



# 2012 NYC DOT Bridges & Tunnels Annual Condition Report





# **NEW YORK CITY DEPARTMENT OF TRANSPORTATION DIVISION OF BRIDGES 2012 BRIDGES AND TUNNELS ANNUAL CONDITION REPORT**



Commissioner Janette Sadik-Khan, Neighborhood Activist Loretta Ponticello, and Chief Bridge Officer Henry D. Perahia Crossing the Newly Constructed East 78<sup>th</sup> Street Pedestrian Bridge over the FDR Drive After the Ribbon Cutting Ceremony on January 20, 2012.

**Michael R. Bloomberg, Mayor**  
**Janette Sadik-Khan, Commissioner**  
**Lori A. Ardito, First Deputy Commissioner**

**Henry D. Perahia, P.E., Chief Bridge Officer**  
**Russell Holcomb, P.E., Deputy Chief Engineer, Maintenance, Inspections & Operations**  
**Robert O. Collyer, P.E., Deputy Chief Engineer, Bridge Capital Design & Construction**  
**George W. Klein, P.E., Deputy Chief Engineer, Specialty Engineering & Construction**  
**Dorothy Roses, Executive Director, Management & Support Services**  
**Anilkumar Vyas, P.E., Deputy Chief Engineer, Engineering Review & Support**  
**Joannene Kidder, Chief Staff Manager/Executive Director, Community Affairs**

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Note: The photographs in this report have been converted from color to grayscale for printing. The electronic version of the report retains the color versions.

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### **Cover Photographs**

Division projects completed during the Bloomberg administration that won awards (Third Avenue, Queens Boulevard, Williamsburg, Roosevelt Island, Andrews Avenue, Hamilton Avenue, Metropolitan Avenue, Willis Avenue, Grand Concourse, and Borden Avenue), including the Staten Island Ferry Terminal Ramp Project, which is the largest ARRA-funded stimulus project in New York State. (Borden Avenue Credit: Sergey Parayev, Hamilton Avenue Credit: Hardesty & Hanover, Willis Avenue Credit: Douglas Reese)

### **Cover Design**

Michele N. Vulcan, Director of Analysis – Bridges  
David Moidel – NYCDOT Director, and Melanie Michel – Graphic Designer, Creative Services

### **Procurement of Printing Services**

James Gallagher, Director, Budget & Fiscal - Bridges

### **Map and Inventory Preparation**

Kevin McNulty, Director, Bridge Management Unit  
Fitz Arthur Brown and Lidiya Akhmedova, Bridge Management Unit  
Claudio Revelo, NYSDOT Region 11

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**Report Compiled and Prepared by:**  
**Michele N. Vulcan, Director of Analysis - Bridges**  
**New York City Department of Transportation**  
**55 Water Street, 5<sup>th</sup> Floor**  
**New York, New York 10041**



## A Message from the Commissioner

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Dear Friends,

On behalf of the many dedicated professionals who staff the Division of Bridges, it is my pleasure to present the 2012 Edition of the New York City Department of Transportation's Annual Bridges and Tunnels Condition Report, as mandated under the New York City 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 2012 calendar year.

The cover highlights various Division projects that were completed during the Bloomberg administration that won awards, including the Staten Island Ferry Terminal Ramp Project, which is the largest ARRA-funded stimulus project in New York State.

The Division of Bridges includes 787 DOT employees who manage the City's capital bridge program, conduct bridge inspections and monitorings, 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.

The Division of Bridges takes pride in its vital participation in the work both before and after Hurricane Sandy struck the City on October 29, 2012. The Division's skilled and specialized employees responded to the emergency effort wherever they were needed and did not stint their efforts.

Hurricane Sandy arrived in the metropolitan region in time to catch both the full moon and lower Manhattan's high tide. The 8 to 13 foot storm surge overwhelmed the Battery and roared into both the Battery Park Underpass and the West Street Underpass (which serves as the Brooklyn Battery - Hugh Carey Tunnel entrance). Pre-storm efforts by Division operations, painting, and electrician employees included barricading the tunnels to prevent motorists' attempts to ford the flow, which prevented injury and potential loss of life to an unwary public. Generators were brought to the site to power the sump pumps. After the storm, they coordinated the effort to remove 10 to 15 million gallons of seawater from the tunnels with the assistance of the Department of Environmental Protection and the Army Corps of Engineers. The crews worked around the clock for over a week to de-water the tunnels, remove storm debris, pressure wash tunnel walls, and perform initial inspections of the tunnels' electrical, ventilation and lighting operating systems.

Not long after the tunnels were drained, the metropolitan region braced for a second storm. On November 7, a snow laden nor'easter hit the City and although it did not hit, as the hurricane did, in perfect concert with time, tide and the moon, the surge was still expected to reach more than seven feet at the Battery. In anticipation of this impact, Division highway repairer and ironworker crews (with the assistance of a team from the Sidewalk and Inspection Management Division), filled and placed 1,000 sandbags at the underpass to hold off the second surge in less than ten days. Just 12 hours after the operation began, the tunnel was closed 35 minutes ahead of schedule.

Bridge Inspections personnel performed emergency inspections of the city's bridges and other affected structures. The four East River Bridges were the first bridges in New York City to re-open on October 30. With MTA's subways knocked offline, Division engineers assisted in launching a "bus bridge" shuttle service between Brooklyn and Manhattan, moving tens of thousands of passengers along dedicated MTA bus lanes on the East River bridges. Division

carpenters provided assistance to the Office of Emergency Management (OEM) with storm damage emergency repairs at George Washington High School in Washington Heights. In addition, Division ironworkers assisted OEM in unloading heavy equipment at the Citifield staging area in Queens.

Hurricane Sandy surged water levels in the English Kills by over six feet, flooding into the counterweight pits of the Metropolitan Avenue Bridge control house. Flood waters damaged the electrical control system, burning out the transformer and power supply. Approximately 187,000 gallons of water flowed into both bridge pits. On the morning of October 31, Division oilers and electricians began the recovery effort with portable pumps, pumping continuously for four straight days. The Department of Environmental Protection augmented the pumping effort with larger pumps and the bridge pits were finally drained dry on November 3. On November 4, a crew of ten oilers began a manual operation process which took five straight hours of hard labor but permitted a fuel oil barge to enter its port. Further access for fuel barges was also undertaken on November 6 when the opening time was reduced to 1.5 hours as the hydraulic system was returned to service.

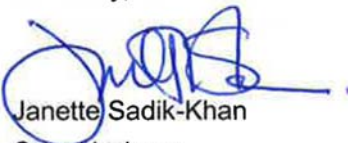
Three important bridges on the Belt Parkway are currently under reconstruction: Fresh Creek Bridge, Rockaway Parkway Bridge and Paerdegat Basin Bridge. Situated along the picturesque south shore of Brooklyn and adjacent to the Gateway National Park, this lovely but low-lying area's propensity for flooding is well known. Keeping the roadway dry, safe and open is always a priority; during storm events it is critical. As soon as the storm began, Division engineers went to the field office and began coordinating the effort to keep the pumps running and keep the road open. Both during and after the hurricane, this effort also included coordinating the removal of the tons of debris that washed onto the walkways and roadway.

In the aftermath of the hurricane, a massive deployment of heavy equipment and removal of debris was undertaken. Over-dimensional truck permits enable the movement of construction equipment and important goods into and through the city on travel routes that protect the city's bridge infrastructure and in turn, the city as a whole. The Division's Truck Permit Section, working without one of their most important tools – mapping software, continued to process permit applications for essential truck permits to facilitate storm clean up, the delivery of essential clean-up equipment and the arrival of goods necessary to the immediate and long term recovery of the City. They were a vital part of the effort that kept the construction industry moving.

The Division of Bridges proved an essential part of the tremendous effort provided by our great City's municipal workers. Thanks to all of the devoted public servants, our City rose above its disaster and showed the world a shining example of civic pride, courage and effectiveness.

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



**Inventory**

In calendar year 2012, the inventory of bridges under the jurisdiction of the Division increased to 788. NYCDOT owns, operates, and/or maintains 758 non-movable bridges, 25 movable bridges, and five tunnels. Over the past 10 years, there has been a decline in the number of bridges rated "Poor," and an increase in the number of bridges rated "Very Good," as shown below.

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Poor</b>	<b>4</b>	<b>6</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>1</b>
<b>Fair</b>	429	456	458	456	459	455	456	462	459	460
<b>Good</b>	209	212	210	210	215	213	209	207	215	212
<b>Vgood</b>	<b>111</b>	<b>116</b>	<b>118</b>	<b>118</b>	<b>111</b>	<b>116</b>	<b>116</b>	<b>113</b>	<b>109</b>	<b>114</b>
<b>Closed</b>					1	1	1	1	1	1
	<b>753</b>	<b>790</b>	<b>790</b>	<b>787</b>	<b>789</b>	<b>788</b>	<b>786</b>	<b>787</b>	<b>787</b>	<b>788</b>

\* 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) were rated "Fair," which accounted for the increase in Fair rated bridges. 1 of the Parks additions, Flushing Meadow Park Pedestrian Bridge over Willow Lake and 76<sup>th</sup> Road, was rated "Poor." It has since been closed.

<sup>1</sup> In 2009, the newly "Poor" rated Hill Drive Bridge in Prospect Park was closed to vehicular traffic. In 2009, 93 of the Parks bridges accounted for 20.4% of the "Fair" rated structures. In 2012, 100 of the Parks bridges accounted for 21.7% of the "Fair" rated structures.

The City has only one bridge that was rated "poor" after its last inspection. 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 it 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 City bridge that is rated "poor" 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 are being replaced during a rehabilitation project that began on January 19, 2010. It should be noted that of the 75 spans of the bridge, only 6 spans contribute to the low condition rating. None of them are among the three suspended spans (i.e. between the anchorages).

**Contract Acceleration**

Acceleration measures are a contract provision used in some reconstruction projects that is implemented through a contract pay item. This contract provision provides a mechanism to implement measures to accelerate the contractor's work to maintain critical path milestones. This provision does not apply to measures undertaken by the contractor to make up for time it lost in the progress schedule. Only the NYCDOT representative invokes this provision when the contract

schedule is compromised due to unforeseen conditions during construction that are out of the contractor's control, and when it is deemed in the City's interests to accelerate.

Incentive and disincentive (I/D) 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).

### **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 2011-2012, a total of 12,800 gallons of potassium acetate and 43.5 tons of sodium acetate were applied on the roadways of all four East River Bridges.

### **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. An updated underwater inspection was performed within the limits of the proposed contract in 2009. The final design is now complete. The construction work commenced in April 2012, and is expected to be complete in April 2016.

### **2012 Awards**

In 2012, the outstanding work of the Division was recognized by the receipt of several awards.

In March 2012, the American Council of Engineering Companies of New York selected the replacement of the Willis Avenue Bridge for both a Gold and a Diamond Award in the structural systems category in its 2012 Engineering Excellence Awards. The Manhattan Bridge biennial inspection and the emergency reconstruction of the Borden Avenue Bridge were selected for Platinum Awards in the structural systems category, the reconstruction of the Roosevelt Island



## ***EXECUTIVE SUMMARY***

Bridge was selected for a Diamond Award in the transportation category, and the protective coating project on the Belt Shore Parkway Bridges received a Silver Award in the transportation category.

In April 2012, the American Council of Engineering Companies selected the replacement of the Willis Avenue Bridge and the reconstruction of the Roosevelt Island Bridge for National Recognition Awards in its 2012 Engineering Excellence Awards.

In May 2012, the Metropolitan Section of the American Society of Civil Engineers selected the replacement of the Willis Avenue Bridge as its Construction Achievement Project of the Year.

In June 2012, the New York Chapter of the New York State Society of Professional Engineers selected the replacement of the Willis Avenue Bridge as its Project of the Year.

In November 2012, Director of Quality Assurance Muhammad Afzal received an Outstanding Achievement Award from the South Asian American Association.

In November 2012, Roads & Bridges Magazine selected the replacement of the Willis Avenue Bridge as the fifth place finisher in its annual selection of the country's top 10 bridge projects.

In November 2012, the Municipal Engineers of the City of New York selected the St. George Ferry Terminal Ramps Rehabilitation project as its 2012 Municipal Project of the Year.

In November 2012, Interim Director of Bridge Preventive Maintenance Paul Schwartz was presented the Young Engineer of the Year award from the Municipal Engineers of the City of New York.

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***

As an integral part of New York City's Department of Transportation, the Division of Bridges has a two-fold mission: to maintain an optimal transportation network by ensuring smooth mobility on the city's bridges, and to ensure the safety of the public.

The New York City Department of Transportation's Division of Bridges is comprised of five 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 5 tunnels), and 53 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 design issues, 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 5 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 and photographs of the 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.



## ***DIVISION OVERVIEW***

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

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

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

This Section is also responsible for investigating new materials and methods to improve existing bridge conditions. It sponsors a series of lectures by experts on subjects relevant to design, construction, and maintenance, such as seismic retrofitting of bridges, salt substitutes, cathodic protection against corrosion, concrete patching materials, new paint strategies, non-destructive bridge testing, and deck resurfacing. The unit also participates in research programs with interested transportation and infrastructure entities. In conjunction with the Port Authority, 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 2012 Bridge Operations effected a total of 5,496 openings, 4,819 of which allowed 8,402 vessels to pass beneath the bridges. The remaining 677 openings were for operational and maintenance testing. The section also operates the city's five 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.

## ***DIVISION OVERVIEW***

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.

