboro Bridge.
(Credit: Russell Holcomb)

Harlem River Drive Northbound Ramp over Harlem River (Manhattan)

Cleaning and painting of the bridge, which began in August 2006, was completed in March 2007.

Henry Hudson Parkway Bridges (NB & SB) over the Ramp to 96th Street (Manhattan)

Cleaning and painting of these bridges began and was completed in March 2007.

APRIL

Anti-Icing

Anti-icing crews were deployed on the East River bridges on April 7, 2007 from 3:00 AM until noon; no applications of chemicals were necessary.

Grand Concourse Bridge over East 170th Street (Bronx)

Cleaning and painting of the bridge, which began in January 2007, was completed on April 11, 2007.

Manhattan Bridge

The final existing floorbeam of the lower roadway was removed and replaced on April 18, 2007.



Removal and Replacement of the Final Existing Manhattan Bridge Lower Roadway Floorbeam.



Placing the Final Floorbeam Into Position. Engineer-In-Charge Brian Gill (in Center) and Inspection Staff on the Lower Roadway.

Virginia Polytechnic Institute and State University Victims Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on April 19, 2007, in tribute to the 30 students and two professors at Virginia Polytechnic Institute and State University in Blacksburg, Virginia, who were shot to death on April 16 by another student with two guns. This mass shooting was the deadliest act of criminal gun violence in American history. Faculty, graduate and undergraduate victims who were killed in the attack included citizens from Egypt, Peru, Indonesia, India, Lebanon and Israel. The flags were raised on April 23, 2007.

Hamilton Avenue Asphalt Plant (Brooklyn)

On April 20 and 21, 2007, Division ironworkers repaired the plant’s hopper, trap door, and dryer.

Sixth Annual “Take Our Children to Work Day”

On April 26, 2007, as part of the Agency’s sixth annual “Take Our Children to Work Day,” Division personnel hosted children at the Carroll Street Bridge in Brooklyn, the Staten Island Ferry, and at Division headquarters at 2 Rector Street.



Chief Bridge Officer Henry Perahia With the Children. (Credit: Ghanshyam Patel)



Supervisor Bridge Operator Mohamed Adel Tork and Deputy Director of In-House painting Earlene Powell on the Carroll Street Bridge With the Children. (Credit: Ghanshyam Patel)



Children on the Staten Island Ferry. View of the Brooklyn Bridge From the Ferry. Children and Deputy Director Powell Visiting a Financial District Icon on their return to Division Headquarters. (Credit: Ghanshyam Patel)

Rose Avenue and New Dorp Lane Bridges over SIRT South Shore (Staten Island)

On April 10, 2007, Division inspectors issued safety flags for loose and falling concrete, and Division personnel began the emergency repair work to remove the loose concrete and install shielding under the bridge decks. This work was completed on April 28, 2007.



Inspecting the New Dorp Lane Bridge.

Flatbush Avenue Bridge over Belt Parkway (Brooklyn)

Cleaning and painting of the bridge, which began in April 2007, was completed on April 30, 2007.

CHRONOLOGY



Painting Flatbush Avenue Bridge over Belt Parkway. (Credit: Earlene Powell)

Site of Former Chestnut Avenue Bridge over Staten Island Railroad (Staten Island)

In April 2007, after the collapse of an abandoned abutment at the former bridge site due to heavy rains, Division personnel removed the remaining wall and fencing, and re-graded the embankment to prevent material from fouling the tracks. The Division of Traffic Operations and Consolidated Edison were also called in to remove a utility pole, which had become unstable. Before the pole was taken down, the street light was removed. The runoff was caused by the two heavy rainstorms. The west abutment was found to be in good repair, and no further action on the Division's part was required.



Department and Consolidated Edison Personnel at the Former Bridge Site. Executive Director of Bridge Preventive Maintenance and Repair Thomas Whitehouse (Fourth From Left, in Last Photo.)

Henry Hudson Parkway Bridge over Broadway (Bronx)

Cleaning and painting of the bridge, which began in November 2006, was completed in April 2007.

MAY

Macombs Dam Bridge over the Harlem River (Bronx/Manhattan)

May 1, 2007 marked the 112th anniversary of the opening of the bridge.



Macombs Dam Bridge. (Elevation Credit: Michele N. Vulcan)

Whitelaw Pedestrian Bridge over Conduit Avenue (Queens)

Cleaning and painting of the bridge, which began in April 2007, was completed on May 4, 2007.



