



2008 NYC BRIDGES AND TUNNELS ANNUAL CONDITION REPORT

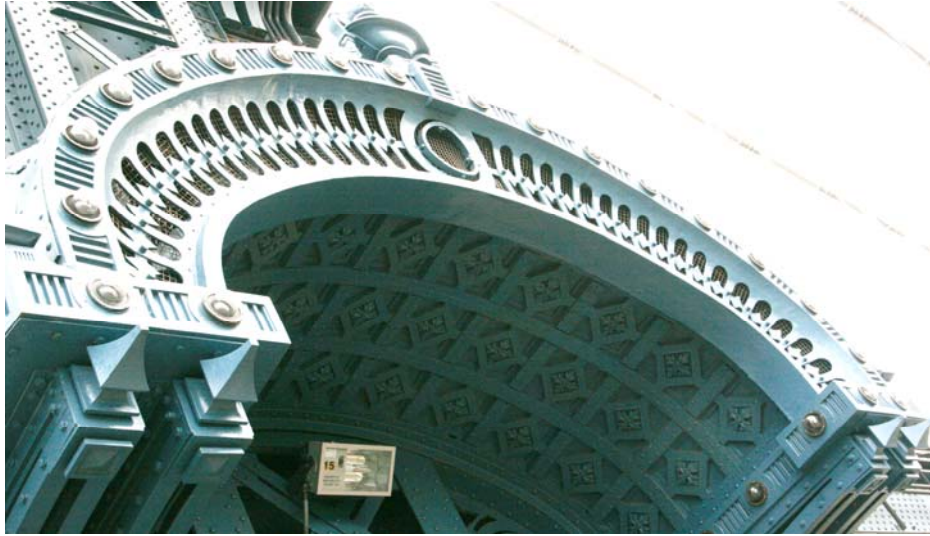


New York City
Michael R. Bloomberg, Mayor



New York City
Department of Transportation
Janette Sadik-Khan, Commissioner

**NEW YORK CITY DEPARTMENT OF TRANSPORTATION
DIVISION OF BRIDGES
2008 BRIDGES AND TUNNELS ANNUAL CONDITION REPORT**



Renovated Manhattan Bridge Tower Canopy With New Decorative Lights in February 2008.

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Janette Sadik-Khan, Commissioner
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Brooklyn Bridge Quasquicentennial in May 2008. (Credit: Julienne Schaer)

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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 2008 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 2008 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 replacement of the Willis Avenue Bridge, the Brooklyn Bridge ramps and painting, the Manhattan Bridge, the Belt Parkway bridges, and the ramps at the St. George Ferry Terminal. Over the next ten years, DOT has \$5.1 billion in the Ten Year Capital Strategy plan to spend on bridge reconstruction projects.

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, 30,771 square feet of concrete were used to renew sidewalks, curbs, and road decks; some 10,497 cubic yards of debris were removed; 1,820 bridge drains were cleaned; and crews eliminated 6,722,630 square feet of graffiti. DOT

crews also eliminated 527 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 Design-Build re-decking project on the Belt Parkway Bridge over Mill Basin; the Platinum Award for the structural health monitoring of the Belt Parkway Bridge over Paerdegat Basin; the Diamond Award for the construction management of the reconstruction of the Third Avenue Bridge over Harlem River; and the Gold Award for the protective coating of the Washington Bridge over Harlem River.
- The Construction Innovation Forum's nomination of the Design-Build reconstruction of the Belt Parkway Bridge over Ocean Parkway as one of 35 world-wide finalists for the prestigious NOVA award, the highest honor a construction innovation can receive.
- *New York Construction Magazine* selected the reconstruction of the Hamilton Avenue over the Gowanus Canal as the Best Bridge Project of 2008. The award recognizes design and construction excellence, the contribution of key team members and the innovative solutions to a project's challenges.

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,



Janette Sadik-Khan
Commissioner

EXECUTIVE SUMMARY

Inventory

In calendar year 2008, the inventory of bridges under the jurisdiction of the Division decreased to 788. NYCDOT owns, operates, and/or maintains 757 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.

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---------------|------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|
| Poor | 16 | 13 | 9 | 8 | 4 | 6 | 4 | 3 | 3 | 3 |
| Fair | 507 | 481 | 459 | 451 | 429 | 456 | 458 | 456 | 459 | 455 |
| Good | 160 | 180 | 196 | 202 | 209 | 212 | 210 | 210 | 215 | 213 |
| Vgood | 81 | 85 | 88 | 94 | 111 | 116 | 118 | 118 | 111 | 116 |
| Closed | | | | | | | | | 1 | 1 |
| | 764 | 759 | 752 | 755 | 753 | *790 | 790 | 787 | 789 | 788 |

* 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 this summer.

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 2009. 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).

2008 was a year in which the use of incentives/disincentives resulted in the early completion of two bridge projects:

The reconstruction of Grand Concourse over East 161st Street project was declared substantially complete on November 1, 2008 with the following 3 key project milestones completed on time. Milestone 1, the reconstruction and reopening of the East 161st Street underpass, was completed on May 31, 2007, and the contractor received an incentive of \$600,000. Milestone 2, the reconstruction and reopening of the East 161st Street south service roadway from Gerard to Sheridan Avenue to traffic, which began on November 10, 2007 was completed on March 14, 2008, 25 days ahead of schedule, and the contractor received an incentive of \$300, 000. Milestone 3, the reconstruction and reopening of the Grand Concourse between East 161st and East 166th Streets to traffic, was completed on May 15, 2008, 27 days ahead of schedule, and the contractor received an incentive of \$540,000. The contractor also received an incentive of \$1.8 million for the early completion of the contract.

The reconstruction of Hamilton Avenue Bridge over the Gowanus Canal - The contractor will be paid the maximum incentive of \$216,000 for early completion of the work relating to early opening of the west bridge to traffic.

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 2007-2008, a total of 51,000 gallons of potassium acetate and 92 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 complete. 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 summer 2009, and to be complete in 2013.

2008 Awards

In 2008, the outstanding work of the Division was recognized by the receipt of several awards. In March 2008, the American Council of Engineering Companies of New York conferred awards on four projects in its 2008 Engineering Excellence Awards. The Design-Build re-decking project on the Belt Parkway Bridge over Mill Basin won a Platinum Award in the structural systems category; the structural health monitoring of the Belt Parkway Bridge over Paerdegat Basin won a Platinum Award in the structural systems category; the construction management of the reconstruction of the Third Avenue Bridge over Harlem River won a Diamond Award in the special projects category; and the protective coating of the Washington Bridge over Harlem River won a Gold Award in the special projects category.

Also in March 2008, the Construction Innovation Forum selected the Design-Build reconstruction of the Belt Parkway Bridge over Ocean Parkway as one of 35 world-wide finalists to be nominated for the prestigious NOVA award, the highest honor a construction innovation can receive.

EXECUTIVE SUMMARY

In December 2008, *New York Construction Magazine* selected the reconstruction of the Hamilton Avenue over the Gowanus Canal as the Best Bridge Project of 2008. The award recognizes design and construction excellence, the contribution of key team members and the innovative solutions to a project's challenges.

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 788 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 **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 788 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

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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 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 2008 Bridge Operations effected a total of 5,030 openings, 3,873 of which allowed 6,647 vessels to pass beneath the bridges. The remaining 1157 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 Deputy Chief Engineer for Bridge Maintenance, Inspections and Operations also acts as the **Deputy Chief Bridge Officer**, assuming the responsibilities of the Chief Bridge Officer in that person's absence.

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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.

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/replacement 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

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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, 633 City owned retaining walls (along major streets) have been inspected and inventoried; 27 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.

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, timber, 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

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construction practice. Current major projects include the Manhattan, Williamsburg, 145th Street, Willis Avenue, Roosevelt Island, 20th Avenue, Hamilton Avenue, Grand Concourse, Annadale Road, Shore Road Circle, and Yankee Stadium Parking Garages Connector 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 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, Belt Parkway Bridges, Borden Avenue Bridge, and the Queensboro Bridge, as well as Component Rehabilitation, Roadway Bridge, and Design/Build projects.