The **Bureau of Bridge Capital Design & Construction** is made up of two major sections:

The **East River and Movable Bridges Section** 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 Section 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 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 **Roadway Bridges Section** 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 (comprised of the Structural, Electrical, and CADD Groups) 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 repair projects of the **Bureau of Bridge Maintenance, Inspections and Operations**. Over the last 20 years, In-House Design has completed contract documents for over 30 major replacement/rehabilitation projects. Some of these structures were in highly environmentally sensitive areas, such as the FDR Drive from 42<sup>nd</sup> to 54<sup>th</sup> Streets, Hylan Boulevard over Lemon Creek, Chelsea Road over Sawmill Creek, Cropsey Avenue over Coney Island Creek, the Exterior Street Ramp, Belt Parkway Bridge over Paerdegat Basin, 145<sup>th</sup> Street Bridge over Harlem River, and the Greenpoint Avenue Bridge over Newtown Creek. The staff also provided plans, working drawings, and shop drawings for in-house built projects such as the temporary Pedestrian Bridge for PS-5, Ferry Terminals at 34<sup>th</sup> Street, the Hamilton Avenue Asphalt Plant conveyor supports, the Yankee Stadium Ferry Access, the concrete barrier at Cross Bay Boulevard, and the protection beam at Westchester Avenue.

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



## ***DIVISION OVERVIEW***

specifications prepared by consultants and review test results of electrical systems conducted by vendors on the movable bridges.

The **Engineering Support Section** is comprised of four units: *Specifications, Survey, Records Management, and Special Projects*.

The *Specifications Unit* prepares and reviews contract bid documents and specifications for all Federal and City-funded, private developer, City-let in-house and consultant-designed bridge and various other construction projects, processes the contracts for bidding, after ensuring that they comply with the City, New York State and Federal standards, prepares, reviews, and transmits addenda, maintains and updates City-let bridge construction boiler plates in compliance with FHWA and NYSDOT Engineering bulletins and instructions, and updates and maintains an inventory of all NYC and NYS special specifications used in bridge and other construction projects. This Unit approves and issues item numbers for newly written special specifications for the city funded projects. In addition, it prepares "Revisions to NYSDOT Standard Specifications" (R-pages), which are compiled from NYSDOT Engineering Bulletins and Engineering Instructions, and reviews contract drawings for compliance with contract bid proposal books.

The *Survey Unit* performs field surveys and visual inspections for the preparation of monitoring bridge structures, bridge component movement, crack monitoring, and foundation settlement. This unit also is involved in the survey, visual inspection, and monitoring of movement and cracks in retaining walls.

The *Records Management and Electronic Media Unit* establishes drafting guidelines for contract plans 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 CDs and DVDs containing pdf and CAD files. This unit maintains original plan files, upgrades the records database and converts original drawings into electronic media in retrievable formats. It also responds to requests received from private, public and other agencies for information regarding records of City-owned bridges.

The *Special Projects Unit* reviews contract bid documents and specifications for public and private agencies to ensure compliance with City, State and Federal standards and guidelines.

The **Engineering Review Section** consists of ten units: *Structural Review, Retaining Wall, Bridge Hold, Cost Estimate, Other Agency/Private Developer, Scope Development, Overweight Truck Permit, Geotechnical, Land Use Planning, and Utilities*.

The *Structural Review Unit* reviews all City-let bridge construction contract drawings, oversees seismic design requirements for City-let contracts for bridge projects, reviews analysis and design calculations and ensures that the work to be performed conforms to NYCDOT requirements. This unit establishes design standards, including seismic requirements.

The *Retaining Wall Unit* is 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. Data on poorly rated retaining walls are developed into scope packages and forwarded to the New York City Department of Design and Construction for permanent rehabilitation with DOT funding. Walls of questionable ownership are researched for ownership and jurisdiction. 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 *Bridge Hold Unit* was established in February 2011, based on OCMC requests to review construction permit applications for any proposed work located within 100 feet of any City-owned bridge structure. The permit applications may also originate from other City agencies, private developers, and utility companies. The Unit reviews the proposed work to ensure that it does not compromise the integrity of the structure and that it is in compliance with Agency requirements. Based on the review's recommendations, OCMC approves or disapproves these permit applications. The Unit receives an average of 85 permit applications per week for review.

## ***DIVISION OVERVIEW***

The *Cost Estimate Unit* reviews and oversees design and construction cost estimates of City projects.

The *Other Agency/Private Developer Unit* currently provides engineering review supervision of projects from other agencies and private developers such as the Atlantic Yards Project, the Eastside Access Project, and the Riverside South Project. In addition, the unit conducts non-bridge engineering projects, such as the annual balloon wind study for the Macy's Thanksgiving Day Parade.

The *Scope Development Unit* reviews inspection reports, as-built drawings, and structural condition ratings, performs field inspection of bridges to develop the scope of work for the rehabilitation of deficient and poorly rated bridges, and initiates the procurement of Design Consultant contracts. The Unit is also responsible for reviewing of quarterly budgetary plans for bridge rehabilitation projects and coordinates these reviews with the Bureau of Bridge Maintenance, Inspections and Operations, and the Capital Procurement and Capital Planning Sections.

The *Overweight Truck Permit Unit* in coordination with the Division's Truck Permit Unit reviews the engineering aspects of overweight and over-dimensional truck and self-propelled crane permit applications, performs load rating analyses, and reviews load postings for City owned bridges. The Unit also reviews resurfacing, snow removal and other heavy equipment permit requests from within the Agency and from other agencies.

The *Geotechnical Engineering Unit* provides geotechnical-engineering services. This unit reviews bridge rehabilitation/reconstruction project reports, soil investigation/geotechnical foundation reports, City-let bridge construction contract drawings and other agency/private developers' geotechnical work which impacts City-owned projects.

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

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

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 construction practice. Current major projects include the Brooklyn Bridge, Manhattan Bridge, Willis Avenue Bridge, Roosevelt Island Bridge, Belt Parkway Bridge over Paerdegat Basin, Belt Parkway Bridge over Rockaway Parkway, Belt Parkway Bridge over Fresh Creek Basin, 11<sup>th</sup> Avenue Viaduct over LIRR Westside Yard, East 8<sup>th</sup> Street Access Ramp over Belt Parkway, St. George Staten Island Ferry Terminal Ramps, Northbound and Southbound Bruckner Expressway Bridges, Wards Island Pedestrian Bridge over Harlem River, 149<sup>th</sup> Street Bridge over LIRR, East 78<sup>th</sup> Street Pedestrian Bridge over FDR, Shore Road Circle Bridge, Carlton Avenue Bridge over LIRR Yard, and the Claremont Parkway Bridge. In addition, the Section provides services to the Component Rehabilitation Section on an as-needed basis.

## ***DIVISION OVERVIEW***

The Section is currently involved in extending its services for inspection of concrete at batching plants for the Sidewalk and Inspection Management Citywide Concrete Program via its contract with a City-contracted inspection firm.

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, management of storm water runoff, soil erosion controls, management of concrete washout wastewater, 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, 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 Willis Avenue Bridge, Manhattan Bridge, Williamsburg Bridge, Brooklyn Bridge, Wards Island Pedestrian Bridge over Harlem River, Floyd Bennett Field Wetland Mitigation, and Belt Parkway Bridges, as well as Component Rehabilitation, Roadway Bridge, and Design/Build projects such as the reconstruction of the ramps at the St. George Ferry Terminal in Staten Island, Bruckner Expressway over the Bronx River and the Bruckner Expressway Bridges over Conrail/Amtrak.

The **Specialty Engineering and Construction Bureau** is responsible for all ***Component Rehabilitation*** activities, ***Design-Build/Emergency Contracts***, ***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 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 Component Rehabilitation Program is an ongoing program with cumulative effects. Each Fiscal Year, a number of bridges are selected for inclusion in the program and construction is completed on others. Through fiscal year 2018, the program will obligate approximately \$141.5 million.

The ***Design-Build/Emergency Contracts 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



## ***DIVISION OVERVIEW***

process for declared emergency situations; providing technical expertise related to the development, procurement and administration of Design-Build contracts throughout the various areas of the Division; preparing and administering Design-Build agreements; and supervision of Design-Build project design, construction, and inspection services.

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

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

## ***DIVISION OVERVIEW***

and procedures; and overseeing telephone and facility-related issues for personnel located at 55 Water Street and 59 Maiden Lane in Manhattan.

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

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

The *Vehicle Coordination Unit* tracks the placement and condition of all vehicles under the jurisdiction of Bridges. It maintains a database and prepares reports containing this information; provides information and reports to appropriate inquiring Divisions and Agencies such as the Auditor General's Office, NYCDOT Legal Department and NYCDOT Litigation Support Services; coordinates the assignments of vehicles and their movement throughout various borough field locations and job sites; prepares reports on Vehicle Status and replacement; prepares reports for the purpose of tracking Overnight Vehicle Assignments for all Division vehicles; receives and routes vehicle Accident Reports, Police Reports and Security Incident Reports relating to vehicle accident, theft and/or vandalism; coordinates priorities for vehicle and equipment repair with Fleet Services; prepares reports and memoranda regarding vehicle safety issues and communication procedures for 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, other Agency Divisions, the public and private railroads, and the various consulting firms involved with the procurement process. The duties of this unit include: overseeing the Division's capital consultant contract procurement from scope to registration; preparing status reports; processing of the Division's change orders through registration, and coordinating Railroad Force Account Agreements and railroad invoice payments for Division construction projects.

*Railroad Force Account Agreements* are a vital component in the rehabilitation/reconstruction program since train traffic affects 327 (41.5%) 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. Upon registration of the railroad force account contracts between the City of New York and the respective railroad, Notices to Proceed [NTPs] are issued, and invoices are generated. The invoices, once approved by the engineers for the railroad and the corresponding DOT Project Manager, are sent to the Railroad Coordinator for processing and actual payment by the New York City Comptroller's Office.

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

## ***DIVISION OVERVIEW***

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.

Certificates to Proceed [CPs] are a critical component for the registration of any Construction, Consultant Programs, Force Account, Change Order and Engineering Service Agreement and assigned ESA tasks. Coordinating the submission of New and Revised Certificates to Proceed for submission to the Capital Budget is overseen by the Capital Procurement Unit.

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 \$4.9 billion. This plan is designed to rehabilitate the City's bridges. Responsibilities include: administering and participating in the development and implementation of planning capital projects; acting as liaison with oversight agencies, DOT Administration and all responsibility centers within Bridges; 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. In addition, this section coordinates the Division's submission of Initial Financial Plans, Annual Financial Plan and Construction Management Plans prepared by Project Managers that must be submitted to the Office of Finance, Contracts & Program Management.

The **Truck Permit Section** issues approximately 682 Annual Overweight Load Permits (renewals only), and approximately 37,890 other permits, including Annual Self-Propelled Crane Permits, Daily Oversize/Overdimensional/Supersize Truck Permits, and Bulk Milk Permits; 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 January 2012, the Section Coordinated a Series of Supersized Moves with Bay Crane to Move a 435,000 Pound Tunnel Boring Machine Head and a Smaller Machine Head Weighing 150,000 Pounds, as Part of the Ongoing Eastern Access Project. The Vehicle was 27'-10" high, 22'-5" Wide, and 94'-2" Long, With a Gross Weight of 689,800 Pounds. In February 2012, the Section Issued a Permit for the Move of the Sculpture "Bird" by Will Ryman. The 12 Feet High, 16 feet Wide, 2 Ton Sculpture was Exhibited From February 16 Until March 24, 2012. (Credit: Will Ryman and Paul Kasmin Gallery)



**JANUARY*****Hamilton Avenue Asphalt Plant (Brooklyn)***

On January 7, 2012, Division ironworkers repaired the drum, silo, and chute.

***Willis Avenue Bridge over Harlem River (Bronx/Manhattan)***

The newly built Ramp C, which provides a direct connection to the Major Deegan Expressway, was opened on January 10, 2012.

***Flushing Avenue Service Road over Flushing Avenue (Queens)***

Cleaning and painting of this bridge, which began on October 11, 2011, was completed on January 11, 2012.

***Anti-Icing***

On January 14 – 17, 2012 icicle patrols monitored the FDR Drive, and the Cross Bronx and Brooklyn-Queens Expressways.

***Hamilton Avenue Asphalt Plant (Brooklyn)***

On January 14, 2012, Division ironworkers repaired the drum, hopper, and chute.

***Commissioner Richard J. Sheirer Tribute***

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on January 20, 2012, in tribute to former Office of Emergency Management Commissioner Richard J. Sheirer, 65, who died on January 19. Commissioner Sheirer served under both Mayors Bloomberg and Giuliani. He oversaw all of the agency's emergency response, preparedness and recovery protocols and was responsible for coordinating plans for major events across the five boroughs. He began working in the Fire Department in 1967 as a Fire Alarm Dispatcher, and ultimately rose to become Deputy Commissioner in 1994, earning the Chief Thomas P. O'Brien Award in the process. In 1996, Mr. Sheirer was appointed as the NYPD's Deputy Commissioner for Administration and Chief of Staff, and in February 2000 became Director of the Mayor's Office of Emergency Management. After the terrorist attacks on September 11, 2001, he was in charge of coordinating the enormous effort of rescue and clean-up, involving dozens of local, state and federal agencies. Commissioner Sheirer retired in March 2002. The flags were raised on January 23, 2012.



Commissioner Richard J. Sheirer.

***East 78<sup>th</sup> Street Pedestrian Bridge over FDR Drive (NB & SB)***

The reconstruction of the bridge was substantially completed on January 20, 2012. Decades of use and exposure to the elements took a toll on the original structure, which was built in the 1940s. In 2006, the State Department of Transportation listed the bridge's condition as "poor" in its biennial inspection. Given the scope of repairs and need for additional upgrades, DOT chose to replace the entire crossing, an impressive undertaking given its location over a key six-lane arterial highway.

The new bridge, constructed entirely in Camden, New Jersey and delivered by barge, includes wider sidewalks and approaches, pedestrian safety fencing and ADA-compliant ramps for added safety and improved access. The new bridge also sits higher over the road than its predecessor to provide more clearance for large vehicles, particularly for emergency responders. The project

also improved lighting in the area, including replacements for nearby streetlights and the addition of decorative lighting on the East 78<sup>th</sup> Street approach. The contract also included re-pointing masonry for the retaining wall along East 78<sup>th</sup> Street.



East 78<sup>th</sup> Street Bridge. The Ribbon-Cutting Ceremony: Council Member Jessica Lappin, Neighborhood Advocate Loretta Ponticello, Commissioner Janette Sadik-Khan, Assembly Member Micah Z. Kellner, and Parks Manhattan Borough Commissioner William T. Castro.