Bridge Painters Reynaldo Grant, Joao Silva, Robert Avellino, Louis Masucci, Brian Kavanagh, and Joao Nascimento at the Whitelaw Pedestrian Bridge. Bridge Painter Reynaldo Grant. (Credit: Earlene Powell)



Bridge Painter Brian Kavanagh at the Whitelaw Pedestrian Bridge. Section of the Bridge. (Credit: Earlene Powell)

30th Annual Five Borough Bike Tour

In preparation for the 42-mile Five Borough Bike Tour on May 6, 2007, Division personnel placed fresh asphalt on the Pulaski Bridge, placed barrels around the portions of the uneven north upper roadway of the Queensboro Bridge, checked the ramping of plates on the Harlem River Drive, and swept the Madison Avenue, Third Avenue, Queensboro, and Pulaski Bridges.

The Five Borough Bike Tour is produced by Bike New York and the New York City Department of Transportation. Bike New York is a non-profit organization that promotes and encourages bicycling and bicycle safety through education, public events, and collaboration with community and government organizations. Best known for the Five Borough Bike Tour, Bike New York also organizes smaller rides and runs a Bicycle Education Program offering free classes and workshops for adults and children.



Mayor Michael R. Bloomberg at the Gracie Mansion Reception on May 15, 2007 in Honor of the 30th Anniversary of the Five Borough Bike Tour. Deputy Chief Engineer Russell Holcomb and Director of Bridge Preventive Maintenance Paul Schwartz.

Hamilton Avenue Asphalt Plant (Brooklyn)

On May 19 and 26, 2007, Division ironworkers repaired the plant's drum, chute, and conveyor belt.

Park Avenue Viaduct over East 42nd Street (Manhattan)

Cleaning and painting of the bridge, which recommenced in November 2006, was completed on May 22, 2007.

Brooklyn Bridge

May 24, 2007 marked the 124th birthday of the bridge.



Water Taxi Near the Brooklyn Bridge. (Credit: Peter Basich)
Roebling Memorial Plaque. (Credit: Michele N. Vulcan)

Woodhaven Boulevard Bridge over Atlantic Avenue (Queens)

Cleaning and painting of the bridge, which began in April 2007, was completed on May 26, 2007.



Bridge Painters Frank Hollen, Albert Pappas, Nicholas Krevatas, Henry Bollin, and Branko Grzanic, Supervisor Bridge Painter Georgeios Ploumis, and Bridge Painter Brain Kenny at the Woodhaven Boulevard Bridge. Supervisor Bridge Painter Georgeios Ploumis.
(Credit: Earlene Powell)

3rd Street Bridge over Gowanus Canal (Brooklyn)

Due to heat expansion, the bridge was closed to marine traffic beginning at 10:16 AM on May 27, 2007. It was returned to service at 11:00 PM that night.

Macombs Dam Bridge over the Harlem River (Bronx/Manhattan)

The reconstruction of this bridge, which began in April 1999, was substantially completed on May 29, 2007.



Macombs Dam Bridge in May 2007.

JUNE

Hamilton Avenue Asphalt Plant (Brooklyn)

On June 2, 14, 15, and 16, 2007, Division ironworkers repaired the plant's main drum.

145th Street Bridge over Harlem River (Bronx/Manhattan)

All four lanes of the bridge were opened to vehicular traffic at 7:00 AM on June 16, 2007.



Division and Contractor Personnel at the Reopening of the 145th Street Bridge, Including: Civil Engineer Rafeek Shaker (2nd From Left), Chief Bridge Officer Henry Perahia (4th From Left), Deputy Chief Engineer Jay Patel (7th From Left), Administrative Engineer Robert Collyer (5th From Right), Civil Engineer Hani Faouri (2nd From Right), and Assistant Civil Engineer Khalid Mohammed (On Right). New Bridge Ready for Traffic.



New 145th Street Bridge Open for Marine Traffic.

Firefighter Daniel F. Pujdak Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on June 22, 2007, in tribute to Firefighter Daniel F. Pujdak of Ladder Company 146 in Brooklyn. Firefighter Pujdak, 23, was fatally injured while battling an all-hands fire in the Williamsburg section of Brooklyn on June 21. Firefighter Pujdak was the 1,135th member of the New York City Fire Department to make the supreme sacrifice in the Department's 143-year history. The flags remained at half-mast until June 27, 2007.



Firefighter Pujdak

Greenpoint Avenue Bridge over Newton Creek (Brooklyn/Queens)

Due to heat expansion, the bridge was closed to marine traffic beginning at 2:55 PM on June 26, 2007. It was returned to service at 10:20 PM that night.

Belt Parkway Bridge over Mill Basin (Brooklyn)

Due to heat expansion, the bridge was closed to marine traffic beginning at 4:55 PM on June 27, 2007. It was returned to service at 8:18 PM that night.