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.

DIVISION OVERVIEW

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.

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.

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 **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 five primary sections: **Office of the Executive Director, Administration and Finance, Capital Procurement, Capital Coordination, and the Truck Permit Unit**. 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 enforcement, confidential investigations, Bridges' Engineering Service Agreements, space allocation, and special projects, the **Executive Director** oversees, on an executive level, the following areas and functions:

The **Senior Director of the Administration and Finance 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 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 Senior Director of the Administration and Finance Section also oversees the following three units:

DIVISION OVERVIEW

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 the NYCDOT Communication Center; and collects required documentation from field personnel for checking Driver Certifications with the Department of Motor Vehicles and EZ Pass.

The *Finance Unit* 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. The duties of this unit include: overseeing the Division's capital consultant contract procurement from scope to registration; 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 326 (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.

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.

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 \$6 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

DIVISION OVERVIEW

agencies, DOT Administration and all responsibility centers within Bridges; coordinating the submission of New and Revised Certificates to Proceed for submission to Capital Budget; reviewing and processing transfer of fund requests in an attempt to resolve funding issues; and maintaining the Division's registration report for all current year capital contracts.

The ***Truck Permit Section*** issues approximately 1,500 Annual Overweight Load Permits (renewals only), 100 Annual Self-Propelled Crane Permits, and in excess of 35,000 Daily Oversize/Overdimensional/Supersize Truck Permits annually; all in accordance with the New York City Department of Transportation Policy and Procedures and the New York City Traffic Rules and Regulations section 4-15.



In October 2008, a Permit Was Issued for the Move of a Wheat Combine to the South Street Seaport. The Wheat Foods Council's "Urban Wheat Field Experience," Which Ran From October 6 Through 8, 2008, Brought the Farm-to-Fork Journey of America's Most-Consumed Grain to Life with a ¼ Acre Wheat Field, Full-Size Combine, Functioning Mill, Bread-Baking Station, and Nutrition Lab. (Credit: Earl Coomes)

JANUARY

Brooklyn Bridge

On January 3, 2008, Division engineers hosted students and teachers from the Astor Collegiate Academy on a tour of the bridge.



Grade 11 Creative Mathematics Students with Math Teacher Lorelie Racelis (Wearing White Parka) and Deputy Chief Engineer George Klein (Wearing Green Parka). Social Studies Teacher Mr. Novak (Wearing Black Hat) Learning About the Bridge. (Credit: Peter Basich)

Willis Avenue Bridge over Harlem River (Bronx/Manhattan)

On January 3, 2008, the East 125th Street exit ramp off the northbound FDR Drive was closed. This closure was necessary so that work on the construction of a temporary ramp, as well as construction of the new north-bound FDR Drive ramp to the Willis Avenue Bridge, could begin. The East 125th Street exit ramp, which typically carries only a low volume of traffic, will not reopen until the temporary ramp is removed in June 2011.

Fire Lieutenant John H. Martinson Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on January 4, 2008, in tribute to Fire Lieutenant John H. Martinson of Engine Company 249 of Brooklyn. Fire Lieutenant Martinson, 40, a 14 year veteran of the Department (who had previously served for 4 years as a police officer), died in the line of duty while battling a blaze in an apartment building in Brooklyn at the site of the former Ebbets Field on January 3. Fire Lieutenant Martinson was the 1,138th member of the New York City Fire Department to make the supreme sacrifice in the Department's 144-year history. The flags remained at half-mast through January 8, 2008.



Fire Lieutenant
John H. Martinson

Anti-Icing

Anti-icing crews were deployed on the East River bridges from 3:00 PM on January 17, 2008 until 3:00 AM the following morning, and from 2:00 PM to 8:00 PM on January 19, 2008. No application of chemicals was necessary. Icicle patrols monitored the Brooklyn-Queens Expressway, the FDR Drive, the Cross Bronx Expressway, and the Battery Park Underpass.

Hamilton Avenue Asphalt Plant Emergency Repairs (Brooklyn)

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 was then once again operational and 400 tons of asphalt were processed on January 21, 2008.



The Completed Project. (Credit: Earlene Powell)

Anti-Icing

Anti-icing crews were deployed on the East River bridges from 6:30 AM to 7:00 PM on January 24, 2008, and from 8:30 PM on January 26, 2008 until 8:00 AM the following morning. No application of chemicals was necessary. Icicle patrols were active on the Brooklyn-Queens Expressway, the FDR Drive, the Cross Bronx Expressway, and the Battery Park Underpass.

FEBRUARY

DUMBO Art Piece

The "Nature Matching System" art piece of painted plywood panels was installed on February 21, 2008 on the existing fence of the Division's Front Street Yard near the Manhattan Bridge. On February 25, 2008, Commissioner Janette Sadik-Khan, accompanied by senior executive staff, the artist Tattfoo Tan, the local school principal and children, and the DUMBO BID unveiled the art piece created by the children and installed by in-house forces.

This was the first mural of the Agency's Temporary Art Program. It stood eight feet tall by 70 feet wide. The program is a new initiative of the Commissioner to install artwork for up to eleven months on DOT properties across the City. DOT and partner organizations, such as Business Improvement districts and other not-for-profit organizations, select artists through a competitive process to install artwork on public sites. The two main goals of the program are to enhance the social and civic vitality of a community through contemporary art, and to establish community partnerships by encouraging community participation in the process.

CHRONOLOGY

Each of the 64 colors found in the mural represented a commonly known fruit or vegetable. Forty students between the ages of five and seven from P.S. 307 and 25 children from the community assisted the artist in painting some of the mural tiles.



Artist Tattfoo Tan and Teachers Assisting the Students of P.S. 307 in Painting the Mural Panels.



Installing the Mural Panels on February 21, 2008. Celebrating the Installation of the Temporary Art Program Mural in DUMBO are, From Left to Right: DUMBO Improvement District Executive Director Tucker Reed, Supervisor Bridge Repairer and Riveter John Jones, Assistant Commissioner of Urban Design and Art Wendy Feuer, Bridge Repairer and Riveter David Collins, Mural Artist Tattfoo Tan, Carpenter Joseph Moschella, Commissioner Janette Sadik-Khan, Carpenter Stephen Buckley, Carpenter William Sic, and Supervisor Carpenter Joseph Vaccarro.

Anti-Icing

Anti-icing crews were deployed on the East River bridges and were on standby on February 10, 2008 from 8:00 AM until 5:30 PM. No application of chemicals was necessary. Crews were mobilized again from 1:00 PM on February 12, 2008 until 5:00 AM the following morning, and made 15 applications of anti-icing chemicals. Priority overpasses were cleared, and icicle patrols monitored the Brooklyn-Queens Expressway, the FDR Drive, the Cross Bronx Expressway, and the Battery Park Underpass.

Anti-Icing

On February 22, 2008, 6 inches of snow fell in Central Park, 6.4 inches at La Guardia Airport, and 6.9 inches at JFK Airport, setting new records for this date. Anti-icing crews were deployed on the East River bridges from 1:30 AM on February 22, 2008 until 8:00 AM the following morning; 28 applications of chemicals were made. Priority overpasses were cleared, and icicle patrols monitored the Brooklyn-Queens Expressway, the FDR Drive, the Cross Bronx Expressway, and the Battery Park Underpass.

Anti-Icing

Anti-icing crews were deployed on the East River bridges from 4:00 PM on February 29, 2008 until 4:30 AM the following morning; two applications of chemicals were made. Icicle patrols monitored the Brooklyn-Queens Expressway, the FDR Drive, the Cross Bronx Expressway, and the Battery Park Underpass.