### ***Anti-Icing***

On January 21, 2012, 4.3 inches of snow fell in Central Park, 3.4 inches at La Guardia Airport, and 1.6 inches at JFK Airport. Anti-icing crews were deployed on the East River bridges from 1:00 AM to 5:00 PM on January 21; 33 applications of chemicals were made. Crews were again deployed from 8:30 PM on January 22 until 5:00 AM the following morning; no applications were necessary. Snow was cleared from priority overpasses, and icicle patrols were active on the FDR Drive, Battery Park Underpass, and the Cross Bronx and Brooklyn-Queens Expressways.

### ***Hamilton Avenue Asphalt Plant (Brooklyn)***

On January 21, 2012, Division ironworkers repaired the drum and chute.

### ***Hamilton Avenue Asphalt Plant (Brooklyn)***

On January 28, 30, and 31, 2012, Division ironworkers worked on the installation of the new cyclone and repaired the ducts.

### ***Brooklyn Bridge***

At approximately 8 AM on January 30, 2012, an over-height truck on the northbound Brooklyn-Queens Expressway struck the Brooklyn Bridge. Four empty 90-foot long containers fell off the back of the truck into the street. No one was injured. All eastbound lanes were closed for several hours as the truck was removed and the bridge was inspected. The damage to the fascia girder was repaired that night by the contractor. Follow-up repairs were conducted in early February.

### ***Willis Avenue Bridge over Harlem River (Bronx/Manhattan)***

The sidewalk to the North Access Road was opened on January 30, 2012.

### ***Belt Parkway Bridge over Fresh Creek (Brooklyn)***

The first concrete deck pour in the winter concrete enclosure was completed in January 2012.



Fresh Creek Bridge: Winter Tent Enclosure for Stage IIB Concrete Bridge Deck Placement.

## **FEBRUARY**

### ***Shore Road Circle over Amtrak (Bronx)***

On February 3, 2012, the traffic in the center lanes of the bridge was moved to the newly constructed outer lanes. The contractor then began demolition of the inner lanes of the bridge.

### ***Hamilton Avenue Asphalt Plant (Brooklyn)***

On February 4, 2012, Division ironworkers repaired the cyclone and drum.

### ***Anti-Icing***

Anti-icing crews were deployed on the East River bridges from 7:00 PM on February 8, 2012 until 4:00 AM the following morning, and from 10:00 PM on February 10 until 2:00 PM the following day. No applications of chemicals were necessary. Icicle patrols were active on the FDR Drive, Battery Park Underpass, and the Cross Bronx and Brooklyn-Queens Expressways.

### ***South of Tillary Street Pedestrian Bridge over Navy Street (at NYCHA Ingersoll Houses) (Brooklyn)***

Additional pedestrian fencing on the bridge approaches was needed to ensure public safety. Division in-house design staff provided plans for the additional fencing and maintenance personnel installed it. The fence extension installation began on January 24, 2012, and was completed on February 9, 2012.



Additional Fencing on the Pedestrian Bridge.

### ***Hamilton Avenue Asphalt Plant (Brooklyn)***

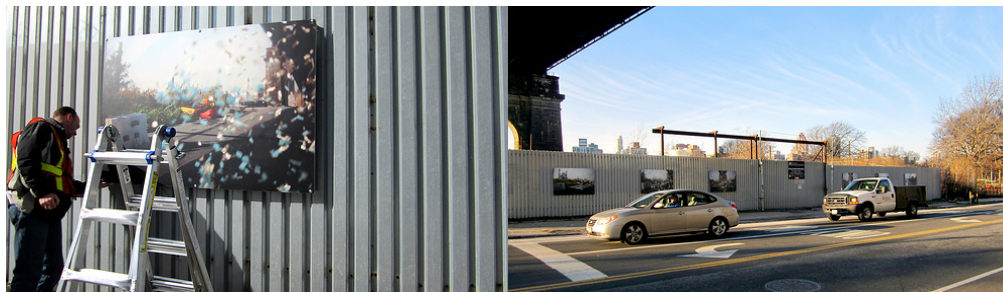
On February 11, 2012, Division ironworkers repaired the cyclone, main drum, and grizzly.

### ***Ed Koch – Queensboro Bridge***

The Agency's Urban Art Program enhances public space through art and improved street design and streetscapes. Launched in October 2008, the program brings the vision of the Agency's World Class Streets initiative to life by partnering with community organizations to install murals, sculptures and other art forms in plazas and on medians, triangles, sidewalks, Jersey barriers and construction fences for up to 11 months on NYCDOT properties.

Rena Leinberger's "When it opens like this, up is not over" transposed images of the veiled environment behind a 50-foot fence on Vernon Boulevard and Queens Plaza South onto its face.

She took six photographs shot in documentary fashion of the view beneath the Ed Koch - Queensboro Bridge. These photographs were then re-photographed with everyday objects, in a state of falling, in front of them suggesting precipitation, celebration, and elusiveness. Neither the artwork nor the scenes they depict can ever be viewed in entirety, partially obscured by the flurry. The exhibit opened on February 3, 2012.



Installing the Exhibit. Art on the Fence.

### ***Champions of Change: Rebuilding America's Infrastructure***

On February 15, 2012, Chief Bridge Officer Henry D. Perahia participated in a roundtable discussion regarding transportation projects, and discussed the St. George Ferry Terminal Project, as part of the White House Champions of Change Program.



United States Secretary of Transportation Ray LaHood, Director of the Navajo Division of Transportation Paulson Chaco, Chief Bridge Officer Henry D. Perahia, and Project Manager for the DFW Connector Project Sam E. Swan.

### ***Hamilton Avenue Asphalt Plant (Brooklyn)***

On February 18, 2012, Division ironworkers repaired the cyclone and hoppers.

### ***Harper Street Asphalt Plant (Queens)***

On February 18, 2012, Division ironworkers repaired the cyclone and hoppers.

### ***Harper Street Asphalt Plant (Queens)***

On February 25, 2012, Division ironworkers repaired the mixer and hopper.

### ***Service Road Turnaround over Flushing Avenue (Queens)***

Cleaning and painting of this bridge, which began on September 15, 2011, was completed on February 27, 2012.

### ***Bruckner Expressway Bridge over Bronx River (a.k.a. Eastern Boulevard Bridge) (Bronx)***

Cleaning and painting of the bridge operator's house, which began in January 2012, was completed in February 2012.

### ***FDR Drive Southbound over FDR Drive Northbound Underpass (Manhattan)***

Cleaning and painting of the motor and control rooms began and was completed in January 2012.



### ***Department of Transportation Facility at Plymouth Street (Brooklyn)***

Cleaning and painting of this structure began and was completed in February 2012.

### ***Third Street Bridge over Gowanus Canal (Brooklyn)***

Cleaning and painting of the bridge operator's house, which began in January 2012, was completed in February 2012.

## **MARCH**

### ***Awards***

In March 2012, the American Council of Engineering Companies of New York selected the replacement of the Willis Avenue Bridge for both a Gold and a Diamond Award in the structural systems category in its 2012 Engineering Excellence Awards. The Manhattan Bridge biennial inspection and the emergency reconstruction of the Borden Avenue Bridge were selected for Platinum Awards in the structural systems category, the reconstruction of the Roosevelt Island Bridge was selected for a Diamond Award in the transportation category, and the protective coating project on the Belt Shore Parkway Bridges received a Silver Award in the transportation category.

### ***Harper Street Asphalt Plant (Queens)***

On March 3, 2012, Division ironworkers repaired the hopper and scales.

### ***Manhattan Bridge***

Bicyclists returned to the bridge's north path and pedestrians to the south path on March 5, 2012, as scheduled.

### ***65<sup>th</sup> Place Bridge Railing over Brooklyn-Queens Expressway (Queens)***

Cleaning and painting of this bridge, which began on June 17, 2011, was completed on March 5, 2012.

### ***Superior Road Bridge over Cross Island Parkway (Queens)***

The component rehabilitation of this bridge was substantially completed on March 9, 2012.



Sandblasting the Underdeck Concrete and Rebar on the Superior Road Bridge. Placing Rapid Hardening Polymer Concrete.

### ***37<sup>th</sup> Street Bridge over Brooklyn-Queens Expressway (Queens)***

The component rehabilitation of this bridge was substantially completed on March 9, 2012.



Placing Concrete for Northeast Sidewalk on the 37<sup>th</sup> Street Bridge. New Fence and Railing.

### ***Harper Street Asphalt Plant (Queens)***

On March 10, 2012, Division ironworkers repaired the crusher, mixer, and conveyor belt.

### ***Harper Street Asphalt Plant (Queens)***

On March 17, 2012, Division ironworkers repaired the mixer, pulley system, and conveyor belt.

### ***Belt Parkway Bridge over Fresh Creek (Brooklyn)***

The new path for bicycles and pedestrians on the eastbound bridge was opened on March 20, 2012, and vehicular traffic commenced on March 24.



Eastbound Fresh Creek Bridge Deck Open to Motor Vehicle, Bicycle, and Pedestrian Traffic.

### ***Ed Koch Queensboro Bridge***

On March 30 and 31, 2012, Division electricians assisted a film crew from the television series “Elementary” at the Ed Koch Queensboro Bridge.

### ***Brooklyn Bridge***

The necklace lights on the Brooklyn Bridge were turned off for one hour on the evening of March 31, 2012 in observance of Earth Hour.

### ***Hamilton Avenue Asphalt Plant (Brooklyn)***

On March 31, 2012, Division ironworkers repaired the chute channel, screener, and silo.

### ***Harper Street Asphalt Plant (Queens)***

On March 31, 2012, Division ironworkers repaired the rap bin, main drum, chute channel, screener, and silo.

### ***Belt Parkway Bridge over Paerdegat Basin (Brooklyn)***

The Pier #2 cofferdam was completed and excavations inside began in March 2012.



Paerdegat Basin Waterway with Partially Demolished Bridge, Temporary Work Platform, and Pier 2 Cofferdam. Embankment for Future Westbound Bridge in Background.

### ***Greenpoint Avenue Bridge over Newtown Creek (Brooklyn/Queens)***

Cleaning and painting of the bridge operator's house, which began in January 2012, was completed in March 2012.

**APRIL****Awards**

In April 2012, the American Council of Engineering Companies selected the replacement of the Willis Avenue Bridge and the reconstruction of the Roosevelt Island Bridge for National Recognition Awards in its 2012 Engineering Excellence Awards.

**Marine Borer Remediation (Manhattan and Brooklyn)**

A Notice to Proceed for the marine borer remediation work on the supporting structures of the relieving platforms along the FDR Drive (from East 15<sup>th</sup> to East 96<sup>th</sup> Street), and the timber piles and structures of the Carroll Street and Ocean Avenue bridges in Brooklyn was issued to the contractor with a start date of April 2, 2012.

**West 33rd Street Bridge over Land Adjacent to Amtrak (Manhattan)**

Cleaning and painting of the bridge, which began on December 21, 2011, was completed on April 3, 2012.

**Hamilton Avenue Asphalt Plant (Brooklyn)**

On April 7, 2012, Division ironworkers repaired the grizzly.

**Harper Street Asphalt Plant (Queens)**

On April 14, 2012, Division ironworkers repaired the mixer, chute, and conveyor belt.

**Fire Lieutenant Richard A. Nappi Tribute**

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on April 17, 2012, in tribute to Fire Lieutenant Richard A. Nappi of Engine Company 237 in Brooklyn. He collapsed while battling a three-alarm fire at a commercial building in the Bushwick section of Brooklyn on April 16, and died later that day. Fire Lieutenant Nappi, 47, was a 17-year veteran of the FDNY.

After his appointment to the FDNY on October 23, 1994, then-Firefighter Nappi worked at Engine 7 on Duane Street in lower Manhattan. Although he was off-duty on September 11, 2001, he responded from his home in Long Island that morning to the World Trade Center, which was several blocks from his firehouse. In 2003, he transferred to Engine 302 in Queens, and, after his promotion to Lieutenant on November 10, 2007, he was assigned to Engine 237.

Before joining the FDNY, Lieutenant Nappi was a parole officer for the NYS Division of Parole, and a case worker for the Suffolk County Department of Social Services. Fire Lieutenant Nappi was the 1,142nd firefighter to die in the line of duty since the FDNY's founding in 1865. The flags were raised on April 22, 2012.



Fire Lieutenant Richard A. Nappi.

**Woodside Avenue Bridge over Brooklyn-Queens Expressway (Queens)**

Cleaning and painting of the bridge, which began on March 8, 2012, was completed on April 24, 2012.

**41<sup>st</sup> Avenue Bridge Railing over Brooklyn-Queens Expressway (Queens)**

Cleaning and painting of the bridge railing, which began on April 23, 2012, was completed on April 24, 2012.



### **69<sup>th</sup> Street Bridge over Brooklyn-Queens Expressway (Queens)**

Cleaning and painting of the bridge, which began on March 9, 2012, was completed on April 24, 2012.

### **Council Member Enoch H. Williams Tribute**

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on April 26, 2012, in tribute to former Council Member and former New York Army National Guard Major General Enoch H. Williams, 84, who died on April 24. Council Member Williams represented District 41 in Brooklyn for five terms, from 1978 until 1997. As chairman of the Health Committee during his last term, Mr. Williams was a principal force behind the law that in 1994 banned smoking in restaurants, offices, and many outdoor locations.

He also served as commander of the New York Army National Guard from 1990 to 1993. Major General Williams earned his commission in 1950 after serving as an enlisted member during World War II, rising from the ranks of second Lieutenant to Colonel. He served in many positions; among them-Artillery Officer, Transportation Officer, liaison to the Deputy Chief of Staff for Logistics and Commander of the Selective Service. General Williams was appointed Commander of the New York Guard in 1990. He retired from the military in 1995 after more than 30 years of active service.



Council Member Enoch H. Williams.

### **Harper Street Asphalt Plant (Queens)**

On April 28, 2012, Division ironworkers repaired the scale and duct plates.