CHRONOLOGY

3rd Street Bridge over Gowanus Canal (Brooklyn)

Due to heat expansion, the bridge was closed to marine traffic beginning at 3:07 AM on June 27, 2007. It was returned to service at 11:58 PM on June 28, 2007.

West 207th Street/West Fordham Road over Harlem River (Bronx/Manhattan) (a.k.a. University Heights Bridge)

Due to heat expansion, the bridge was closed to marine traffic beginning at 12:05 PM on June 27, 2007. It was returned to service at 12:52 PM that afternoon. Further heat expansion closed the bridge to marine traffic from 3:20 PM on June 27, 2007 until 10:25 AM on June 28.

Hamilton Avenue Asphalt Plant (Brooklyn)

On June 30, 2007, Division ironworkers repaired the plant's drum, silo, and bins.

Hamilton Avenue Bridge over Gowanus Canal (Brooklyn)

Stage I reconstruction of the bridge began on June 30, 2007.

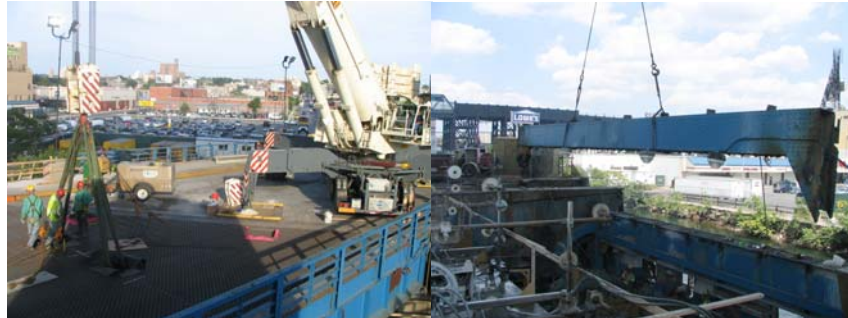
Guy R. Brewer Boulevard Bridge over Belt Parkway (Queens)

Cleaning and painting of the bridge, which began in May 2007, was completed in June 2007.

JULY

Hamilton Avenue Bridge over Gowanus Canal (Brooklyn)

The Manhattan-bound bascule span was removed in halves on July 2 and July 6, 2007.



Removing the East Span in July 2007.

Greenpoint Avenue Bridge over Newton Creek (Brooklyn/Queens)

Due to heat expansion, the bridge was closed to marine traffic beginning at 12:54 PM on July 10, 2007. It was returned to service at 8:10 PM that night. Further heat expansion closed the bridge to marine traffic from 4:10 PM until 9:57 PM on July 14.

Officer Russel Timoshenko Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on July 15, 2007, in tribute to Police Officer Russel Timoshenko of the 71st Precinct, who was fatally shot in Crown Heights, Brooklyn on July 9, 2007 while making a routine traffic stop. He succumbed to his injuries on July 14, 2007. Officer Timoshenko, 23, and a 1 ½ year veteran of the department, was posthumously promoted to the rank of Detective by Police Commissioner Ray Kelly. Officer Timoshenko was the 713th police officer to die in the line of duty. The flags remained at half-mast until July 20, 2007.



Police Officer Timoshenko

Manhattan Bridge Female Ironworker

Ambra Melendez, a contractor ironworker working on the Manhattan Bridge, and one of only 18 female ironworkers in New York City, was the subject of a feature in the July 17, 2007 edition of the Daily News.



Ambra Melendez on the Manhattan Bridge.
(Credit: Hasan Ahmed)

West 252nd Street Bridge over Henry Hudson Parkway (Bronx)

At about 4:30 AM on July 23, 2007, the Communications Center reported that a truck traveling south on the Parkway hit the bridge. The responding engineer found that the truck had hit the contractor's shield under the bridge. There was no structural damage to the bridge, but the steel beams of the shield exhibited scratch marks. The road was fully reopened about 6:20 AM. The contractor subsequently made minor repairs to the shielding.



Debris Under the West 252nd Street Bridge
Construction Shield After Accident.
(Credit: Mohammad Awal)

West 207th Street/West Fordham Road over Harlem River (Bronx/Manhattan) (a.k.a. University Heights Bridge)

Due to heat expansion, the bridge was closed to marine traffic beginning at 2:45 PM on July 25, 2007. It was returned to service at 7:00 PM that evening.