MARCH

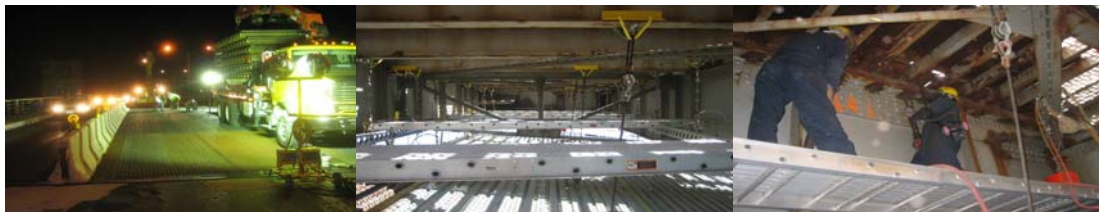
Award

In March 2008, the American Council of Engineering Companies of New York selected the Design-Build re-decking project on the Belt Parkway Bridge over Mill Basin for a Platinum Award in the structural systems category in its 2008 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.

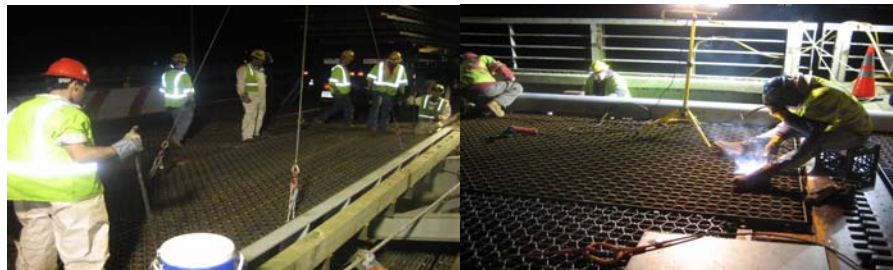
A Notice to Proceed for the project to replace the rapidly deteriorating bridge grid deck was issued to the contractor with a start date of October 25, 2005. The design was completed, and grid panel fabrication was underway at the end of 2005. Panel replacement began in spring 2006, and was completed 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.



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



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

Award

In March 2008, the American Council of Engineering Companies of New York selected the structural health monitoring of the Belt Parkway Bridge over Paerdegat Basin for a Platinum Award in the structural systems category in its 2008 Engineering Excellence Awards. This

remote deck condition monitoring system was installed as part of an emergency contract, which was substantially completed on February 17, 2004.

Award

In March 2008, the American Council of Engineering Companies of New York selected the construction management of the reconstruction of the Third Avenue Bridge over Harlem River for a Diamond Award in the special projects category in its 2008 Engineering Excellence Awards.

The design of the approximately \$120 million reconstruction project of this rim bearing swing bridge was completed in October 2000. Construction began in July 2001. Reconstruction included complete replacement of the approaches and the swing span. Elimination of the center median on the main span greatly improved the traffic flow on the bridge. The new bridge uses a center spherical roller thrust bearing for supporting the span and for seismic loads. The bearing is the largest of this type made for this purpose. The existing pivot pier was also reinforced for seismic loads. A temporary bridge, adjacent to the current one, was in place for five months to maintain two lanes of traffic into Manhattan while the swing span was being replaced.

The bridge was opened to five lanes of traffic at 5 AM on February 10, 2005. The new 18 span bridge supports five traffic lanes (one more than the old one), and the horizontal clearance of each of the navigation channels was increased from 100 feet to 116 feet. In addition, the sidewalks on the new bridge are 8 feet wide rather than the old 6 feet. The reconstruction of this bridge was substantially completed on November 14, 2006.

Award

In March 2008, the American Council of Engineering Companies of New York selected the protective coating of the Washington Bridge over Harlem River for a Gold Award in the special projects category in its 2008 Engineering Excellence Awards. This project was substantially completed in November 2004.



Washington Bridge in 2008. (Credit: Duane Bailey-Castro)

Nomination

In March 2008, the Construction Innovation Forum selected the Design-Build reconstruction of the Belt Parkway Bridge over Ocean Parkway as one of 35 world-wide finalists to be nominated for the prestigious NOVA award, the highest honor a construction innovation can receive. The NOVA Award was first awarded in 1990 to recognize the innovative techniques and methods, proven on actual projects, that improve the quality and reduce the cost of construction.

The Belt Parkway is a significant corridor of the Regional Transportation System with daily volumes of 166,000 vehicles. Coupled with the rapid deterioration of the bridge, the possibility of closure, and our concern for public safety, the New York State Department of Transportation (NYSDOT) requested that NYCDOT procure this project using Design-Build. The project secured 80% federal funding since it involves this significant corridor of the Belt Parkway, as well as the Historic Ocean Parkway, which was the first parkway of its kind in the United States. It was part of the Special Experimental Project No. 14 Program, a Federal Program that allows innovative contracting practices to be used.

The Ocean Parkway project also involved the reconfiguration of the interchange, roadway work on approximately a mile of the Belt Parkway, and roadway and associated landscaping work on Ocean Parkway from approximately Avenue Z to West End Avenue. The new bridge utilized

CHRONOLOGY

many precast elements, including deck units, t-wall abutments, cap beams, parapets, and approach slabs.

The new bridge has shoulders and an increased width of 40.5 meters (133 ft.). In addition to carrying three lanes each way, the added width allows for an acceleration and deceleration lane at the ends of the bridge to ease vehicle access and departure, as well as the introduction of shoulder lanes, a feature that was previously missing from the Belt Parkway. The new interchange configuration eliminates the old geometric deficiencies and enhances traffic flow. As part of the project, a mile of the Belt Parkway (half a mile on each side of the bridge) received new pavement; Ocean Parkway was widened and its mainline was separated from its service road by two malls (one landscaped and the other for pedestrian and bicycle use); new watermains were provided; all sewers within the project limits were cleaned; and new lighting was provided, as well as new signals at the Ocean Parkway intersection with the Belt Parkway service roads. In addition, extensive landscaping was done on Ocean Parkway, both where the old interchange loop ramps used to be, and along both Belt Parkway service roads. The new bridge itself is aesthetically pleasing with architectural details at the abutments and parapets, and decorative lighting at the abutments. Other architectural work included the placement of historic type lampposts on Ocean Parkway. In addition, a pigeon deterrent system was installed on the new bridge.

The reconstruction of this bridge, which began on September 12, 2002, was substantially completed on December 3, 2004. This early completion resulted to the contractor collecting the maximum incentive of \$2 million. This project brought this segment of the Belt Parkway up to current design standards and will provide a minimum 50-year useful service life.



Precast Pier Capbeam Section Prior to Setting it on the Cast-in-Place Columns. Installing T-Walls. Precast Panels and Joints Awaiting Cast-in-Place Concrete Placement.



Belt Parkway Bridge in Spring 2005.

Hamilton Avenue Asphalt Plant (Brooklyn)

On March 1, 2008, Division ironworkers repaired the plant's chute, drum, and rap bins.

Brooklyn Bridge

On March 20, 2008, Deputy Chief Engineer George Klein escorted local public school students on a tour of the Brooklyn Bridge. The trip was organized by "Into the Outside," a non-profit

organization that promotes the integration of interdisciplinary and field-based learning into the standard classroom curriculum.



Deputy Chief Engineer George Klein (in Blue Jacket) Leading the Tour. Examining the Plaques. Students Displaying Their Bridge Drawings. (Credit: Peter Basich)

Department of Transportation Garage in College Point (Queens)

Cleaning and painting of this structure, which began on January 2, 2008, was completed on March 21, 2008.

Houston Street Bridge over FDR Drive (Manhattan)

Cleaning and painting of the bridge railings, which began on March 14, 2008, was completed on March 26, 2008.

Queensboro Bridge

March 30, 2008 marked the 99th anniversary of the opening of the bridge.



Queensboro Bridge.
(Credit: Bernard Ente)

APRIL

Hamilton Avenue Asphalt Plant (Brooklyn)

On April 5, 2008, Division ironworkers repaired the plant's cyclones, chutes, and silo.