### **Manhattan Bridge**

Each spring, the Agency's Urban Art Program, in collaboration with New York Cares, commissions artists and designers to produce murals for concrete barriers that typically separate bicycle lanes from lanes of vehicular traffic. Hundreds of New York Cares volunteers assist the selected artists with painting their designs onto assigned barrier sites. Murals remain installed for 11 months.

In April 2012, approximately 600 feet of concrete wall along the Manhattan Bridge Ramp in Brooklyn were brought to life with artist Abby Goldstein's engaging play of color and pattern. Her design referred to both the natural world and the built environment with cast shadows of botanical forms and a background of repeated blues and greens in a staggered pattern.



Barrier Beautification on the Manhattan Bridge Ramp in April 2012.

**MAY****Award**

In May 2012, the Metropolitan Section of the American Society of Civil Engineers selected the replacement of the Willis Avenue Bridge as its Construction Achievement Project of the Year.

**Gregory Jackson Tribute**

The American flags on the Brooklyn Bridge that had been lowered to half-mast in tribute to former Council Member Enoch H. Williams remained at half-mast in tribute to Parks and Recreation Department employee Gregory Jackson. He collapsed while at the Department's Brooklyn headquarters in Prospect Park on May 1, 2012, and died later that day. Mr. Jackson, 60, was a 26-year veteran of the Department and the Director of the Brownsville Recreation Center.

A former NBA basketball player drafted by the New York Knicks, he grew up playing in the Brownsville Recreation Center and vowed to one day lead it. Mr. Jackson joined the Department as a Recreation Specialist on June 24, 1986 and true to his word, was promoted to his leadership post in 1997. He enlisted local artists to paint murals on the walls and expanded the center's programs beyond athletics, staging plays, running talent shows and holding roller-skating nights. Mr. Jackson was the 2010 recipient of the W. Allison and Elizabeth Stubbs Davis Award, which recognizes Department employees who show extraordinary dedication to the communities that they serve. The flags were raised on May 9, 2012.



Gregory Jackson.

**East 8<sup>th</sup> Street Access Ramp (Guider Avenue Ramp to Belt Parkway) Over Belt Parkway (Brooklyn)**

The reconstruction of the bridge was substantially completed on May 4, 2012.



East 8<sup>th</sup> Street Access Ramp – East Side View. Traffic on Bridge.

**Harper Street Asphalt Plant (Queens)**

On May 5, 2012, Division ironworkers repaired the bin and duct.

**35<sup>th</sup> Annual Five Borough Bike Tour**

In preparation for the 42-mile Five Borough Bike Tour on May 6, 2012, Division personnel swept the bridges along the route and patrolled them for potholes. Carpenters installed temporary plywood covers over the finger joints of the Pulaski Bridge, which were removed after the tour concluded that day.



Preparing the Pulaski Bridge for the Bike Tour by Installing Plywood Covers Over the Finger Joints. Blowing Out Debris, Placing the Plywood Board, and Taping into Place: Carpenters Mark Pavia, Michael Short III, and Patrick Burns. Completed Job: Carpenter Patrick Burns, Supervisor Carpenter John Motylewski, and Carpenters John Green, Andrew Myjer, Michael Short III, and Mark Pavia. (Credit: Paul Schwartz) Cyclists on the Madison Avenue, Third Avenue, Ed Koch Queensboro, and Pulaski Bridges. (Credit: Mark Feinman)

***Grand Concourse over Metro North (Bronx)***

Expansion joint repairs on this bridge, which began on the night of April 16, 2012, were completed on May 8.

***Hamilton Avenue Asphalt Plant (Brooklyn)***

On May 10, 2012, Division ironworkers made emergency repairs on the mixer.

***Hamilton Avenue Asphalt Plant (Brooklyn)***

On May 12, 2012, Division ironworkers repaired the shaker box, support angles, recycling fan and hydraulic arms.

***Harper Street Asphalt Plant (Queens)***

On May 12, 2012, Division ironworkers repaired the dryer.

***Merrick Boulevard Bridge over Laurelton Parkway Eastbound and Merrick Boulevard Bridge over Laurelton Parkway Westbound (Queens)***

Cleaning and painting of these bridges, which began on April 26, 2012, was completed on May 14, 2012.

***Peace Officers Memorial Day Tribute***

The Brooklyn Bridge American flags flew at half-mast on May 15, 2012, to commemorate Peace Officers Memorial Day.

***Hamilton Avenue Asphalt Plant (Brooklyn) and Harper Street Asphalt Plant (Queens)***

On May 17, 2012, Division ironworkers repaired the elevator, drum, and silo.

***Henry Hudson Parkway Bridge over Broadway (Bronx)***

Cleaning and painting of this bridge, which began on April 4, 2012, was completed on May 17, 2012.

***70<sup>th</sup> Street Bridge Railing over Brooklyn-Queens Expressway (Queens)***

Cleaning and painting of this bridge, which began on April 16, 2012, was completed on May 18, 2012.

### ***Jeffrey Barbieri Tribute***

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on May 19, 2012, in tribute to Parks and Recreation Department employee Jeffrey Barbieri. He collapsed while working to preserve elements of the 9/11 Memorial in Tribute Park, in Rockaway, Queens on May 18, and died later that day. Mr. Barbieri, 38, was a three and a half year veteran of the Department, and worked as a Cement Mason, building and renovating features of the City's parks. The flags were raised on May 24, 2012.



Jeffrey Barbieri.

### ***Division Years of Service Ceremony***

Division personnel were honored on May 23, 2012 for their years of service to the City. The awards were presented by Chief Bridge Officer Henry D. Perahia and First Deputy Chief Engineer Russell Holcomb.

#### 30 Years of Service

Supervisor Bridge Operator Brian Corry and Highway Repairer John Godfrey

#### 25 Years of Service

Highway Repairer Alfred Black, Area Supervisor Highway Maintenance James Campbell, Associate Staff Analyst Michael DePompo, Highway Repairer Kevin Donahue, Supervisor Bridge Operator Arturo Fisher, Civil Engineer Lev Gold, Associate Staff Analyst Paul Kahn, Bridge Operator George Kutty, Highway Repairer Karim McLean-Nur, Bridge Repairer and Riveter Gonzalo Montano, Cement Mason Luigi Mula, Computer Associate Software Laurie Oberson, Electrician Richard Parisi, Electrician Steven Radice, Executive Director of Management and Support Services Dorothy Roses, Assistant Civil Engineer Reza Taheri, Staff Analyst Agnes Thanjan, and Bridge Repairer and Riveter Ignazio Trapani.



Division Staff at the Ceremony With Deputy Chief Engineer Russell Holcomb, Chief Bridge Officer Henry D. Perahia, and Executive Director of Management and Support Services Dorothy Roses. (Credit: Michele N. Vulcan)

### ***Knapp Street Bridge over Belt Parkway (Brooklyn)***

Cleaning and painting of this bridge, which began on February 28, 2012, was completed on May 23, 2012.

### ***Memorial Day Tribute***

The Brooklyn Bridge American flags flew at half-mast until noon on May 28, 2012, to commemorate those who died serving the nation during war.



### ***Ninth Street Bridge over Gowanus Canal (Brooklyn***

Due to heat expansion, the Ninth Street Bridge was closed to marine traffic beginning at 4:50 PM on May 29, 2012, and was returned to service at 1:00 AM.

### ***Stand Alone Demolition 670 and 676 Grand Concourse and the New Roots Community Farm (Bronx)***

Originally, this project was a part of the scope of work for the construction of the East 153<sup>rd</sup> Street cable stayed bridge, which has been pushed to Fiscal Year 2022 due to budgetary constraints. To avoid future issues related to security, maintenance and safety of the buildings, the Agency decided to demolish them under a stand-alone contract.

The properties 670 Grand Concourse and 676 Grand Concourse were acquired by the City under its power of Eminent Domain Law to satisfy the street widening and to accommodate the proposed alignment of the cable stay bridge as part of the right-of-way for East 153<sup>rd</sup> Street between Grand Concourse and Morris Avenue. A Notice to Proceed for the demolition of these buildings was issued to the contractor with a start date of April 11, 2011. The demolition began on January 9, 2012. The project was substantially completed on May 30, 2012.



Grand Concourse Project Site. During Demolition in Winter 2012.



May 2012: Application of Binder Course and Tack Coat.



Ready for Planting in Spring 2012.

Rather than leave a vacant lot until construction moves ahead, DOT coordinated with GreenThumb (the Department of Parks and Recreation's community gardening program) and the International Rescue Committee to prime the site for a temporary garden. The entire site was backfilled and brought to grade. A concrete pad and oversized gate were constructed to accommodate garden deliveries and a new fresh water service connection was installed. New sidewalks and fencing also were installed around the garden's perimeter.

On June 15, 2012, Commissioner Janette Sadik-Khan inaugurated the "New Roots Community Farm," a 6,500 square foot temporary community garden for refugees and the South Bronx

community on the site. In conjunction with GreenThumb, DOT prepared the site and is partnering with the International Rescue Committee, which will manage the space.



Angele Nogue (who Fled her Native Cameroon and was Given Sanctuary in the U.S., Ellee Iggoe (International Rescue Committee's Advisor for U.S. Food and Agriculture Programs), and Commissioner Janette Sadik-Khan. Emad Kuterneh, Bronx Borough Commissioner Constance Moran, Chief Bridge Officer Henry D. Perahia, Commissioner Janette Sadik-Khan, Deputy Chief Engineer Robert Collyer, Mosey Said, Administrative Engineer Mohammad Arain, and Civil Engineer Atiq Rehman. Commissioner Janette Sadik-Khan and Students from the Nearby Knowledge is Power Program Schools.  
(Credit: Alexander Engel)

### **130<sup>th</sup> Avenue Bridge over Laurelton Parkway Eastbound and 130<sup>th</sup> Avenue Bridge over Laurelton Parkway Westbound (Queens)**

Cleaning and painting of these bridges, which began on May 3, 2012, was completed on May 30, 2012.

#### **John Jones**

Supervisor Bridge Repairer and Riveter John Jones was the subject of the "Staff Spotlight" feature in the May 2012 edition of "Byways," the official Agency newsletter.



Supervisor Bridge Repairer and Riveter John Jones.

**JUNE****Award**

In June 2012, the New York Chapter of the New York State Society of Professional Engineers selected the replacement of the Willis Avenue Bridge as its Project of the Year.

**Wards Island Pedestrian Bridge over Harlem River (Manhattan)**

The bridge was reopened to pedestrian and bicycle use at 10:45 AM on June 1, 2012. Commissioner Janette Sadik-Khan officiated at the ribbon cutting ceremony.



Associate Urban Designer Neil Gagliardi (2<sup>nd</sup> from Left), Chief Bridge Officer Henry D. Perahia, Civil Engineer George Chamoun (Partially Obscured), Council Member Melissa Mark-Viverito, Director of Movable Bridges Rahul Shah, Deputy Chief Engineer Robert Collyer, and Administrative Engineer Hani Faouri. Bicyclist on Bridge. (Credit: Nicole Garcia)

**Hamilton Avenue Asphalt Plant (Brooklyn)**

On June 2, 8, and 9, 2012, Division ironworkers repaired the main drum.

**Farmers Boulevard Bridge over Belt Parkway (Queens)**

Cleaning and painting of this bridge, which began on May 25, 2012, was completed on June 12, 2012.

**Southern Boulevard Bridge over East Fordham Road (Bronx)**

Cleaning and painting of this bridge, which began on May 18, 2012, was completed on June 14, 2012.

**Shore Road Circle Bridge over Amtrak (Bronx)**

The installation of structural steel for Stage 2 was completed on June 15, 2012.



Steel Girder and Shielding Plank Installation on June 15. Disassembling the Crane.

**Crotona Avenue Bridge over Bronx Pelham Parkway (Bronx)**

Cleaning and painting of this bridge, which began on June 15, 2012, was completed on June 20, 2012.

**Hylan Boulevard Bridge over Lemon Creek (Staten Island)**

Cleaning and painting of this bridge, which began on April 24, 2012, was completed on June 21, 2012.



### **Highland Boulevard Bridge Eastbound over Jackie Robinson Parkway (Brooklyn)**

Cleaning and painting of this bridge, which began on May 24, 2012, was completed on June 22, 2012.

### **Harper Street Asphalt Plant (Queens)**

On June 23, 2012, Division ironworkers repaired the shaker and hot elevator.

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

The reconstruction of the bridge was substantially completed on June 27, 2012.



Roosevelt Island Bridge Preparing to Open. (Credit: Kevin Hillery) Executive Director of Bridge Preventive Maintenance and Repair Thomas Whitehouse Inspecting the Bridge.  
(Credit: Bojidar Yanev)

### **Third Avenue Bridge over Harlem River (Bronx/Manhattan)**

On June 23, 2012, Division engineers assisted a film crew from "The Secret Life of Walter Mitty" at the Third Avenue Bridge.

### **Bancroft Avenue Bridge over SIRT South Shore (Staten Island)**

Contractor cleaning and painting of the bridge, which began on October 6, 2011, was completed on June 29, 2012.

### **Lincoln Avenue Bridge over SIRT South Shore (Staten Island)**

Contractor cleaning and painting of the bridge, which began on August 5, 2011, was completed on June 29, 2012.

### **Midland Avenue Bridge over SIRT South Shore (Staten Island)**

Contractor cleaning and painting of the bridge, which began on July 5, 2011, was completed on June 29, 2012.

### **Belt Parkway Bridge over Rockaway Parkway (Brooklyn)**

Concrete paving operations for the westbound side of the new bridge began in June 2012.



Placing and Finishing On-Grade Concrete Pavement for Westbound Roadway on West Side of the Rockaway Parkway Bridge.



**JULY*****Williamsburg Bridge***

On July 3, 2012, Division electricians and an engineer assisted a film crew for a Samsung commercial at the Williamsburg Bridge.

***Greenpoint Avenue Bridge over Newtown Creek (Brooklyn/Queens)***

Due to heat expansion, the bridge was closed to marine traffic beginning at 2:25 PM on July 5, 2012. It was returned to service at 10:55 PM.