9th Street Bridge over Gowanus Canal (Brooklyn)

Due to heat expansion, the bridge was closed to marine traffic beginning at 7:30 AM on July 31, 2007. It was returned to service at 1:25 AM on August 1, 2007. Further heat expansion closed the bridge to marine traffic from 2:15 PM on August 1, 2007 until 1:08 AM on August 2.

Linden Boulevard Bridge over Conduit Avenue (Queens)

Cleaning and painting of the bridge, which began in June 2007, was completed in July 2007.

Sunrise Highway WB Bridge over Laurelton Parkway EB & Sunrise Highway WB Bridge over Laurelton Parkway WB (Queens)

Cleaning and painting of these bridges, which began in May 2007, was completed in July 2007.

AUGUST

Greenpoint Avenue Bridge over Newton Creek (Brooklyn/Queens)

Due to heat expansion, the bridge was closed to marine traffic beginning at 2:50 PM on August 1, 2007. It was returned to service at 3:25 AM on August 2.

Hamilton Avenue Asphalt Plant (Brooklyn)

On August 6, 2007, Division ironworkers repaired the plant's adjusting rod and motor drive. On August 24 and 25, 2007, they repaired the plant's scales, drum, and bins.

Manhattan Bridge

The north bikeway, which was closed since October 9, 2006 to enable the rehabilitation of the tower canopies and balconies over the bikeway, was reopened on August 6, 2007. The south walkway then reverted to pedestrian use only.

9th Street Bridge over Gowanus Canal (Brooklyn)

Due to heat expansion, the bridge was closed to marine traffic beginning at 2:50 PM on August 7, 2007. It was returned to service at 2:10 AM on August 8, 2007. Further heat expansion closed the bridge to marine traffic from 3:05 AM until 6:20 AM, and from 5:20 PM until 10:40 PM that night.

Pearl Street Triangle Plaza (Manhattan)

The Department, the DUMBO Improvement District, and local artists worked together to transform a barren parking island on Pearl Street at the side of the Manhattan Bridge into a vibrant pedestrian space. The plaza opened on August 9, 2007. The asphalt triangle was transformed with a green-painted floor, café tables and chairs, umbrellas and planters filled with flowers and trees. Great granite blocks from the Williamsburg Bridge now delineate the space, which also showcases a large abstract sculpture.



Pearl Street Triangle Plaza. (Credit: Peter Basich)

Firefighters Robert Beddia and Joseph Graffagnino Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on August 20, 2007, in tribute to Firefighters Robert Beddia and Joseph Graffagnino of Engine Company 24 and Ladder Company 5 of Battalion 2 in Manhattan. Firefighter Beddia, 53, a 23 year veteran of the department, and Firefighter Graffagnino, 33, an 8 year veteran, died in the line of duty while battling a seven alarm fire in the Deutsche Bank building on Liberty Street at Ground Zero on August 18. They were the 15th and 16th members from their firehouse to fall victim to fatal fires since 1994. That year, three firefighters died in an apartment blaze on Watts Street. Eleven more perished on September 11, 2001. Firefighters Beddia and Graffagnino were the 1,136th and 1,137th members of the New York City Fire Department to make the supreme sacrifice in the Department's 143-year history. The flags remained at half-mast until August 25, 2007.



Grand Concourse Bridge over East 161st Street (Bronx)

Stage IIIA reconstruction began on August 25, 2007.

Willis Avenue Bridge over Harlem River (Bronx/Manhattan)

A Notice to Proceed for the replacement of this bridge was issued to the contractor with a start date of August 27, 2007.

Hamilton Avenue Bridge over Gowanus Canal (Brooklyn)

The Manhattan-bound span reopened three days earlier than scheduled on the morning of August 31, 2007.



Deputy Chief Engineer of East River and Movable Bridges Jay Patel, Administrative Engineer Robert Collyer, and Chief Bridge Officer Henry Perahia at the Reopening of the Hamilton Avenue Manhattan-Bond Span. Open Span. Traffic on New Span.

Bruckner Expressway Southbound & Northbound over Amtrak & CSX (Bronx)

The nighttime emergency project to remove loose underdeck concrete, which began in July 2007, was completed in August 2007.

Shawn Samuels

Shawn Samuels, a Bridge Operator working since 2004, was the subject of the “Staff Spotlight” feature in the August 2007 edition of ‘Byways,’ the official Agency newsletter.



Bridge Operator
Shawn Samuels.

SEPTEMBER

Patriot Day Tribute

The Brooklyn Bridge flags flew at half-mast on September 11, 2007 to commemorate Patriot Day.