Eagle Avenue Bridge over East 161st Street (Bronx)

Cleaning and painting of the bridge, which began on March 27, 2008, was completed on April 11, 2008.

Stationary Engineer Henry Chang Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on April 23, 2008, in tribute to Stationary Engineer Henry Chang of DCAS. Mr. Chang, 58, a seven year veteran of the Department, died in the line of duty while working in a maintenance room at the Long Island City Courthouse. The flags remained at half-mast through Saturday May 3, 2008.



Brooklyn Bridge Flag at Half-Mast.

Seventh Annual “Take Our Children to Work Day”

On April 24, 2008, as part of the Agency’s seventh annual “Take Our Children to Work Day,” Division personnel hosted children at the West 207th Street (University Heights) Bridge.



Bridge Operator in Charge Anthony Small (Back to Camera) Explaining How the West 207th Street Bridge Opens. Children on the Bridge. Bridge Operator Steven Lopez Explaining the Equipment. (Credit: Reza Taheri)

Manhattan Bridge

Contract #11 was substantially completed on April 29, 2008.

NYC Bridge Centennial Commission Day

In cooperation with the Office of the Mayor, the Offices of the Borough Presidents of Manhattan, Queens, Brooklyn and the Bronx, the Department of Transportation, the Department of Parks and Recreation, the Landmarks Preservation Commission, the Department of Records and Information Services, Hunter College, La Guardia Community College and non-profit groups and private citizens, the aim of the NYC Bridge Centennial Commission is to promote the 100th year anniversary of six historic New York City bridges, to educate the public about the bridges’ role in the life of the city, to encourage respect for the history of New York City; to heighten the public’s awareness of the City’s infrastructure and the need to maintain it; and to stimulate the interest of the public in celebrating the centennial of these six bridges.

The six structures are the Borden Avenue, University Heights, Pelham Bay, Queensboro, Manhattan, and Madison Avenue bridges. April 30, 2008 was declared “NYC Bridge Centennial Commission Day.”



The Proclamation. Queens Borough President Helen M. Marshall, NYC Bridge Centennial Commission President Sam Schwartz, and Commissioner Janette Sadik-Khan. Manhattan Borough President Scott M. Stringer. Councilmember Jessica Lappin. (Credit: Judith Berdy)



Parks and Recreation Commissioner Adrian Benape. Records and Information Services Commissioner Brian G. Andersson. (Credit: Judith Berdy) Director of Community Affairs Fred Herschkowitz and Commissioner Janette Sadik-Khan (Credit: Peter Basich)



Deputy Chief Engineers Larry King, Jay Patel, and Russ Holcomb, Queens Borough Commissioner Maura McCarthy, and Deputy Chief Engineer George Klein. Executive Director of Bridge Preventive Maintenance and Repair Thomas Whitehouse (Credit: Peter Basich)

MAY

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

May 1, 2008 marked the 113th anniversary of the opening of the bridge.



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

Hamilton Avenue Asphalt Plant (Brooklyn)

On May 4, 2008, Division ironworkers repaired the plant's silo, chutes, and bins. On May 24, they repaired the drum and chutes.

31st Annual Five Borough Bike Tour

In preparation for the 42-mile Five Borough Bike Tour on May 4, 2008, Division personnel repaired potholes on the Madison Avenue, Queensboro, Pulaski, and Third Avenue Bridges, and swept all of the bridges on the route. Carpenters installed temporary plywood covers over the finger joints of the Pulaski Bridge, which were removed after the tour concluded that day.

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.



Assistant Civil Engineer Yousef Demis, and Carpenters John Green, Michael Short III, Mark Pavia, and Andrew Myjer After Preparing the Pulaski Bridge for the Tour. Cyclists on the Bridge. Deputy Chief Engineer George Klein (on right) Observing the Cyclists. (Credit: Russell Holcomb)

Brooklyn-Queens Expressway Westbound & Eastbound over Cadman Plaza (Brooklyn)

Cleaning and painting of the bridges, which began on April 3, 2008, was completed on May 7, 2008.

Merrick Boulevard Bridges over Laurelton Parkway (NB & SB) (Queens), 149th Street Bridge over LIRR (Queens), 130th Avenue Bridges over Laurelton Parkway (EB & WB) (Queens), Queensboro Bridge Ramp over 21st & 22nd Streets (Queens), Queensboro Bridge Ramp over 11th Street & Terrain (Queens), United Nations

Plaza – 1st Avenue Tunnel (Manhattan), Belt Parkway Bridge over Ocean Avenue (Brooklyn), and Ocean Avenue Bridge over LIRR Bay Ridge (Brooklyn)

A Notice to Proceed for the component rehabilitation of these bridges was issued to the contractor with a start date of May 12, 2008.



Merrick Boulevard Bridges over Laurelton Parkway (NB and SB), 149th Street Bridge over LIRR. (Credit: NYSDOT)



130th Avenue Bridges over Laurelton Parkway (EB and WB), Queensboro Bridge Ramp over 21st & 22nd Streets. (Credit: NYSDOT)



Queensboro Bridge Ramp over 11th Street & Terrain, Approach to United Nations Plaza – 1st Avenue Tunnel, Belt Parkway Bridge over Ocean Avenue. (Credit: NYSDOT)



Ocean Avenue Bridge over LIRR Bay Ridge. (Credit: NYSDOT)

Peace Officer Memorial Day Tribute

The Brooklyn Bridge flags flew at half-mast on May 15, 2008 to commemorate Peace Officer Memorial Day. This day honors police officers who died in the line of duty.

Department of Transportation Facilities at 59th Street, Kent Avenue, and Maspeth

Cleaning and painting of these structures, which began on January 2, 2008, was completed on May 17, 2008.

Shore Road Circle Bridge over Amtrak (Bronx)

A Notice to Proceed for the reconstruction of this bridge was issued to the contractor with a start date of May 19, 2008.

Brooklyn Bridge

As part of the five-day celebration of the 125th birthday of the bridge, Commissioner Janette Sadik-Khan announced the completion of the Washington Street way-finding project on May 21, 2008. The permanent improvements feature wayfinding signage, and a public art lighting installation entitled “This Way.”

“The beauty of Brooklyn doesn’t have to end with the Bridge,” said the Commissioner. “A single sign can mean the difference between finding your way and continuing on your Brooklyn adventure. Today, that adventure continues as we better connect the historic bridge’s walkway with Brooklyn’s equally historic neighborhoods.”



Unveiling the Upgrades to the Brooklyn Bridge Brooklyn Side Pedestrian Entrance. From Left: Lisa Kim, Director, Percent Art, NYC Department of Cultural Affairs; Tucker Reed, Executive Director, Dumbo Improvement District; Commissioner Janette Sadik-Khan; Brooklyn Borough President Marty Markowitz. (Credit: Kathryn Kirk)

Brooklyn Bridge

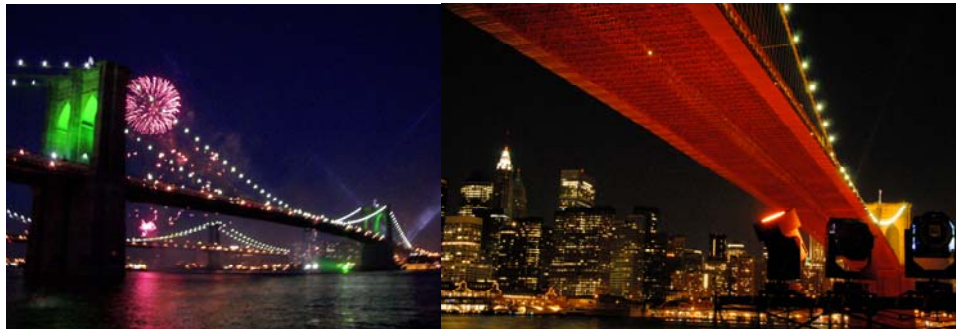
May 24, 2008 marked the 125th birthday of the bridge. The celebration, which took place from May 22 through May 26, featured an array of fun and family-friendly cultural events in both Brooklyn and Manhattan, commemorating the historic structure and highlighting the cultural diversity of the boroughs it unites. The celebration featured concerts, a film series, lectures, children’s readings, dance performances and a bike tour. An unprecedented light installation featuring a colorful array spanning the length of the bridge, illuminated the New York City skyline each evening from 9:00 PM to 11:00 PM from May 22 through Memorial Day.