***Chelsea Road Bridge over Sawmill Creek (Staten Island)***

Cleaning and painting of the bridge, which began on June 25, 2012, was completed on July 6, 2012.

***Cohancy Street Bridge over Belt Parkway (Queens)***

Cleaning and painting of the bridge, which began on June 12, 2012, was completed on July 10, 2012.

***Brooklyn Bridge and Adams Street Ironworker Facility***

On July 10, 2012, the Agency's summer interns visited the Brooklyn Bridge and the Adams Street Ironworker Facility. Divisional responsibilities and capabilities were discussed and questions were answered.



Supervisor Bridge Repairer and Riveter John Jones at the Adams Street Facility. Division Staff Answering Interns' Questions About the Bridge: Oiler Stanley Karolewicz, Deputy Chief Engineer Russell Holcomb, Administrative Engineer Sunil Desai. Deputy Chief Engineer Russell Holcomb, Supervisor Carpenter Joseph Vaccaro, Administrative Engineer Sunil Desai, and Assistant Civil Engineer Clara Medina. (Credit: Jingqin Gao) Interns on the Brooklyn Bridge. (Credit: Russell Holcomb) Summer College Interns Kevin Hillery and Nikita Gupta With Their Supervisor, Assistant Mechanical Engineer Vera Ovetskaya.

***First Deputy Mayor Donald D. Kummerfeld Tribute***

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on July 11, 2012, in tribute to former First Deputy Mayor Donald D. Kummerfeld, 78, who died on July 5. He served as the City's Budget Director beginning in January 1976, when the City was on the edge of bankruptcy. Mr. Kummerfeld enforced budget cuts and extended financial planning years into the future. He was promoted to First Deputy Mayor in April 1977, serving in that position until

January 1978, when he was appointed by Governor Hugh Carey to be executive director of the New York State Emergency Financial Control Board. The flags were raised on July 12, 2012.



Donald D. Kummerfeld.

***Belt Parkway Bridge over Mill Basin (Brooklyn)***

Due to heat expansion, the Mill Basin Bridge was closed to marine traffic beginning at 1:20 PM on July 12, 2012. It was returned to service at 11:15 PM.

***Belt Parkway Bridge over Mill Basin (Brooklyn), and Hutchinson River Parkway over Hutchinson River (Bronx)***

Due to heat expansion, the Mill Basin Bridge was closed to marine traffic beginning at 1:20 PM on July 17, 2012. It was returned to service at 3:00 AM on July 18. The Hutchinson River Parkway Bridge was closed to marine traffic beginning at 6:35 PM on July 17, and was returned to service at 3:30 AM on July 18.

***9<sup>th</sup> Street Bridge over Gowanus Canal (Brooklyn)***

Due to heat expansion, the 9<sup>th</sup> Street Bridge was closed to marine traffic beginning at 2:37 PM on July 18, 2012. It was returned to service at 7:00 PM. On July 18, a record high temperature of 101 degrees was set at La Guardia Airport, and a record 96 degrees at JFK Airport.

***Union Street Bridge over Brooklyn-Queens Expressway (Brooklyn), Brooklyn-Queens Expressway over Adams Street (NB) (Brooklyn), Brooklyn-Queens Expressway over Adams Street (SB) (Brooklyn), 4<sup>th</sup> Avenue Bridge over Belt Parkway (Brooklyn), Belt Parkway Bridge over Bedford Avenue (Brooklyn), Carroll Street Bridge over Gowanus Canal (Brooklyn), Crown Street Bridge over Franklin Shuttle (Brooklyn), Bedford Avenue Bridge over LIRR Bay Ridge (Brooklyn), Hill Drive Bridge (Cleft Ridge Span) over Pedestrian Path South of Boathouse (Brooklyn), and 5<sup>th</sup> Avenue Bridge over Greenwood Cemetery (Brooklyn)***

A Notice to Proceed for the component rehabilitation of these bridges was issued to the contractor with a start date of July 23, 2012.



Union Street Bridge over Brooklyn-Queens Expressway, Brooklyn-Queens Expressway over Adams Street (NB), Brooklyn-Queens Expressway over Adams Street (SB), 4<sup>th</sup> Avenue Bridge over Belt Parkway, Belt Parkway Bridge over Bedford Avenue, Carroll Street Bridge over Gowanus Canal, Crown Street Bridge over Franklin Shuttle, and Bedford Avenue Bridge over LIRR Bay Ridge. (Credit: NYSDOT) Hill Drive Bridge (Cleft Ridge Span) over Pedestrian Path South of Boathouse. 5th Avenue Bridge over Greenwood Cemetery. (Credit: NYSDOT)

## Brooklyn Bridge

On July 24, 2012, at approximately 5PM, an over-height truck traveling east in the left lane of the Brooklyn-Queens Expressway struck the Brooklyn Bridge. The truck overturned, blocking all three eastbound lanes. An engineer evaluated the condition and did not detect any significant new damage to the bridge. Traffic was restored at approximately 7:30 PM.



Preparing to Remove the Damaged Truck. (Credit: Rafael Lopez) Overturned Truck. (Credit: Russell Holcomb)

## Shore Road Circle Bridge over Amtrak (Bronx)

The Stage 2 concrete deck placement was completed on July 25, 2012. The first truck load of concrete was poured at approximately 6:45 AM, and the 14<sup>th</sup> and final load was completed at approximately 10:00 AM.





Following Behind the Finishing Machine Along the Deck, the Concrete was Textured and Wet-Burlaped Within the Prescribed Time Limits. Texturing was Performed in the Longitudinal Direction. Continuous Wet Curing was Set up With Hoses Over the Burlap.

### ***Travis Avenue Bridge over Main Creek (Staten Island)***

Cleaning and painting of the bridge, which began on July 1, 2012, was completed on July 31, 2012.

## **AUGUST**

### ***New Dorp Lane Bridge over SIRT South Shore (Staten Island)***

Contractor cleaning and painting of the bridge, which began on July 27, 2011, was completed on August 1, 2012.

### ***Whitelaw Pedestrian Bridge over Conduit Avenue (Queens)***

Cleaning and painting of the bridge, which began on May 25, 2012, was completed on August 3, 2012.

### ***Summer Streets***

As part of the fifth annual Summer Streets program in August 2012, Division crews closed the Centre Street exit ramp from the Brooklyn Bridge on August 4, 11, and 18 from 7:00 AM until 1:00 PM.



Cyclists Enjoying the Park Avenue Viaduct on August 4 During the Summer Streets Event.

### ***Harper Street Asphalt Plant (Queens)***

On August 4, 2012, Division ironworkers repaired the recycle bin, hot tower door plate, and dry mixer drum.



### ***Riverside Drive Bridge over West 96<sup>th</sup> Street (Manhattan)***

Cleaning and painting of the bridge, which began on June 25, 2012, was completed on August 6, 2012.

### ***Slater Boulevard Bridge over New Creek (Staten Island)***

Cleaning and painting of the bridge, which began on July 23, 2012, was completed on August 6, 2012.

### ***Manhattan Bridge***

"(Super)heroes," an art installation curated by United Photo Industries' Creative Director Sam Barzilay in partnership with the DUMBO Business Improvement District, was officially unveiled on the fence at Adams Street, Plymouth Street, and Anchorage Place – the Manhattan Bridge Anchorage, on August 9, 2012. The exhibit explores the unsung heroes all around us, the innate desire of humanity to believe in powers greater than ourselves, and upending gender roles or stereotypes. With a total of nine artists, the photographs cover 340 feet of the fence. The 11 month installation is part of the Agency's Urban Art Program.



The "(Super)heroes" Exhibit at the Manhattan Bridge.

### ***North Conduit Avenue Bridge Westbound over Belt Parkway Westbound and North Conduit Avenue Bridge Westbound over Belt Parkway Eastbound (Queens)***

Cleaning and painting of these bridges, which began on July 24, 2012, was completed on August 9, 2012.

### ***Belt Parkway Bridge over Mill Basin (Brooklyn)***

Due to heat expansion, the bridge was closed to marine traffic beginning at 1:05 PM on August 9, 2012. It was returned to service at 8:15 PM.

### ***United Nations Plaza (East 42<sup>nd</sup> Street – East 47<sup>th</sup> Street) over First Avenue Tunnel (Manhattan)***

The component rehabilitation of this tunnel was substantially completed on August 10, 2012.



Repairing the Railing in April 2012.

### ***Harper Street Asphalt Plant (Queens)***

On August 11, 2012, Division ironworkers repaired the hot tower, docking area, and boundary fence.

### ***Hamilton Avenue Asphalt Plant (Brooklyn) and Harper Street Asphalt Plant (Queens)***

On August 14, 15, and 17, 2012, Division ironworkers repaired the drum and frames.

### ***Linden Boulevard Bridge over Conduit Avenue (Queens)***

Cleaning and painting of the bridge, which began on August 6, 2012, was completed on August 20, 2012.

### ***Hamilton Avenue Asphalt Plant (Brooklyn) and Harper Street Asphalt Plant (Queens)***

On August 25, 2012, Division ironworkers repaired the chutes and the mixing and drying drums.

### ***Guy Brewer Boulevard Bridge over Belt Parkway (Queens)***

Cleaning and painting of the bridge, which began on June 25, 2012, was completed on August 31, 2012.

### ***Belt Parkway Bridge over Paerdegat Basin (Brooklyn)***

Tub girder erection for the new westbound bridge began in August 2012.



Paerdegat Basin- Eastbound Belt Parkway Traffic on New Eastbound Bridge Shown at Left. Westbound Belt Parkway Traffic on Old Paerdegat Basin Bridge at Center. Tub Girder Erection in Progress at Right Side by Crane on a Temporary Work Platform at Future Westbound Bridge.

## ***SEPTEMBER***

### ***Grand Concourse over East 174<sup>th</sup> Street (Bronx)***

Cleaning and painting of the bridge, which began on June 13, 2012, was completed on September 7, 2012.

### ***Hamilton Avenue Asphalt Plant (Brooklyn)***

On September 8, 2012, Division ironworkers repaired the mixing drum and its housing.

### ***Patriot Day Tribute***

The Brooklyn Bridge flags flew at half-mast on September 11, 2012 to commemorate the National Day of Service and Remembrance.



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

***Ambassador John Christopher Stevens and Benghazi Mission Personnel Tribute***

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on September 13, 2012, in tribute to United States Ambassador to Libya John Christopher Stevens, Sean Smith, Glen Doherty, and Tyrone Woods, who were killed on September 11, 2012, in the attack on the United States diplomatic facility in Benghazi, Libya. Ambassador Stevens, 52, was the sixth U.S. ambassador to be killed in the line of duty, and the first since 1979. Sean Smith, 34, was a Foreign Service information management officer, had served in the State Department for 10 years, and was an Air Force veteran. Glen A. Doherty, 42, and Tyrone S. Woods, 41, former Navy SEALs, worked for a private company that provided security for American officials overseas. Mr. Doherty was an experienced pilot and paramedic. Mr. Woods was also a registered nurse and certified paramedic. The flags were raised on September 17, 2012.

***Harper Street Asphalt Plant (Queens)***

On September 15, 2012, Division ironworkers repaired the bins and dry mixer.

***Ross Avenue Bridge over SIRT South Shore (Staten Island)***

Contractor cleaning and painting of the bridge, which began on June 11, 2012, was completed on September 15, 2012.

***Rose Avenue Bridge over SIRT South Shore (Staten Island)***

Contractor cleaning and painting of the bridge, which began on July 27, 2012, was completed on September 15, 2012.

***15<sup>th</sup> Avenue Bridge over LIRR Bay Ridge (Brooklyn)***

The component rehabilitation of this bridge was substantially completed on September 17, 2012.



15<sup>th</sup> Avenue Bridge - Vertical Patch Repair on the Abutment Wall. Joint Repair Work.

***Brooklyn-Queens Expressway (Eastbound and Westbound) over Cadman Plaza (Brooklyn)***

Cleaning and painting of the bridge, which began on August 10, 2012, was completed on September 19, 2012.

### ***Linden Boulevard Bridge over Cross Island Parkway (Queens)***

Cleaning and painting of the bridge, which began on September 3, 2012, was completed on September 19, 2012.

### ***Belt Parkway Bridge over Mill Basin (Brooklyn)***

High water temperatures in the region around New York appeared to be the result of an unusually warm winter that preceded the mild spring and summer months. A stingray with a wingspan of approximately 2.5 to 3 feet was spotted under the bridge on September 21, 2012.



Stingray in Mill Basin.  
(Credit: Samuel Teaw)

### ***Ed Koch Queensboro Bridge***

On September 21, 2012, Division highway repairers assisted a film crew from the television series "Blue Bloods" at the Vernon Boulevard Yard.

### ***Harper Street Asphalt Plant (Queens)***

On September 22, 2012, Division ironworkers repaired the mixer drum, brace ladder, and conveyor belt.

### ***East Drive (East Wood Arch) over Pedestrian Path Near Center Drive (Brooklyn)***

The component rehabilitation of this bridge was substantially completed on September 24, 2012.



East Wood Arch. Pointing the Masonry. Cleaning the Stone Fascia.

### ***Hunts Point Landing Park (Bronx)***

This 1.5 acre park, located at the confluence of the Bronx and East Rivers, is a component of the South Bronx Greenway Master Plan. It opened on September 24, 2012. The New York City Economic Development Corporation utilized large granite slabs from the old Willis Avenue Bridge to construct the boulder seating area and a grass retaining wall. One of the stones was engraved to identify it as a reused local material.





Granite Slabs From the Old Willis Avenue Bridge in the Hunts Point Landing Park. (Credit: NYCEDC)

### ***Eliot Avenue Bridge over Queens Boulevard (Queens)***

Cleaning and painting of the bridge, which began on August 23, 2012, was completed on September 27, 2012.

### ***Woodhaven Boulevard Bridge over Queens Boulevard (Queens)***

Cleaning and painting of the bridge, which began on August 21, 2012, was completed on September 27, 2012.

### ***Williamsburg Bridge***

On September 30, 2012, Division electricians assisted a film crew from “Chinese Puzzle” at the Williamsburg Bridge.