Brooklyn Bridge Flag at Half-Mast at Dusk.
(Flag Credit: Michele N. Vulcan)

Hamilton Avenue Asphalt Plant (Brooklyn)

On September 14 and 15, 2007, Division ironworkers performed emergency repairs on the plant's rap bin, chute, and conveyor belt. On September 22, 28, and 29, 2007, they performed emergency repairs on the plant's paddles, hopper, and crusher.

Belt Parkway Bridge over Ocean Avenue (Brooklyn)

Cleaning and painting of the bridge, which began in April 2007, was completed in September 2007.



Painting the Belt Parkway Over Ocean Avenue Bridge. (Credit: Earlene Powell) Bridge Painter Brian Casey, Deputy Director of In-House Painting Earlene Powell, Bridge Painters Anthony Attore and Samuel Martinez, and Supervisor Bridge Painter David Yanolatus.

Union Turnpike Bridge over Jackie Robinson Parkway (Queens)

Cleaning and painting of the bridge, which began in July 2007, was completed in September 2007.

OCTOBER

Manhattan Bridge

The lower roadway, closed on October 15, 2006, reopened on Monday October 1, 2007, earlier than the scheduled completion date of October 14, 2007.



The Completed Lower Roadway on the Brooklyn Side
And Near the Manhattan Colonnade.

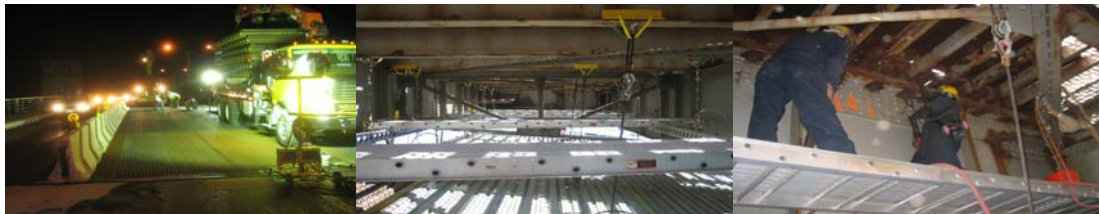
Awards

On October 9, 2007, the New York Tri-State Metro Chapter of the Design Build Institute of America honored the Design-Build re-decking project on the Belt Parkway Bridge over Mill Basin as the chapter's Transportation (Highways/Bridges) Project of the Year. The Institute advocates and advances single source project delivery within the design and construction community. Members include practitioners from all project phases, plus public- and private-sector project owners. The organization was founded in 1993.

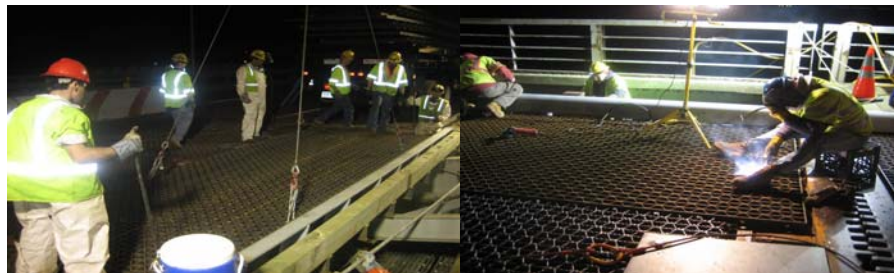
A Notice to Proceed for the project to replace the rapidly deteriorating bridge grid deck was issued to the contractor with a start date of October 25, 2005. The design was completed, and grid panel fabrication was underway at the end of 2005. Panel replacement began in spring 2006, and was completed on November 10, 2006. The project work expanded to address safety flags involving fender system work, as well as steel repair work. The replacement of the bridge grid deck was substantially completed on December 22, 2006. The new deck will serve traffic needs until April 2012. At that time, a new bridge carrying the Belt Parkway over Mill Basin will have been built and the existing one will be demolished.



Aerial View of the Belt Parkway Over Mill Basin Bridge. Director of Design-Build/Emergency Contracts Chris Sklavounakis and Deputy Director of Design-Build Beatriz Duran at the Award Ceremony.



Work Zone Protection Barrier. Below Deck Access For Panel Replacement. Removing Rivets.



Landing Panel On The Span. Welding New Panel At Toe Joint.

The second award presented by the Chapter on October 9, 2007 was for “Owner of the Year”, which acknowledged NYCDOT for being at the forefront in developing and fine-tuning our Design-Build process.

Grand Concourse Bridge over East 161st Street (Bronx)

Stage IIIB reconstruction began on October 2, 2007.

Grand Concourse Bridge over East 161st Street (Bronx)

Stage IIIC reconstruction began on October 19, 2007.