Supervisor Electrician Ben Cipriano, Administrative Engineer Bala Nair, Deputy Chief Engineer George Klein, Deputy Chief Engineer Jay Patel and Director of Bridge Preventive Maintenance Paul Schwartz at the Celebration. Mayor Michael R. Bloomberg and Brooklyn Borough President Marty Markowitz. Electricians Thomas Cipriano and Robert Stackpole Assisted Event Organizers by Providing Power for the Lights. (Credit: Russell Holcomb)



Fireworks Celebration. Searchlights Illuminating the Bridge. Coast Guard and Fire Boats. (Credit: Jason Bax)



Fireworks and Arch Lighting. (Credit: David Paul Gerber)
Three Searchlights Under the Bridge. (Credit: Peter Basich)

In addition, volunteers with the American Society of Civil Engineers and the Roebling Chapter of the Society for Industrial Archaeology staffed the bridge during the birthday weekend to provide information. They handed out thousands of free informational brochures about the bridge's design and construction as well as special newspapers for the event celebration and ceremonial "Deed to the Brooklyn Bridge" certificates signed by Brooklyn Borough President Marty Markowitz.



ASCE Booth. Birthday Banner. Civil Engineer Jagtar Khinda and Bridge Facts Poster.

On Sunday, May 25, Paul Giroux, chairman of the ASCE's 125th Brooklyn Bridge Anniversary Committee, gave two formal presentations entitled "Building the Brooklyn Bridge" at the Brooklyn Historical Society and Surrogate's Court in Manhattan. Each presentation detailed the history of John Roebling, Washington Roebling, and Emily Roebling and their part in the bridge's construction. The presentation also described how the bridge was constructed, including explanations of the caissons for the tower foundations and the cable spinning operations.

Memorial Day Tribute

The Brooklyn Bridge flags flew at half-mast until noon on May 26, 2008 in honor of those who died serving the nation during war.

Annadale Road Bridge over SIRT South Shore (Staten Island)

A Notice to Proceed for the reconstruction of this bridge was issued to the contractor with a start date of May 27, 2008.

Gun Hill Road Bridge over Metro North (Bronx)

The reconstruction of this bridge was substantially completed on May 30, 2008.

JUNE

Westchester Avenue over Hutchinson River Parkway (Bronx)

Cleaning and painting of the bridge, which began on April 11, 2008, was completed on June 2, 2008.

Department of Environmental Protection Plants at Bowery Bay, Astoria, and Wards Island

Cleaning and painting of these structures, which began on January 2, 2008, was completed on June 7, 2008.

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

Division representatives participated in the 100th anniversary celebration of this bridge on June 12, 2008.



Councilmember Miguel Martinez (2nd From Left), Bronx Borough President Adolfo Carrión Jr. (3rd From Left), and Manhattan Borough President Scott M. Stringer. NYC Bridge Centennial Commission President Sam Schwartz (on Left), Chief Bridge Officer Henry Perahia (Center). (Credit: Joshua Orzeck)



At the Centennial Celebration. Director of Bridge Preventive Maintenance Paul Schwartz, Bridge Operator Dennis Aquino, Administrative Engineer Pinakin Patel, Bridge Operators Jorge Rodriguez and Jose Rincon, Supervisor Electrician Rasheed Salim, Executive Director of Bridge Preventive Maintenance and Repair Thomas Whitehouse, Administrative Superintendent Bridge Operations George Kern, Supervisor Bridge Repairer and Riveter Sze Ming "Simon" Liu, Bridge Operator Steven Lopez, Bridge Operator in Charge Anthony Small, Area Supervisor Highway Maintenance Loui Garzia, Supervisor Carpenter Joseph Diblasi, Assistant Civil Engineer Reza Taheri, Bridge Repairer and Riveters William Caputo and Joe Sanders, Deputy Chief Engineer George Klein, Bridge Repairer and Riveter David Fontanez, and Electrician Donald White. Supervisor Bridge Operator Mohamed Adel Tork, Bridge Repairer and Riveter Christopher Pillai, Electrician Kevin Costello, Bridge Repairer and Riveter Michael Collins, Electrician Rafael Bonnelly, Bridge Repairer and Riveters Chris Mauldin, Scott Mahaffey, and Dennis Sullivan. (Credit: Joshua Orzeck)

Jamaica Avenue Bridge over the Cross Island Parkway (Queens)

Cleaning and painting of the bridge, which began on June 7, 2008, was completed on June 14, 2008.

Hamilton Avenue Asphalt Plant (Brooklyn)

On June 21, 2008, Division ironworkers repaired the plant's paddles, and installed crossbeams and angles to support the scale plates. On June 28, 2008, they repaired the paddles, chute and grid.

Union Street Bridge over Gowanus Canal (Brooklyn)

Due to heat expansion, the bridge was closed to marine traffic beginning at 1:10 PM on June 24, 2008. It was returned to service at 3:10 PM that afternoon.

Belt Parkway Bridge over Nostrand Avenue (Brooklyn)

Cleaning and painting of the bridge, which began on April 4, 2008, was completed on June 25, 2008.

Braddock Avenue Bridge over Cross Island Parkway (Queens)

Cleaning and painting of the bridge, which began on June 14, 2008, was completed on June 30, 2008.

DOT Employee Recognition Ceremony

Division personnel were among the DOT employees honored on June 30, 2008 for their years of service to the City. First Deputy Commissioner Lori Ardito led the ceremony, which took place at DC 37's headquarters at 125 Barclay Street in Manhattan.

50 Years of Service

Supervisor Highway Repairer Willie E. Tucker Sr.

35 Years of Service

Staff Analyst Valerie Kemp, and Administrative Engineer Lawrence King.

30 Years of Service

Principal Administrative Associate Patricia Foster, and Associate Staff Analyst Alice Todd.

25 Years of Service

Principal Administrative Associate Rona Brown, Electrician Gary Emmanuel, Oiler Rene Francis, Assistant City Highway Repairer Roosevelt Gee Jr., Administrative Engineer Eugenia Katsnelson, Bridge Operator David Leifer, Tractor Operator Robert Noordzy, Bridge Operator In Charge Domingo Porrata, Principal Administrative Associate Marija Raborg, and Electrician Robert Stackpole.

Metropolitan Avenue Bridge over Conrail (Queens)

The component rehabilitation of this bridge was substantially completed on June 30, 2008.



Inspecting Conditions at the Metropolitan Avenue Bridge in November 2006. Working Under the bridge in December 2006. Underdeck Repair Work in June 2007.

JULY

Manhattan Bridge Brooklyn Plaza

The Brooklyn Plaza of the Manhattan Bridge was opened to the public on July 1, 2008. The 20,000 square foot plaza bounded by the bridge, Jay Street, and Sands Street in Brooklyn was used for staging during reconstruction projects and had been closed to the public since 1982.



Looking South From the Pedestrian Entrance. Aerial View of the Plaza.
Evening View Looking South.

East 149th Street Bridge over Metro North (Bronx)

The component rehabilitation of this bridge was substantially completed on July 8, 2008.

Belt Parkway Bridge over Mill Basin (Brooklyn)

Due to heat expansion, the bridge was closed to marine traffic beginning at 4:55 PM on July 18, 2008. It was returned to service at 10:00 PM that night.

Hamilton Avenue Asphalt Plant (Brooklyn)

On July 12, 2008, Division ironworkers repaired the plant's dryer, cyclone, and bin. On July 26, 2008, they repaired the drum and hopper.