### ***Battery Park Underpass of the FDR Drive (Manhattan)***

Cleaning and painting of the motor and control rooms, which began in January 2012 and continued intermittently, was completed in September 2012.

### ***Department of Transportation Facilities at the Greenpoint Avenue Yard (Brooklyn/Queens)***

Cleaning and painting of these structures, which began in February 2012 and continued intermittently, was completed in September 2012.

### ***Belt Parkway Bridge over Paerdegat Basin (Brooklyn)***

Tub girder erection for the new westbound bridge was completed in September 2012.



Setting the Last Tub Girder Section for the Westbound Bridge at the East Abutment.

## **OCTOBER**

### ***West 128<sup>th</sup> Street Pedestrian Bridge over 3<sup>rd</sup> Avenue Bridge Approach (Manhattan)***

Cleaning and painting of the bridge, which began on September 12, 2012, was completed on October 4, 2012.

### ***Harper Street Asphalt Plant (Queens)***

On October 6 and 13, 2012, Division ironworkers repaired the mixer drum and rap hopper.

### ***Braddock Avenue Bridge over Cross Island Parkway (Queens)***

Cleaning and painting of the bridge, which began on September 10, 2012, was completed on October 9, 2012.

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

During September and October 2012, Division personnel and their friends and families participated in bake and book sales and other fundraisers, and sponsored the DOT Teams for the American Cancer Society's annual "Making Strides Against Breast Cancer" walk.



Cupcake Display at the  
Fundraiser.  
(Credit: Gladys Millan)

### ***Beach Avenue Bridge over SIRT South Shore (Staten Island)***

Contractor cleaning and painting of the bridge, which began on July 21, 2012, was completed on October 19, 2012.

### ***Harper Street Asphalt Plant (Queens)***

On October 20, 2012, Division ironworkers repaired the pipe supports, mixer frame, and drum.

### ***Brooklyn Bridge***

As part of the contract to rehabilitate the Brooklyn Bridge ramps and approaches, a full closure of the Manhattan-bound lanes of the bridge was performed on two full weekends this month: from 11:59 PM October 5 to 6:00 AM October 8, and again from 11:59 PM October 12 to 6:00 AM October 15. The first weekend closure was for work on Ramp A (from the southbound FDR Drive to the bridge) for concrete placement. Brooklyn-bound approach work and abrasive blasting was also progressed. The second weekend closure was for work on Ramp A (from the southbound FDR Drive to the bridge), South Cantilever closure pour concrete placement, Brooklyn-bound approaches rehabilitation work, painting of Ramp D/Span 4, Franklin Square Structure orthotropic deck welding, Ramp F (from the southbound FDR Drive to Pearl Street) Stage I grid deck removal/replacement, and preparatory work for widening the exit ramp to Cadman Plaza.



First Full Roadway Closure: Manhattan Approach, Ramp A Concrete Placement. Engineer-in-Charge Ohene Duodu at the Site. Second Full Roadway Closure: Brooklyn Approach, Brooklyn Bound Roadway Super Slab installation - Installing Super Slab.

## ***Hamilton Avenue Asphalt Plant (Brooklyn)***

On October 22, 2012, Division ironworkers performed emergency repairs on the cracked main drum ring.

## ***Park Avenue Viaduct over East 42<sup>nd</sup> Street (Manhattan)***

Cleaning and painting of the bridge, which began on September 20, 2012, was completed on October 22, 2012.

## ***East 129<sup>th</sup> Street Pedestrian Bridge over 3<sup>rd</sup> Avenue Bridge Ramp (Manhattan)***

Cleaning and painting of the bridge, which began on September 12, 2012, was completed on October 29, 2012.

## ***Hurricane Sandy***

On October 29, 2012, the New York Metropolitan area was impacted by Hurricane Sandy (Post-Tropical Cyclone Sandy), causing flooding, loss of power and damage to many components of New York City's infrastructure. Division employees ensured the safety of City residents and infrastructure.

### East River Bridge Openings

All four East River Bridges were inspected early in the morning of October 30 as the storm began winding down. They were deemed safe and re-opened by 10:15 AM. These were the first bridges in New York City to re-open. Manhattan Bridge Engineer-in-Charge Brian Gill also coordinated all efforts with the Division of Traffic to route MTA buses unable to use the Brooklyn Battery - Hugh Carey Tunnel. The "Bus Bridge" was operational one day after the storm and the maintenance and protection of traffic plan for the Manhattan Bridge was modified on short notice, which allowed buses on November 1 and 2 onto the lower roadway to accommodate the 250 buses per hour running when there was no transit service between Brooklyn and Manhattan. Over 400 pedestrians an hour crossed the south walkway, and 10,000 bicyclists used the north path.



HOV Variable Message Sign at Tillary Street in Brooklyn. Busses Entering on Manhattan Side Near the Colonnade. (Credit: Brian Gill) Director of Bicycle and Pedestrian Programs Joshua Benson and Manhattan Bridge Engineer-in-Charge Brian Gill Preparing to Set up Traffic Barrels for the Bus Bridge.



Pedestrians on the Manhattan Bridge South Walkway. Bicyclists on the North Path. (Credit: Brian Gill) November 3 - Special Temporary Shuttle Buses Carried Subway Customers Across the East River While Train Service was Being Restored. All Six of the MTA's Subway Tunnels Connecting Brooklyn and Manhattan, as Well as the G Train's Tunnel under Newtown Creek, Flooded with Seawater During Hurricane Sandy. (Credit: Metropolitan Transportation Authority/Patrick Cashin)

#### Battery Park Underpass/West Street Underpass

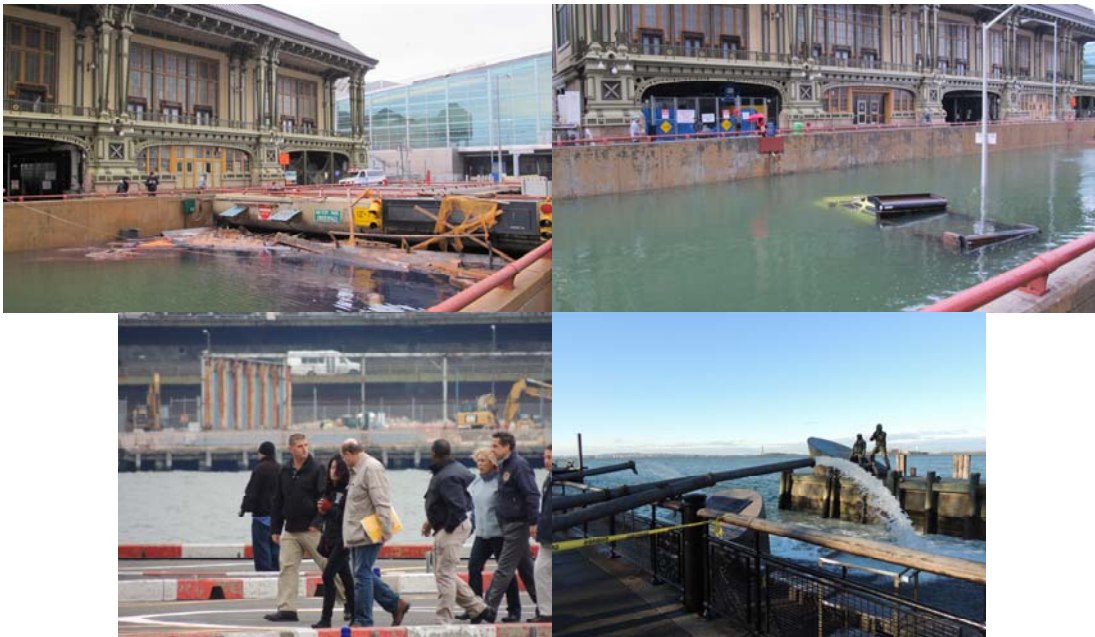
Hurricane Sandy arrived in the metropolitan region in time to catch both the full moon and lower Manhattan's high tide. The storm surge overwhelmed the Battery and roared into both the Battery Park Underpass and the West Street Underpass (which serves as the Brooklyn Battery - Hugh Carey Tunnel entrance). Pre-storm efforts included barricading the tunnels to prevent motorists' attempts to ford the flow which prevented injury and potential loss of life to an unwary public. When Con Edison announced the possibility of cutting electrical service to lower Manhattan, generators were brought to the site to power the sump pumps. The 8 to 13 foot storm surge overwhelmed the Battery and roared into both the Battery Park and West Street Underpasses. After the storm, Division staff coordinated the effort to remove 10 to 15 million gallons of seawater from the tunnels with the assistance of the Department of Environmental Protection (West Street Underpass) and the Army Corps of Engineers (Battery Park Underpass). Crews worked around the clock for over a week to de-water the tunnels, remove storm debris, pressure wash tunnel walls and perform initial inspections of the tunnels' electrical, ventilation and lighting operating systems. Initial estimates peg the cost of the tunnels' rehabilitation at 40 million dollars.

Division supervisory personnel for this effort included: Deputy Chief Engineer Russell Holcomb, Executive Director of Bridge Preventive Maintenance and Repair Thomas Whitehouse, Administrative Superintendent of Bridge Operations George Kern, and Acting Director of Bridge Preventive Maintenance Paul Schwartz. Together they led an effort of more than three dozen that included: Bridge Painters Safdar Ali, Jamie Andrade, and Juscelino Andrade, Supervisor Bridge Painter Robert Avellino, Bridge Painters Henry Bollin and William Budge, Supervisor Bridge Operator Keith Burrowes, Bridge Operator Daniel Casale, Supervisor Bridge Operator Robert Costanza, Bridge Operator Abel Daley, Bridge Painter Frank Duic, Supervisor Bridge Painters Hughie Flood, and Reynaldo Grant, Bridge Painter Branko Grzancic, Bridge Operator Michael Guergues, Bridge Painter Frank Hollen, Supervisor Bridge Operator Anthony Hunter, Bridge Painters Brian Kavanagh, Nicholas Krevatas, Andrew Law, Arlindo Lima, and Goncalo Lima, Supervisor Electrician Ronald Marano, Bridge Painters Samuel Martinez, Louis Masucci, and Richard Mocciano, Supervisor Bridge Operators Edgardo Montanez and Antonio Morales,



Bridge Painter Russell Newbe, Supervisor Bridge Painters Albert Pappas and Cesar Pazmino, Bridge Painter Julio Perez, Deputy Director of In-House Painting Earlene Powell, Electrician Steven Radice, Bridge Painter Milan Radovic, Director of In-House Painting Ronald Rauch, Bridge Painters Teodoro Rendall and Herbert Rodriguez, Electrician Jerry Salzman, Bridge Painter Michael Scotti, Bridge Operator Anthony Small, Bridge Painter Willie Taylor, Supervisor Bridge Operator Mohamed Adel Tork, Supervisor Bridge Painter David Yanolatos, and Bridge Painter Vlatko Zic.

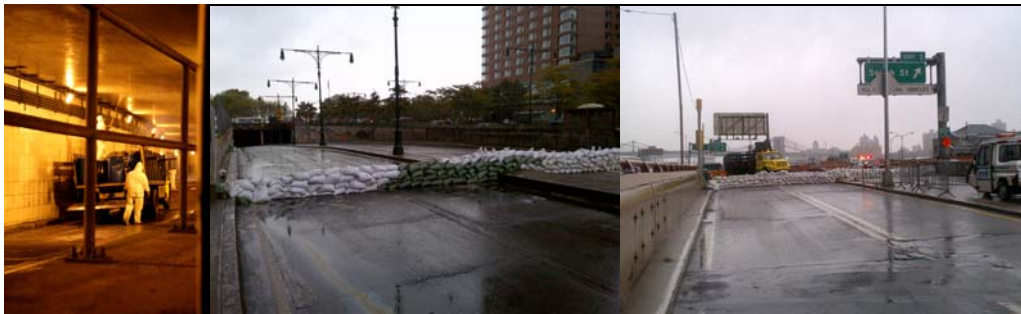
Not long after the tunnels were drained, the metropolitan region braced for a second storm. On November 7, 2012, a snow laden nor'easter hit the city and although it did not hit, as Sandy did, in perfect concert with time, tide and the moon, the surge was still expected to reach more than 7 feet at the Battery. In anticipation of this impact, Division crews were dispatched to the facility at Harper Street to fill sandbags. With the help of a 5-person crew from the Sidewalk and Inspection Management Division, the sandbags were then brought to the underpass to hold off the second surge in less than ten days. Just 12 hours after the operation began, the tunnel was closed 35 minutes ahead of schedule with one thousand sandbags by the crew of: Assistant City Highway Repairer Luis Baez, Bridge Repairer and Riveter Brook Budd, Assistant City Highway Repairer Luciano Cardona, Bridge Repairer and Riveter Kevin Clarkson, Highway Repairers Michael Cunningham, Joseph Davis, and Roosevelt Gee Jr., Supervisor Highway Repairer Anthony Irizarry, Assistant City Highway Repairer Daniel Jean, Supervisor Highway Repairer Luis Soto, and Assistant City Highway Repairer Peter Valentino.



Entrance of the Battery Park Underpass on October 30. A Division Truck Used to Barricade the Entrance is Barely Visible. (Credit: George Kern) Governor Andrew Cuomo (2<sup>nd</sup> from Right) Arriving on October 30 to Inspect the Damage. Pumping Water from the Underpass on November 2.



Bridge Operations Crew: Bridge Operator Daniel Casale, Supervisor Bridge Operators Anthony Hunter and Mohamed Adel Tork, Administrative Superintendent of Bridge Operations George Kern, Supervisor Bridge Operators Anthony Small and Robert Costanza, Bridge Operator Michael Guergues, Supervisor Bridge Operator Keith Burrowes, Bridge Operators Abel Daley and Carlo Fragola, and Supervisor Bridge Operator Antonio Morales. (Credit: Edgardo Montanez)  
Administrative Superintendent of Bridge Operations George Kern inspecting the Battery Park Underpass on November 9. (Credit: Alexander Engel)



Bridge Painters Cleaning the Battery Park Underpass. (Credit: Alexander Engel) Sandbags Used for the November 7 Storm.