Willis Avenue Bridge over Harlem River (Bronx/Manhattan)

At approximately 5:00 AM on October 29, 2007, the Communications Center reported that a garbage truck traveling eastbound crashed, dislodging the Jersey barriers and destroying the impact attenuator. An emergency inspection resulted in the issuance of a safety flag. Division personnel responded and reset the barriers. The contractor also responded and repaired the attenuator by placing sand barrels. Three eastbound lanes at the Manhattan approach from 1st Avenue towards the bridge were closed from 6:00 AM until 11:00 AM.



Damaged Truck, Jersey Barriers, And Impact Attenuator.

Steinway Street Bridges over Grand Central Parkway WB & EB (Brooklyn-Queens Expressway) (Queens)

The reconstruction of these bridges was substantially completed on October 31, 2007.

American Cancer Society's "Making Strides Against Breast Cancer" Campaign

During September and October 2007, Division personnel and their friends and families participated in bake and book sales and other fundraisers, and sponsored Lourdes Acevedo and the DOT Staten Island Team for the American Cancer Society's annual "Making Strides Against Breast Cancer" walk.



Division Bake Sale Display. Michele Adimu and Lourdes Acevedo Preparing for Their Hungry Customers. (Credit: Peter Basich)

Northern Boulevard Bridge over Cross Island Parkway (Queens)

Cleaning and painting of the bridge, which began in September 2007, was completed in October 2007.

80th Street Bridge over 71st to 77th Avenues & LIRR (Queens)

Cleaning and painting of the bridge, which began in September 2007, was completed in October 2007.

NOVEMBER

New York City Marathon

In preparation for the Marathon on November 4, 2007, Division personnel inspected and cleaned the Queensboro, Pulaski, Madison Avenue, and Willis Avenue Bridges, and repaired potholes along the route. In addition, they re-configured the Jersey barriers and placed hay bales at the Queensboro Bridge. Standard traffic configurations were restored before the next morning rush hour.



Wheelchair Racer Winner on the 59th Street Ramp of the Queensboro Bridge: Austria's Kurt Fearnley. Female Racers on the Ramp: Ethiopia's Grete Wami (Wearing Red Shorts, Finished in 2nd Place), and Great Britain's Paula Radcliffe (Wearing Blue Shorts, Winner). (Credit: Paul Schwartz)



Male Racers on the 59th Street Ramp of the Queensboro Bridge: Morocco's Abderrahim Goumri (3rd From Left, Finished in 2nd Place), Kenya's James Kwambai (Wearing Light Blue Shorts, Finished in 5th Place), Kenya's Martin Lel (Wearing Red Shorts, Winner), and South Africa's Hendrick Ramala (On Right, 3rd Place). (Credit: Paul Schwartz) Carpeted Willis Avenue Bridge. (Credit: Edgardo Montanez)



Racers on the Manhattan Side of the Willis Avenue Bridge. Wheelchair Racers on the Bridge, Applauded by Bridge Operator Robert Costanza (Wearing Green Jacket). (Credit: Edgardo Montanez)

Brooklyn Bridge

The Manhattan side span traveler was removed on November 3, 2007. It was lowered onto a barge and shipped to a scrap yard in Staten Island for disposal. The Brooklyn side span traveler was removed on November 10, 2007. It was lowered onto a flatbed truck on Water Street and also transported to the Staten Island scrap yard. The Manhattan main span traveler was removed on November 16, 2007. The Brooklyn main span traveler was removed on November 17.

Grand Concourse Bridge over East 161st Street (Bronx)

Stage IVA reconstruction began on November 10, 2007.

Forest Avenue Culvert at Crystal Avenue (Staten Island)

The project to repair the damaged culvert, which began on November 8, 2007, was completed November 19, 2007.



Completing the Forest Avenue Culvert Repairs: Asphalt was Placed in Two Layers; Compacted With a 5-Ton Vibratory Roller; the Asphalt Joints Were Sealed; Nuclear Compaction Tests Were Performed; and All Forms Were Removed From the Underside of the Culvert. Completed Repair.

81st Annual Macy's Thanksgiving Day Parade

Division engineers reviewed and approved the design specifications of three new large balloons to be introduced in the parade, as follows: Shrek, Hello Kitty, and Abby Cadabby. A balloon is classified as large if it is larger than 5,000 cubic feet. However, the balloons in the parade cannot be taller than 70 feet, wider than 40 feet, or longer than 78 feet.

On November 8, 2007, Division representatives participated in the walk-through of the parade route with NYPD and other agencies. They also attended the test flights of the balloons at Flushing Meadows Park on November 11, 2007.