81st Street Pedestrian Bridge over Belt Parkway (Brooklyn)

Cleaning and painting of the bridge, which began on May 16, 2008, was completed on July 25, 2008.

East 156th Street Bridge over Access to Housing (Bronx)

Cleaning and painting of the bridge, which began on May June 9, 2008, was completed on July 29, 2008.

AUGUST

Stanley Michels Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on August 1, 2008, in tribute to former City Councilmember Stanley Michels, who died on that day. Mr. Michels, 75, served on the city council from 1978 to 2001, when he was forced to leave because of term limits. As councilmember for District Six, which covers much of northern Manhattan, he was active on environmental issues, particularly water quality, and tenants' rights. In 1987, Mr. Michels was the prime sponsor of the Clean Indoor Air Act, the city's first law regulating smoking in public places. The flags remained at half-mast through Sunday August 3, 2008.

Waterbury Avenue Pedestrian Bridge over Bruckner Expressway (Bronx)

At about 2:50 AM on August 8, 2008, the Communications Center reported that a truck traveling south in the center lane of the expressway struck this State-owned bridge. The responding engineer found that the span over the southbound expressway had collapsed, blocking the expressway in both directions. The Police Department, Office of Emergency Management, and Con Edison personnel were on site. NYSDOT was notified and representatives observed as Bridge Division and Roadway Repair and Maintenance crews cut and removed the collapsed span and installed concrete barriers and chain-link fence to block access to the bridge. Traffic was restored at about 2:40 PM.



Waterbury Avenue Bridge Damage.

Sanitation Worker Nelson Diaz and Traffic Agent Donnette Sanz Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on August 12, 2008, in tribute to Sanitation Worker Nelson Diaz, 60, a 23 year veteran of the Department, who died in the line of duty on August 11.

The flags continued to be flown at half-staff in tribute to Traffic Agent Donnette Sanz, 33, a 2 year veteran of the Department, who died in the line of duty on August 14. The flags remained at half-mast through August 25, 2008.

Riverside Drive Bridge over West 96th Street (Manhattan)

Cleaning and painting of the bridge, which began on May 8, 2008, was completed on August 14, 2008.



Riverside Drive Bridge in Spring 2008.
(Credit: Russell Holcomb)

Hamilton Avenue Bridge over Gowanus Canal (Brooklyn)

The Brooklyn-bound span reopened to vehicular traffic on, August 16, 2008, 15 days ahead of schedule.

Bulova Avenue Bridge over the BQE West Leg (Queens)

Cleaning and painting of the bridge, which began on August 8, 2008, was completed on August 28, 2008.

SEPTEMBER

Hamilton Avenue Asphalt Plant (Brooklyn)

On September 2, 2008, Division ironworkers performed emergency repairs to a broken motor anchor base. On September 13, 2008, they repaired the plant's dryer drum blades and recycling bin.

Coney Island Avenue Bridge over Belt Parkway (Brooklyn)

Cleaning and painting of the bridge, which resumed on August 21, 2008, was completed on September 5, 2008.

92nd Street Pedestrian Bridge over Belt Parkway (Brooklyn)

Cleaning and painting of the bridge, which resumed on June 17, 2008, was completed on September 5, 2008.

Manhattan Bridge Water Street Arch

On September 8, 2008, the 45-foot high, 152-foot long, 46-foot wide arch was partially reopened to the public after almost two decades. By moving the Division's bridge metal storage materials out, we were able to re-connect Water Street between Adams Street and Anchorage Place.

But moving the materials out and re-opening the archway is just the first step. The Agency will work with the DUMBO Improvement District to remove the asphalt to reveal the passageway's historic cobblestone, and to add lighting and benches to the archway where users can linger and relax. The archway will completely open in 2009 where its rehabilitation is scheduled to coincide with the Manhattan Bridge's 100th birthday.

Park Road (204th Street) Bridge over Bronx River (Bronx)

Cleaning and painting of the bridge, which began on September 4, 2008, was completed on September 9, 2008.

49th Street Bridge over the BQE West Leg (Queens)

Cleaning and painting of the bridge, which began on August 9, 2008, was completed on September 10, 2008.

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)

17th Avenue Pedestrian Bridge over Belt Parkway (Brooklyn)

Cleaning and painting of the bridge, which resumed on June 17, 2008, was completed on September 5, 2008.

Mosholu Parkway Bridge over Webster Avenue (Bronx)

Cleaning and painting of the bridge, which began on December 12, 2007, was completed on September 15, 2008.

Brooklyn and Manhattan Bridges

On September 22, 2008, at the request of the American Society of Civil Engineers, Division engineers hosted a group of bridge engineers from Moscow in a tour of the Brooklyn and Manhattan Bridges.



Russian Engineers and ASCE Representative on the Brooklyn Bridge Walkway With (in Back Row) Executive Director of Bridge Preventive Maintenance and Repair Thomas Whitehouse (Wearing Black Jacket), Deputy Chief Engineer Russell Holcomb (Wearing Safety Vest), and Inspections Engineer Lev Gold (Wearing Safety Vest).

Osborn Elliott and Elinor Guggenheimer Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on September 29, 2008, in tribute to former Deputy Mayor for Economic Development Osborn Elliott, and former Commissioner of the NYC Department of Consumer Affairs Elinor Guggenheimer.

Mr. Osborn, 83, died on September 28, 2008. He was the editor of Newsweek magazine from 1961 to 1976. In 1975, with New York Senator Jacob K. Javits, he led the formation of the Citizens Committee for New York City, which sought to elevate the standard of living with a wave of voluntarism. Today, it still offers grants and training to community volunteer groups.

When New York's economic development administrator resigned in June 1976, with the city about to topple into bankruptcy, Mayor Abraham D. Beame asked him to join his administration and restructure the city's economic development agency. Given the title of deputy mayor, he waived his city salary and worked for a dollar a year. He stayed in his city post until 1977. He then served eight years as dean of the Columbia University Graduate School of Journalism.

Ms. Guggenheimer, an advocate for children's and women's rights, 96, died on September 29, 2008. In 1948, she founded the Day Care Council of New York, which fought for state-funded day care and protested high milk prices. Active in many other charitable causes, including the Community Service Society, she was named the first female member of the City Planning Commission in 1961.

Boasting "ten immediate goals" when she took office as Commissioner of the Department of Consumer Affairs in 1974, she was fueled by an estimated 14 cups of java a day. The guzzling ended when high prices inspired her to lead a national coffee boycott in 1977, but Guggenheimer never lost her edge. She founded new crusades into the 1980's. She served as Commissioner until 1978.

She had organized the New York Women's Forum, a mentorship and networking group, in 1973. She expanded it in 1981 with the National Women's Forum, then in 1983 the International Women's Forum, and in 1992 the New York Women's Agenda. The flags remained at half-mast through Friday, October 3, 2008.

OCTOBER

Cross Bay Boulevard over Belt Parkway (Queens)

Cleaning and painting of the bridge, which began on September 2, 2008, was completed on October 8, 2008.

Brooklyn-Queens Expressway under the Middagh Street Bridge (Brooklyn)

In the early afternoon of October 6, 2008, a gasoline truck exploded on the eastbound Brooklyn-Queens Expressway, under the Middagh Street Bridge, closed the expressway in both directions for several hours until the fire was extinguished and the bridge was inspected. A Division inspection team, headed by Team Leader Omar Makki, arrived immediately and stayed until late in the night, in order to ascertain that there was no significant structural damage. Westbound traffic was restored at approximately 3:30 PM. Two eastbound lanes opened at approximately 6:30 PM. Traffic was fully restored by 7:00 PM. The left and center lanes of the eastbound Brooklyn-Queens Expressway were closed overnight to replace fire-damaged timber shielding.



Middagh Street Bridge. (Credit: Omar Makki)

Annadale Road over SIRT South Shore (Staten Island)

The western half of the bridge was closed for reconstruction on October 22, 2008.