### Metropolitan Avenue Movable Bridge

Hurricane Sandy surged water levels in the English Kills by over six feet, flooding into the counterweight pits of the bridge control house. Flood waters damaged the electrical control system, burning out the transformer and power supply. Approximately 25,000 cubic feet (187,000 gallons) of water flowed into both bridge pits. On the morning of October 31, oilers and electricians began the recovery effort with portable pumps, pumping continuously for four straight days. The Department of Environmental Protection augmented the pumping effort with larger pumps and the bridge pits were finally drained dry on November 3. On November 4, a crew of ten oilers began a manual operation process which took five straight hours of hard labor but permitted a fuel oil barge to enter its port. In its usual glass-is-half-full outlook, Division maintenance personnel used this opportunity to perform a test of the emergency hydraulic system to open and close the bridge. Further access for fuel was also undertaken on November 6 when the opening time was reduced to 1.5 hours as the hydraulic system was returned to service.

### Truck Permits

Over dimensional truck permits enable the movement of construction equipment and important goods into and through the city on travel routes that protect the city's bridge infrastructure and in turn the city as a whole. The Division of Bridges' Truck Permit Section process over 37,000 permit applications every year. Director Kevin Lobat, a Staten Islander whose own home was without electricity, set up shop in his car, (the only place with heat and power) with a laptop running on a car charger and e-mails flowing via a Blackberry. He continued processing permit applications for essential truck permits to facilitate storm clean up, the delivery of essential clean-up equipment and the arrival of goods necessary to the immediate and long term recovery of the City. He was not alone in this effort. Members of the team, led by Executive Director of Management and Support Services Dorothy Roses and including Administrative Manager David Paul Gerber and Civil Engineer Farid Tadros were available up to 20 hours a day to assist in the routing. The entire group, including Administrative Manager Diana Neal, Clerical Associate

George Liang, Computer Aide Lisa Burns, Community Assistant Gladys Millan, Clerical Associate Tiffany Utley, Assistant Civil Engineers Darlyn Alvarez and Jafar Haider, Civil Engineering Intern Monica Palacio Rodriguez, Project Manager Ajda Ozyurt, and Associate Project Manager Maria Zhurakhinskaya, were required to move from location to location, some without heat and communication, working without one of their most important tools – mapping software. They were a vital part of the effort that is keeping the construction industry moving.

### Belt Parkway

Three important bridges on the Belt (Shore) Parkway are currently under reconstruction: Fresh Creek Bridge, Rockaway Parkway Bridge and Paerdegat Basin Bridge. Situated along the picturesque south shore of Brooklyn and adjacent to the Gateway National Park, this lovely but low-lying area's propensity for flooding is well known. Keeping the roadway dry, safe and open is always a priority; during storm events it is critical. As soon as the storm began, Administrative Engineer Daniel Hom went to the field office and began coordinating the effort to keep the pumps running and keep the road open. Both during and after the storm, this effort also included coordinating the removal of the tons of debris that washed onto the walkways and roadway.

### Sheridan Expressway Through-Hole

On the evening of November 7, at the height of the nor'easter, an expansion joint in the roadway of the northbound Sheridan Expressway near the Westchester Expressway failed, creating a through-hole 4 feet long by 1.5 feet wide. A crew of nine worked with very limited light amidst gale winds of 30-35 miles per hour, with stinging snow blowing sideways into the operation, and at temperatures between 28 and 30 degrees. In a four and a half hour effort, they set and pegged a steel plate across the center lane of the roadway and cold-patched the area for a functional riding surface. Two crews responded to this emergency led by Supervisor Bridge Repairer and Riveters Damian Venezia and Gean Pilipiak with Bridge Repairer and Riveters Michael Collins, Neil Dalton, Daniel Jederlinic, Michael Ledson, John McAllister, and John Mohabir. Assistant Civil Engineer Sohrab Hossain provided engineering direction.

On November 7 through 9, 2012, Division carpenters provided assistance to the Office of Emergency Management (OEM) with storm damage emergency repairs at George Washington High School in Washington Heights. In addition, Division ironworkers assisted OEM in unloading heavy equipment at the Citifield staging area in Queens.



Payloader Cleaning up Debris From Hurricane Sandy on the Eastbound Belt Parkway East of Mill Basin. Private Boat Washed up on Slope of Eastbound Belt Parkway West Side of Paerdegat Basin During Hurricane Sandy. Note Damage to Bicycle/Pedestrian Path and Timber Rail. Motor Grader Operator Peter Paramithis Operating Machinery to Clear Streets in the Oakwood Beach Neighborhood of Staten Island on November 6. (Credit: Stephen Mallon)

### ***Department of Transportation Ironworker Shop and Garage at 59<sup>th</sup> Street (Manhattan)***

Cleaning and painting of these structures, which began in January 2012 and continued intermittently, was completed in October 2012.

**NOVEMBER****Award**

In November 2012, Roads & Bridges Magazine selected the replacement of the Willis Avenue Bridge as the fifth place finisher in its annual selection of the country's top 10 bridge projects.

**Award**

In November 2012, the Municipal Engineers of the City of New York selected the St. George Ferry Terminal Ramps Rehabilitation project as its 2012 Municipal Project of the Year. The Society promotes and advances the various engineering sciences and services which are employed in the government of the City of New York and elevates the standards of proficiency of the technical services of the City.

**Newkirk Avenue Bridge over BMT Subway (Brooklyn)**

Cleaning and painting of the bridge, which began on October 11, 2012, was completed on November 7, 2012.

**Award**

On November 8, 2012, Director of Quality Assurance Muhammad Afzal received an Outstanding Achievement Award from the South Asian American Association.



Chief Bridge Officer Henry D. Perahia and  
Director of Quality Assurance Muhammad  
Afzal. (Credit: Rudy Collins)

**Belt Parkway Bridge over Nostrand Avenue (Brooklyn)**

Cleaning and painting of the bridge, which began on September 4, 2012, was completed on November 14, 2012.

**Award**

On November 16, 2012, Acting Director of Bridge Preventive Maintenance Paul Schwartz was presented the Young Engineer of the Year award from the Municipal Engineers of the City of New York. Mr. Schwartz he is responsible in the summer/seasonal system for routine maintenance including asphalt repairs, mechanical sweeping, scupper (drain) maintenance, grass cutting, guiderails and fencing. In the busy winter season, responsibility shifts to anti-icing and snow removal. He also serves year-round as the Bureau of Maintenance, Inspection and Operations' Environmental Compliance Officer, and supervises a staff of over 100 in a wide variety of labor titles. In the aftermath of Hurricane Sandy, Mr. Schwartz joined his staff in every Bridge Division effort including the de-watering of the Battery Park and West Street underpass. He also bagged sand with them in the second wave nor'easter on the night of November 7.





Chief Bridge Officer Henry D. Perahia and  
Acting Director of Bridge Preventive  
Maintenance Paul Schwartz.

### ***Belt Parkway over Rockaway Parkway (Brooklyn)***

The demolition of the final structural steel sections of the existing bridge was completed on November 2, 2012.

### ***Hurricane Sandy Tribute***

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on November 6, 2012 as a mark of respect for the memory of those who lost their lives due to Hurricane Sandy. The flags were raised on November 9, 2012.

### ***Anti-Icing***

On November 7, 2012, a record 4.3 inches of snow fell in Central Park, a record 1.1 inches fell at La Guardia Airport, and a record 4 inches fell at JFK Airport. Anti-icing crews were deployed on the East River bridges from 6:00 PM on November 7 until 5:30 AM on November 8. 4,300 gallons of liquid anti-icer and 28 tons of solid de-icer were applied. Crews also cleared priority overpasses.

### ***Belt Parkway Bridge over Mill Basin (Brooklyn)***

The bridge was closed to marine traffic due to loss of power from November 1 to November 8, 2012.

### ***Belt Parkway Bridge over Rockaway Parkway (Brooklyn)***

The first phase of the eastbound traffic switch from Stage 3 to Stage 4 was successfully implemented on October 18-19, 2012, as scheduled. However, the second phase of the traffic shift at the east end of the project was delayed due to Hurricane Sandy. The contractor completed this traffic shift on November 20, 2012.

### ***Bruckner Expressway SB and NB Bridges over Amtrak & CSX (Bronx)***

The design-build reconstruction of these bridges was substantially completed on November 20, 2012.

### ***86<sup>th</sup> Annual Macy's Thanksgiving Day Parade***

Division engineers assisted the NYPD and Macy's representatives in walkthroughs of the new parade route along 6<sup>th</sup> Avenue. They also reviewed and approved the design specifications of Papa Smurf, Hello Kitty, and Elf on a Shelf, three new large balloons to be introduced in the parade. 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. Division representatives attended the test flights of the balloons at the Meadowlands Sports Complex in New Jersey on November 10, 2012, with NYPD and other agencies.

On November 22, 2012, wind speeds were relatively low and all 16 large balloons flew in the parade without incident. The maximum wind speed was approximately 12 miles per hour. Chief Bridge Officer Henry Perahia, Deputy Chief Engineer Anil Vyas, and Director of Engineering Review Udaya Dommaraju were positioned at various locations along the parade route to

observe compliance with the approved procedures. Seven anemometers were mounted on top of light poles along the route between 77<sup>th</sup> Street and 34<sup>th</sup> Street to measure the wind speed during the parade. Division and consultant engineers were assigned to the anemometer locations to monitor the wind gusts.



Testing the Balloons (Elf on a Shelf) in New Jersey on November 10: NYPD Lieutenant Franco Barberio of Emergency Services, Director of Engineering Review Udaya Dommaraju, NYPD Deputy Inspector Daniel J. Mulligan, and Vice President of Event Operations at Macy's Susan Babb. Spiderman and Elf on Shelf Balloons. (Credit: George Jarvis)



Parade 2012: Consultant Engineer Patrick D'Ambrosio and Planner Patrick Roth, Director of Engineering Review Udaya Dommaraju, First Deputy Commissioner Lori Ardito, Deputy Chief Engineer Anil Vyas, Chief Bridge Officer Henry D. Perahia, Construction Project Manager George Jarvis, and Assistant Civil Engineers Jana Krettova and Jafar Haider.

### ***Department of Transportation Facility at Wythe Avenue (Brooklyn)***

Cleaning and painting of this structure, which began in January 2012 and continued intermittently, was completed in November 2012.

## ***DECEMBER***

### ***Harper Street Asphalt Plant (Queens)***

On December 1, 8, and 15, 2012, Division ironworkers repaired the dryer drum and cold-feed bins.

### ***Foster Avenue Bridge over BMT Subway (Brooklyn)***

Cleaning and painting of the bridge, which began on November 16, 2012, was completed on December 6, 2012.

### ***27<sup>th</sup> Avenue Pedestrian Bridge over Belt Parkway (Brooklyn)***

Cleaning and painting of the bridge, which began on November 19, 2012, was completed on December 6, 2012.

### ***National Pearl Harbor Remembrance Day***

The Brooklyn Bridge flags flew at half-mast on December 7, 2012 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.

### ***Newtown, Connecticut Tribute***

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on December 14, 2012 as a mark of respect for the victims of the shooting violence that occurred that morning at the Sandy Hook Elementary School in Newtown, Connecticut. The flags were raised on December 19, 2012.

### ***Hurricane/ Post-Tropical Cyclone Sandy Recovery and Overdimensional Trucks***

Under Governor Andrew Cuomo's waiver, the Division's Truck Permit Section processed and issued more than 195 Overdimensional Permit Waivers to transport various qualifying vehicle/load combinations throughout the five boroughs (loads included excavators, loaders and other construction equipment, mobile home/office/and medical trailers, boats and cranes) directly related to the storm recovery effort from November 1 through the middle of December.

### ***Springfield Boulevard Bridge over Belt Parkway (Queens)***

Cleaning and painting of the bridge, which began on September 10, 2012, was completed on December 19, 2012.

### ***Belt Parkway over Paerdegat Basin (Brooklyn)***

The new westbound bridge was opened to traffic at 4:40 AM on December 20, 2012. Final demolition of the existing bridge then commenced.

### ***Superior Road Bridge over Cross Island Parkway (Queens)***

Cleaning and painting of the bridge, which began on December 7, 2012, was completed on December 20, 2012.

### ***Anti-Icing***

On December 26, 2012, 0.4 inches of snow fell in Central Park, and 0.3 inches at La Guardia Airport. On December 29, 2012, 0.3 inches of snow fell at La Guardia Airport, and 0.4 at JFK Airport. Anti-icing crews were deployed on the East River bridges from 1:00 PM until 6:30 PM on December 26; no applications of chemicals were necessary. Crews were again deployed from 6:00 AM on December 29 until 12:30 AM on December 30. 400 gallons of liquid anti-icer and 11 tons of solid de-icer were applied.

### ***Harper Street Asphalt Plant (Queens)***

On December 29, 2012, Division ironworkers repaired the cold-feed bins.

### ***Department of Transportation Facilities at the Harper Street Yard (Queens)***

Cleaning and painting of these structures, which began in November 2012, was completed in December 2012.

### ***Department of Transportation Ironworker and Carpenter Shops at Kent Avenue (Brooklyn)***

Cleaning and painting of these structures, which began in February 2012 and continued intermittently, was completed in December 2012.

### ***Department of Transportation Facilities at South 6<sup>th</sup> Street (Brooklyn)***

Cleaning and painting of these structures began and was completed in December 2012.

***Paul Schwartz, Kevin Lobat, George Kern, Ronald Marano, and Samuel Teaw***

Acting Director of Bridge Preventive Maintenance Paul Schwartz, Truck Permit Unit and Special Projects Director Kevin Lobat, Director of Bridge Operations George Kern, Supervisor Electrician Ronald Marano, and Administrative Engineer Samuel Teaw were among the subjects of the “Staff Spotlight: DOT’s Hurricane Heroes” feature in the December 2012 edition of “Byways,” the official Agency newsletter.