On November 22, 2007, wind speeds were relatively low and the balloons flew in the parade without incident. The maximum wind gust was recorded at 14 miles per hour at the 59th Street intersection. The average wind speed was below 10 miles per hour. Chief Bridge Officer Henry Perahia, Deputy Chief Engineer Kamal Kishore, Director of Engineering Review Abul Hossain, Mahabal Shah, and George Jarvis were positioned at various locations along the parade route to observe compliance with the approved procedures.



New Shrek and New Hello Kitty.



Snoopy. Mahabal Shah; Director of Engineering Review Abul Hossain; Chief Bridge Officer Henry Perahia; Deputy Chief Engineer Kamal Kishore, and George Jarvis.

DOT Employee Recognition Ceremony

Many Division personnel were among the DOT employees honored on November 28, 2007 for their years of service to the City. Commissioner Janette Sadik-Khan and Lillian Roberts, Executive Director of District Council 37, led the ceremony, which took place at DC 37's headquarters at 125 Barclay Street in Manhattan.

49 Years of Service

Supervisor Highway Repairer Willie E. Tucker Sr.

37 Years of Service

Civil Engineer Saul Basri.

30 Years of Service

Bridge Repairer & Riveter David Collins, and Supervisor Highway Repairer Stephen Harbeck.

CHRONOLOGY



Bridge Repairer and Riveter David Collins Demonstrating Heat Straightening Techniques.
(Credit: George Klein)

25 Years of Service

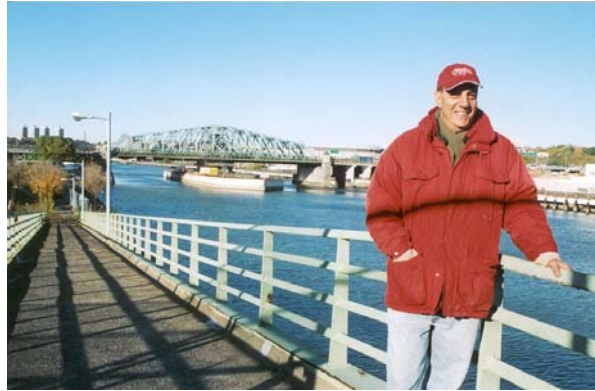
Supervisor Bridge Operator Brian Corry, Assistant City Highway Repairer Roosevelt Gee Jr., Highway Repairer John Godfrey, and Bridge Operator Babubhai Naik.

20 Years of Service

Highway Repairer Alfred Black, Area Supervisor Highway Maintenance James Campbell, Highway Repairer Lloyd Daley, Associate Staff Analyst Michael Depompo, Highway Repairer Kevin Donahue, Bridge Operator In Charge Arturo Fisher, Civil Engineer Lev Gold, Associate Staff Analyst Fred Herschkowitz, Computer Associate Software Laurie Jee-Oberson, Associate Staff Analyst Paul Kahn, Bridge Operator George Kutty, Highway Repairer Karim Mclean-Nur, Cement Mason Luigi Mula, Electrician Helper Richard Parisi, Administrative Engineer Jayantilal Patel, Electrician Steven Radice, Administrative Staff Analyst Dorothy Roses, Administrative Engineer Mohammed Sharif, Assistant Civil Engineer Reza Taheri, Staff Analyst Agnes Thanjan, Bridge Repairer & Riveter Ignazio Trapani, and Associate Staff Analyst Brandon Ward.



Deputy Chief Engineer of East River and Movable Bridges Jay Patel and Mohammed Sharif With Lourdes Acevedo at the Bake Sale. (Patel Credit: Michele N. Vulcan)



Director of Community Affairs Fred Herschkowitz Near the 145th Street Bridge. (Sharif and Herschkowitz Credit: Peter Basich)

15 Years of Service

Bridge Operator Kaniampampil Abraham, Bridge Repairer & Riveter Shawn Ahearn, Supervisor Highway Repairer Victor Andrade, Electrician Rafael Bonnelly, Supervisor Carpenter Joseph Diblasi, Bridge Operator In Charge Michael Elliston, Bridge Operator In Charge David Emrich, Clerical Associate Tenderly Grayson, Supervisor Bridge Operator Anthony Hunter, Office Machine Aide Thomas Kurian, Supervisor Electrician Ronald Marano, Highway Repairer Downen Marshall, Supervisor Highway Repairer Michael Parise, Supervisor Bridge Repairer & Riveter Gean Pilipiak, Principal Administrative Associate Cheryln Thorpe, and Highway Repairer Paul Voluz.

Brooklyn-Queens Expressway WB over Furman Street (Brooklyn)

Cleaning and painting of the bridge, which began in July 2007, was completed in November 2007.