Grand Concourse Bridge over East 167th Street (Bronx)

Cleaning and painting of the bridge, which began on September 23, 2008, was completed on October 22, 2008.

East 14th Street Pedestrian Bridge over Belt Parkway (Brooklyn)

Cleaning and painting of the bridge, which began on September 8, 2008, was completed on October 24, 2008.

NOVEMBER

Grand Concourse Bridge over East 161st Street (Bronx)

The reconstruction of this bridge was substantially completed on November 1, 2008.

Hamilton Avenue Asphalt Plant (Brooklyn)

On November 1, 2008, Division ironworkers repaired the plant's bins and drum. On November 8, and 15, 2008, they repaired the chutes, drums, bins, and baffle plates.

New York City Marathon

In preparation for the Marathon on November 2, 2008, Division personnel inspected and cleaned the Queensboro, Pulaski, and Madison Avenue Bridges, and repaired potholes along the route. The bridge reconstruction contractor prepared the Willis Avenue Bridge for the event. In addition, they re-configured the Jersey barriers and placed hay bales at the Queensboro Bridge. An ironworker crew was on standby to install plates if needed. Standard traffic configurations were restored before the next morning rush hour.

CHRONOLOGY



Male and Female Wheelchair Racers at Mile 16, On the 59th Street Ramp of the Queensboro Bridge.
(Credit: Paul Schwartz)



Female Racers on the 59th Street Ramp of the Queensboro Bridge: Great Britain's Paula Radcliffe (Wearing Black Shorts, Winner). Male Racers on the Ramp: Brazil's Marilson Gomes dos Santos (Wearing Yellow Top, Winner), and Morocco's Abderrahime Bouramdane (On Right, 5th Place).
(Credit: Paul Schwartz)



Carpeted Willis Avenue Bridge. Female Racers on the Willis Avenue Bridge Approach: Great Britain's Paula Radcliffe (Winner), Russia's Ludmila Petrova (2nd Place), and Ethiopia's Dire Tune (7th Place). Kenya's Rita Jeptoo (4th Place). (Credit: Edgardo Montanez)



Male Racers on the Willis Avenue Bridge Approach: Brazil's Marilson Gomes dos Santos (Winner), and Morocco's Abderrahim Goumri (2nd Place). Kenya's Daniel Rono (3rd Place). Bridge Operator-in-Charge Anthony Small, and Bridge Operators Kamaludeen Kahn and Jose Rincon Observing the Racers' Progress.
(Credit: Edgardo Montanez)



Bagpipers on the Off-Going Side of the Willis Avenue Bridge. 20-Mile Marker.
(Credit: Edgardo Montanez)

Terence D. Tolbert, Daniel DeFrancesco, Philip Reed, Veterans Day, and Probationary Firefighter Jamel M. Sears Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on November 8, 2008 in tribute to Terence D. Tolbert, Daniel DeFrancesco, and Philip Reed.

Mr. Tolbert, 44, died on November 2, 2008. As the Executive Director of Inter-Governmental Relations for the New York City Department of Education, he was its chief lobbyist in Albany and Washington. In August 2008, he took a leave to serve as state director of President Obama’s Nevada campaign. During his almost two decades in New York City and State politics, Mr. Tolbert worked on many political campaigns, including John Edwards’ presidential campaign in 2003-2004, Mayor Bloomberg’s 2005 re-election effort, and the campaigns of Senator Charles Schumer and former Governor Eliot Spitzer.

Mr. DeFrancesco, 68, died on November 5, 2008. His tenure with the New York City Board of Elections began in 1967 as a driver to its president. He was appointed Executive Director in 1988. Even after his 2002 retirement, he continued to serve as an advisor to elections administrators throughout New York State.

Mr. Reed, 59, died on November 6, 2008. He served as the first openly gay black member of the City Council from 1998 to 2005, representing District 8, comprised East Harlem and Manhattan Valley, and parts of the Upper West Side and the South Bronx. Mr. Reed was a champion of asthma prevention legislation and an outspoken critic of random searches of black men known as racial profiling.

The flags flew at half-mast on November 11, 2008 to commemorate Veterans Day.

The flags remained at half-mast on November 12, 2008 in tribute to Probationary Firefighter Jamel M. Sears, 33, who died in the line of duty November 11, 2008. He collapsed on November 10 following completion of a training exercise at the Department’s training academy located at Randall’s Island. Mr. Sears was appointed to the FDNY on July 1, 2008, and was enrolled in the 23-week Probationary Firefighters Training Program. He was also a four-year U.S. Navy veteran. The flags were raised on November 19, 2008. In December 2008, Mr. Sears was posthumously assigned to Engine 218 in Brooklyn.



Probationary Firefighter
Jamel M. Sears

Brooklyn Bridge

On November 8, 2008, Division engineers hosted the University of Notre Dame civil engineering students and faculty on a tour of the bridge.



University of Notre Dame Students with Computational Hydraulics Laboratory Coordinator Diane Westerink (Wearing Brown Jacket) and Associate Project Manager Maria Mikolajczyk (Wearing Blue Jacket). (Credit: Paul Schwartz)

Queensboro Bridge

On the evening of November 19, 2008, the Where and When contractor, supported by Division personnel, completed a four night process to prepare and install a waterproofing membrane on the Manhattan approach of the inner roadway. This was in preparation for the maintenance resurfacing operation, which was completed by personnel from both the Bridges and Roadway Repair and Maintenance Divisions on the night of November 22, 2008.



Waterproof Membrane on the Approach. Executive Director of Bridge Preventive Maintenance and Repair Thomas Whitehouse Inspecting the Work. (Credit: Clara Medina)

20th Avenue Bridge over NYCT (Brooklyn)

The reconstruction of this bridge was substantially completed on November 20, 2008.

Fire Lieutenant Robert J. Ryan Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on November 23, 2008, in tribute to Fire Lieutenant Robert J. Ryan of Engine Company 155 of Staten Island. Fire Lieutenant Ryan, 46, a 17 year veteran of the Department, died in the line of duty while battling a two-alarm blaze in a two-story private residence in the New Brighton neighborhood of Staten Island on November 23. He was assigned to Engine 155 for over two years, having previously served with Engines 228, 280 and 282 in Brooklyn, Engine 6 in Manhattan, the 4th Battalion in Manhattan and the 22nd Battalion in Staten Island. He was promoted to the rank of Fire Lieutenant in March 2001. Fire Lieutenant Ryan was the 1,139th member of the New York City Fire Department to make the supreme sacrifice in the Department's 144-year history. The flags remained at half-mast through November 26, 2008.



Fire Lieutenant
Robert J. Ryan

Woodhaven Boulevard Bridge over Queens Boulevard (Queens)

Cleaning and painting of the bridge, which began on November 6, 2008, was completed on November 24, 2008.

Elliot Avenue Bridge over Queens Boulevard (Queens)

Cleaning and painting of the bridge, which began on November 14, 2008, was completed on November 24, 2008.

Third Avenue Bridge over Gowanus Canal (Brooklyn)

The component rehabilitation of this bridge was substantially completed on November 24, 2008.



Third Avenue Bridge Under Rehabilitation in September 2007 and February 2008.



Deck Slab Concrete Pour at the Third Avenue Bridge in April 2008.



Project Engineer Ashraf Anis, Director of Component Rehabilitation Krishan Baweja, and Project Manager Rezaul Karim at the site in April 2008. North Sidewalk Looking West After Rehabilitation.

Linden Boulevard Bridge over Cross Island Parkway (Queens)

Cleaning and painting of the bridge, which began on June 23, 2008, was completed on November 26, 2008.

82nd Annual Macy's Thanksgiving Day Parade

Division engineers reviewed and approved the design specifications of four new large balloons to be introduced in the parade, as follows: Horton, Buzz Lightyear, Smurf, and Beethoven. 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.

In November 2008, 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 8, 2008.