Bruckner Boulevard Bridge over 133rd to 135th Streets (Bronx)

Cleaning and painting of the bridge, which began in August 2007, was completed in November 2007.

Carroll Street Bridge over the Gowanus Canal (Brooklyn)

In November 2007, Bridge Operations personnel hosted first grade children from PS #321 on class trips to the bridge. Students, teachers, and parents enjoyed their visit.



Supervisor Bridge Operator Mohamed Adel Tork With the Children on the Carroll Street Bridge. Answering Questions. Observing an Opening of the Union Street Bridge.

Knapp Street Bridge over Belt Parkway (Brooklyn)

Cleaning and painting of the bridge, which began in September 2007, was completed in November 2007.

DECEMBER

Anti-Icing

Anti-icing crews were deployed on the East River Bridges for 24 hours beginning at 5:00 AM on December 2, 2007. 18 applications of anti-icing chemicals were made. Icicle patrols monitored the Brooklyn-Queens Expressway, FDR Drive, the Cross-Bronx Expressway, and various underpasses.

National Pearl Harbor Remembrance Day Tribute

The Brooklyn Bridge flags flew at half-mast on December 7, 2007 to commemorate National Pearl Harbor Remembrance Day, in honor of those who died as a result of their service at Pearl Harbor and to pay special tribute to veterans of World War II.

Anti-Icing

Anti-icing crews were deployed on the East River bridges on December 7, 2007, from 2:30 PM to 8:00 PM, and on December 9 from noon to 7:00 PM. No applications of anti-icing chemicals were necessary. Icicle patrols monitored the Brooklyn-Queens Expressway, FDR Drive, the Cross-Bronx Expressway, and various underpasses.

Anti-Icing

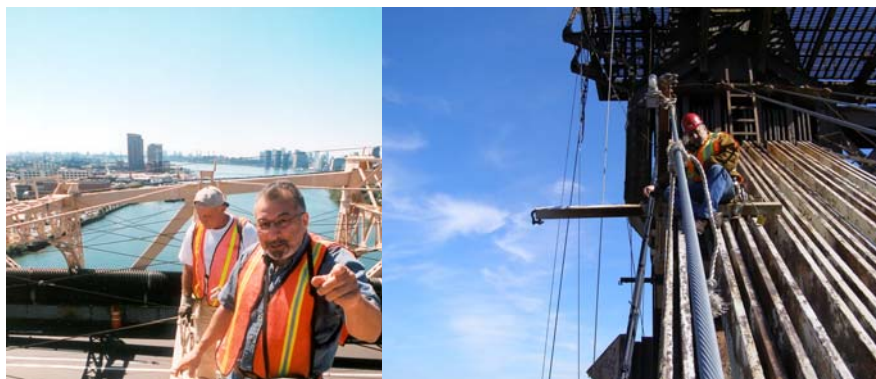
Anti-icing crews were deployed on the East River Bridges from 4:00 AM on December 13, 2007 until 1:00 AM on December 14, and again from 7:00 PM on December 15 until 6:00 PM on December 16, 2007. Twenty applications of anti-icing chemicals were made. Icicle patrols monitored the Brooklyn-Queens Expressway, FDR Drive, the Cross-Bronx Expressway, and various underpasses.

New Year's Eve

On the night of December 27, 2007, at the request of the Mayor's Office of Special Events and the NYPD, Division ironworkers temporarily welded shut all manholes in the Times Square area in preparation for New Year's Eve. Celebrating the arrival of the New Year in Times Square was started in 1904 by Adolph Ochs, owner of the *New York Times*. The ball dropping tradition began three years later.

Ben Cipriano

Ben Cipriano, Supervisor Electrician, leader of a crew of electricians who maintain the four East River Bridges, was the subject of a feature in the December 30, 2007 edition of the *New York Times*.



Electrician Robert Stackpole and Supervisor Electrician Ben Cipriano Atop the Queensboro Bridge. (Credit: Peter Basich) Mr. Cipriano Repairing a Damaged Electrical Cable on The Queensboro Bridge in March 2007. (Credit: Bala Nair)

Anti-icing

Anti-icing crews were deployed on the East River bridges from 4:00 PM on December 30, 2007, until 5:00 AM on December 31. No application of chemicals was necessary.

Manhattan Bridge

December 31, 2007 marked the 98th anniversary of the opening of the bridge.



Manhattan Bridge.
(Credit: Bojidar Yanev)

Cropsey Avenue Bridge over Belt Parkway (Brooklyn)

Cleaning and painting of the bridge, which began in October 2007, was completed in December 2007.