On November 27, 2008, wind speeds were relatively low and the balloons flew in the parade without incident. The average wind speed was light (between 5 and 10 miles per hour) during the parade, but gusts as high as 19.5 miles per hour were also experienced. Chief Bridge Officer Henry Perahia, Director of Engineering Review Abul Hossain, Director of Engineering Support Mahabal Shah, and George Jarvis were positioned at various locations along the parade route to observe compliance with the approved procedures.



New Horton. (Credit: Abul Hossain) New Buzz Lightyear, New Smurf, and New Beethoven. (Credit: George Jarvis)



Commissioner Janette Sadik-Khan, Chief Bridge Officer Henry Perahia, and Director of Engineering Review Abul Hossain. John Daza, Nicholas Spaventa, Assistant Civil Engineer George Jarvis, Director of Engineering Review Abul Hossain, Vlad Koyfman, Chief Bridge Officer Henry Perahia, Philip Yartey, Administrative Engineer Udayakumar Dommaraju, Leslie Hodelin, and Director of Engineering Support Mahabal Shah.

236th Street Bridge over Henry Hudson Parkway (Bronx)

Cleaning and painting of the bridge, which began on October 22, 2008, was completed on November 28, 2008.

DECEMBER

Award

In December 2008, *New York Construction Magazine* selected the reconstruction of the Hamilton Avenue over the Gowanus Canal as the Best Bridge Project of 2008. The award recognizes design and construction excellence, the contribution of key team members and the innovative solutions to a project's challenges.

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

The roadway was returned to full service on December 2, 2008 after the complete re-decking of the main bridge and approaches.



Open Queens Approach Roadway of the Roosevelt Island Bridge in December 2008.

Carroll Street Bridge over the Gowanus Canal (Brooklyn)

On December 4, 2008, 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. Observing an Opening of the Union Street Bridge. Supervisor Tork Explaining the Machinery. (Credit: Antonio Morales)

National Pearl Harbor Remembrance Day and Bus Driver Edwin Thomas Tribute

The Brooklyn Bridge flags flew at half-mast on December 7, 2008 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.

The flags remained at half-mast on December 8, 2008 in tribute to MTA Bus Driver Edwin Thomas, 46, died in the line of duty on December 1, 2008 while driving the B46 route in Brooklyn. Mr. Thomas worked as a bus driver for the MTA for seven years. He died after being stabbed by a passenger. This was the first killing of an on-duty New York City bus driver since 1981.



Edwin Thomas
Bus Driver Edwin Thomas

Manhattan Bridge

In the early morning of December 10, 2008, a hit and run driver damaged a traffic reversal gate on the Brooklyn approach of the bridge. In-house forces repaired seven caution lights before the evening rush hour.



Electricians Thomas Cipriano and Robert Stackpole Inspecting the Repaired Lights.
(Credit: Hany Soliman)

East 238th Street (Nereid Avenue) Bridge over Bronx River Parkway and Metro North (Bronx)

The component rehabilitation of this bridge was substantially completed on December 12, 2008.



East 238th Street: Coring at Pier #9 in 2006. Underdeck at Span #3 in 2006.



East 238th Street: North Sidewalk Repairs in 2007. Sidewalk Repairs in 2008.



East 238th Street: Completed Sidewalk and Bridge View in December 2008.

Hamilton Avenue Asphalt Plant (Brooklyn)

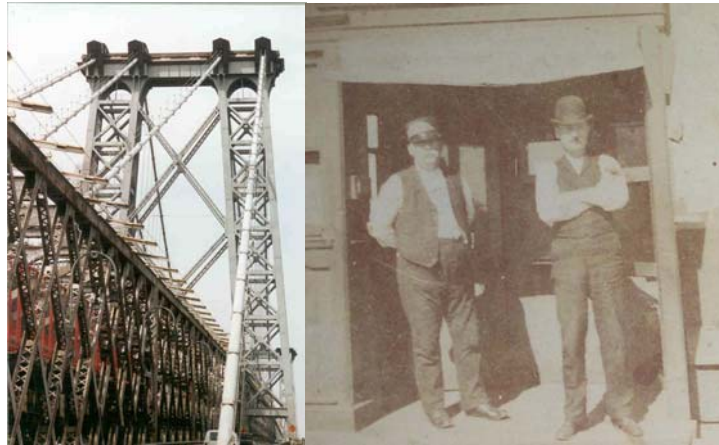
On December 13, 2008, Division ironworkers repaired the plant's bins and drum.

Anti-Icing

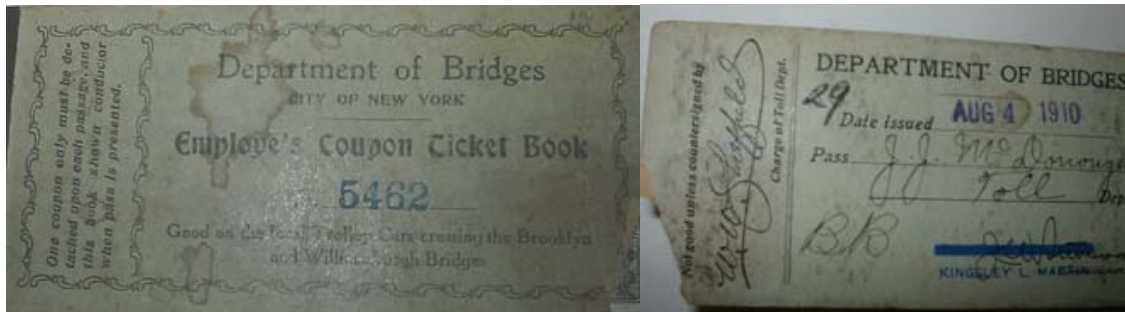
Anti-icing crews were deployed on the East River bridges from 11:00 PM on December 16, 2008 until 4:00 AM the following morning; nine applications of chemicals were made. Icicle patrols monitored the FDR Drive, the Brooklyn Queens and Cross Bronx Expressways, and the Battery Park Underpass.

Williamsburg Bridge

December 19, 2008 marked the 105th anniversary of the opening of the bridge.



Williamsburg Bridge. (Credit: Peter Basich) Gateman J. J. McDonough (on left), Great-Grandfather of Deputy Chief Engineer Russell Holcomb



Trolley Coupon Ticket Book Used by J. J. McDonough on the Brooklyn and Williamsburg Bridges in the Early 1900's (Credit: Russell Holcomb)

Anti-Icing

On December 19, 2008, 4 inches of snow fell in Central Park, 4.4 inches at La Guardia Airport, and 2.6 inches at JFK Airport. Anti-icing crews were deployed on the East River bridges from 6:00 AM on December 19, 2008 until 9:00 AM on December 20, 2008; 16 applications of chemicals were made. Crews were deployed again from midnight on December 21, 2008 until 4:00 AM on December 22, 2008; 13 applications of chemicals were made. Iccle patrols monitored the FDR Drive, the Brooklyn Queens and Cross Bronx Expressways, and the Battery Park Underpass.

New Year's Eve

On the night of December 29, 2008, 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.

Anti-Icing

Anti-icing crews were deployed on the East River bridges on December 23 and 24, and again on December 31, 2008. No application of chemicals was necessary. Priority overpasses were cleared of snow and ice, and icicle patrols monitored the Cross-Bronx Expressway, the Brooklyn-Queens Expressway, the FDR Drive, and the Battery Park Underpass.

Borden Avenue Bridge over Dutch Kills (Queens)

The bridge was closed at noon on December 31, 2008 through July 2009 for an emergency reconstruction project. The decision was made after studies of one of the bridge's abutment walls showed a need for expedited repair. In 2007, the bridge carried approximately 15,747 vehicles per day.

Manhattan Bridge

December 31, 2008 marked the 99th anniversary of the opening of the bridge.



Manhattan Bridge. (Credit: Bojidar Yanev) Bridge at Night in May 2008. (Credit: Jason Bax)