## **ACCOMPLISHMENTS & PLANNED PROJECTS**

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### **Bridge Capital Design & Construction**

**East River Bridges**

**Movable Bridges**

**Roadway Bridges**

**Brooklyn and Manhattan Roadway Bridges**

**Bronx, Queens, and Staten Island Roadway Bridges**

### **Specialty Engineering & Construction**

**Design-Build/Emergency Contracts**

**Component Rehabilitation**

**When and Where**

**Bridge Painting**

### **Engineering Review & Support**

**In-House Design**

**Engineering Support**

**Engineering Review**

**Quality Assurance**

### **Bridge Maintenance, Inspections & Operations**

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## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

### ***East River Bridges***

#### **BROOKLYN BRIDGE**

Arguably the most influential bridge in American history, the Brooklyn Bridge remains one of New York City's most celebrated architectural wonders. Designed by the brilliant engineer John Augustus Roebling, and completed by his equally ingenious son Washington Roebling and daughter-in-law Emily Roebling, this elegant structure was, at the time of its completion in 1883, the longest suspension bridge in the world. It was declared a National Historic Landmark in 1967.



Brooklyn Bridge. (Credit: Bojidar Yanev)

The Brooklyn Bridge carries some 105,820 vehicles and 2,661 commuter bicyclists daily. The \$832 million reconstruction commenced in 1980 with Contract #1, and continues with Contract #6, scheduled for completion in 2014. This contract includes the rehabilitation of both approaches and ramps, the painting of the entire bridge, as well as the seismic retrofitting of the structural elements that are within the Contract #6 project limits.

Work completed on the bridge to date includes reconditioning of the main cables, replacement of the suspenders and cable stays, rehabilitation of the stiffening trusses, and the replacement of the suspended spans deck and the four travelers.

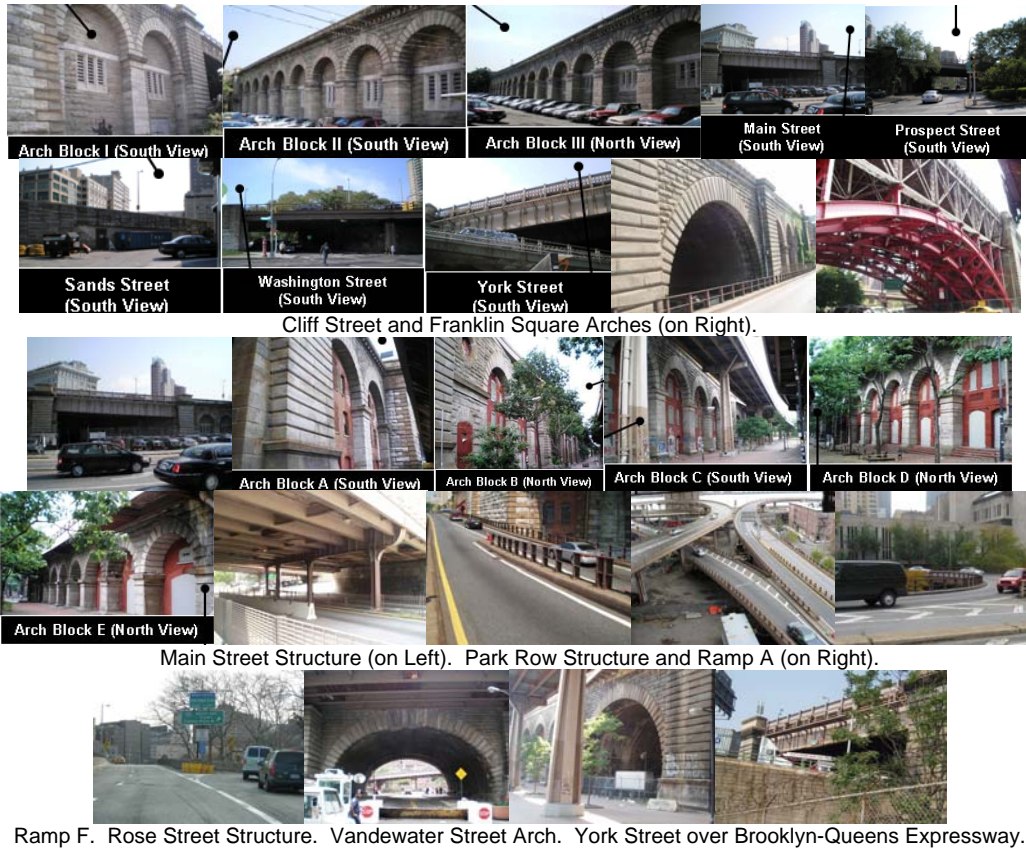
#### **Contract #6**

A Notice to Proceed for this \$508 million project was issued to the contractor with a start date of January 19, 2010. The ramps and approaches to the Brooklyn Bridge are in need of rehabilitation and repair, to improve safety and reduce congestion along both the Brooklyn-side and Manhattan-side approaches, particularly from the FDR Drive. With stimulus money from the federal government's American Recovery and Reinvestment Act, the ramps in Brooklyn and Manhattan will be rehabilitated and widened and the entire bridge will be repainted to prevent steel corrosion on the structure.

The approach roadway to the Brooklyn Bridge is aging, with a failed membrane system and deteriorated closure walls. The existing roadway pavement above the historic arch blocks and masonry structures will be rehabilitated. A precast concrete roadway slab will be installed in segments, over sprayed-on waterproofing membrane. Rusted historic railings at Franklin Square, York, and Main Street structures, some from the original bridge construction, will be refurbished and reinstalled. The existing ramp from the FDR southbound roadway will be widened from one to two lanes to reduce bottlenecks and pinch points in traffic flow. All steel structures, including the ramp structures and the main span, will be painted, restoring them to their original Brooklyn Bridge Tan color, as chosen by the Landmarks Preservation Commission.

On all the bridge approach structures on both the Manhattan and Brooklyn sides, the existing deck will be removed by lifting out sections and replacing them panel by panel with precast concrete-filled steel grid deck panels. This approach will greatly reduce noise from drilling and jackhammers, and will also increase the reliability of the start and end times of construction activities every night.

## ACCOMPLISHMENTS & PLANNED PROJECTS



Painting work, to prevent steel corrosion and improve aesthetics, will occur in negative-pressure containment units that travel along the bridge structure, high above the traffic. All three travel lanes will be maintained during the course of this work, and painting will take approximately two years. Equipment will be placed underneath the FDR Drive, and on land abutting the Brooklyn tower. Dust collection, vacuum and recycle units will be employed to minimize environmental air quality risks, and there will be continuous air monitoring during operations. All painting work will be conducted in accordance to the US Environmental Protection Act and NYS Department of Environmental Conservation requirements. Noise generated by these units will conform to the NYC Noise Code standards adopted in 2007.

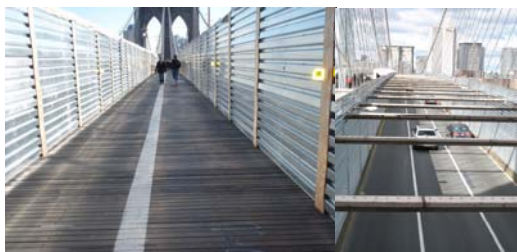
In order to facilitate the reconstruction and associated painting work, the contractor began to mobilize in the area known as the Brooklyn Banks and Red Brick Park, between Pearl Street and Park Row on the north side of the Manhattan approach of the Brooklyn Bridge. The area was closed to the public starting June 2, 2010. The security plan for this area requires that the Red Brick area be completely closed to the public for the duration of this phase of work. Pedestrian access between Pearl Street and the Rose Street/City Hall area is maintained through a walkway adjacent to the banks along Avenue of the Finest.

On the Brooklyn side, two lanes of free-flowing traffic will be created at the Cadman Plaza exit, and approach roadways will be rehabilitated to replace the membrane system and deteriorated closure walls. On the Manhattan side, rusted railings and safety barriers will be replaced, and two lanes of free-flowing traffic will be created from the southbound FDR Drive onto the Brooklyn Bridge.

The contract allows for 24 full weekend closures over the duration of the contract; however, the contract also contains clauses that encourage fewer weekend closures with monetary compensation. Although the promenade will be open, there will be sections immediately under the painting area, which will be narrowed by a foot on each side to facilitate work.

## ACCOMPLISHMENTS & PLANNED PROJECTS

In 2010, after mobilization, the contractor started work on the ramp foundation; installed protective shielding under the Brooklyn main and Brooklyn side spans, the Franklin Square structure, and some of the Manhattan ramps; installed vertical walls at both sides of the Brooklyn and Manhattan-bound roadways at the Brooklyn main and Brooklyn side spans; began the set-up of the containment for the lead paint removal at all of these locations; and proceeded with blasting and painting activities. Other activities included detailed surveying, installation of super slabs and the fabrication of precast members.



Bicycle/Pedestrian Path with Protective Shielding in November 2010. Roadway Shielding in October 2010.

Lead paint removal operations are conducted in a Class 1A containment unit. Rigid containment walls, HEPA filters, and negative air pressure are used to prevent material release. Ambient air quality readings are conducted during lead paint abatement work. Airborne lead levels are continuously monitored using high-volume total suspended particulate samplers at multiple locations in Brooklyn and Manhattan. Additional in-depth testing for volatile organic compounds were conducted at five locations in the summer of 2011.

In March 2012, airborne particulate samples were collected in accordance with regulatory guidelines, at locations where dust is most likely to be deposited during dust-generating activities. Additional tests were replicated in June 2012 for respirable silica, suspended particulates and asbestos. All results were acceptable according to standards set by the Occupational Safety and Health Administration, the National Institute for Occupational Safety and Health, and the American Conference of Industrial Hygienists.



Noise Reduction Along the Sound Pathway – Acoustical Barriers on the Bridge During Night Construction Activities. Acoustical Curtains Along Frankfort Street. Two Crews Work Along Frankfort Street in April 2012. Cranes (On Left) Lift Material In And Out of Walled Enclosures of Sound Blankets. Inspector Taking Noise Measurements.

In 2011, painting was completed at the Franklin Square structure and is currently in progress at the Manhattan ramps and Brooklyn main and Brooklyn side spans with continuous installation of protective shielding and containment. Painting of the truss top struts was also started, and is currently in progress at the Brooklyn-bound Manhattan side span. The following construction work was started in 2011 and is currently in progress: on the Manhattan approach, activities include Brooklyn-bound roadway removal, waterproofing and super slab installation, Franklin Square floor beam replacement, south cantilever beam excavation and repair, and arch block strengthening. On the Manhattan ramps, work includes bearing replacement, widening, and deck replacement, and fascia removal. Asbestos abatement work is taking place in the Brooklyn maintenance shop. Electrical work is also in progress with activities that include light pole and abandoned equipment removal, temporary lightning installation, and temporary power provisions.



## ACCOMPLISHMENTS & PLANNED PROJECTS

Other activities include detailed surveying, testing and repairing of dry-standpipe system, fabrication of precast and steel members.



December 2011: Painted Top Struts of the Brooklyn-Bound Manhattan Side Span.  
Summer 2011: Manhattan Approach - Ramp C Deck Replacement.  
December 2011: Ramp C.

In 2012, work continued on the Manhattan side of the bridge, including deck replacement on ramps and the south cantilever, super-slab installation and arch block strengthening. Painting under the Brooklyn main and side spans was completed, as well as the top struts along the Brooklyn-bound roadway. Painting of the Manhattan main and side spans started in 2012 and will continue through 2013.

In Brooklyn, new shielding was installed under the Prospect and Washington Street structure in anticipation of deck removal. In addition, preparatory work is ongoing for superstructure replacement of the York and Main Street structures.

As part of the contract to rehabilitate the Brooklyn Bridge ramps and approaches, a full closure of the Manhattan-bound lanes of the bridge was performed on two full weekends: from 11:59 PM October 5 to 6:00 AM October 8, and again from 11:59 PM October 12 to 6:00 AM October 15. The first weekend closure was for work on Ramp A (from the southbound FDR Drive to the bridge) for concrete placement. Brooklyn-bound approach work and abrasive blasting was also progressed. The second weekend closure was for work on Ramp A (from the southbound FDR Drive to the bridge), South Cantilever closure pour concrete placement, Brooklyn-bound approaches rehabilitation work, painting of Ramp D/Span 4, Franklin Square Structure orthotropic deck welding, Ramp F (from the southbound FDR Drive to Pearl Street) Stage I grid deck removal/replacement, and preparatory work for widening the exit ramp to Cadman Plaza.



First Full Roadway Closure in October 2012: Manhattan Approach, Ramp A Concrete Placement. Chief Bridge Officer Henry D. Perahia and Deputy Chief Engineer Robert Collyer at the Site. Second Full Roadway Closure: Brooklyn Approach, Brooklyn Bound Roadway Super Slab installation - Installing Super Slab.

Asbestos abatement was completed in the Brooklyn maintenance shop and is in progress in the Manhattan arch blocks.

## ACCOMPLISHMENTS & PLANNED PROJECTS

To date 321 bearings have been replaced under the Manhattan ramps and the flag repairs on the suspended spans are in progress.



April 2012: Overview. (Credit: Maria Mikolajczyk) Manhattan Approach, Ramp A Existing Deck Demolition.  
June 2012: Brooklyn Side Span Netting Protection for Main Cable and Suspender Rope Painting.



June 2012: Platform Removal at Ramp D. Granite Removal at Main Street Structure. Structural Steel and Flag Repairs.



June 2012: Night Shift - Brooklyn Bound Brooklyn Tower Top Struts Primer-Intermediate Coat in Progress. Super Slab Installation on the Brooklyn Approach Brooklyn-Bound Lanes. Temporary Supports at the Park Row West Abutment. Duct Hose Platform Over Esplanade.



July 2012: Painting Brooklyn-Bound Top Struts. Manhattan Side Span Blasting in Progress. Platform Installation at Ramp E. August 2012: Manhattan Main Span Vertical Wall.



August 2012: Manhattan Side Span Containment at Manhattan Tower. Brooklyn Side Span Protective Shield. Brooklyn Side Span Suspender Ropes Painting.



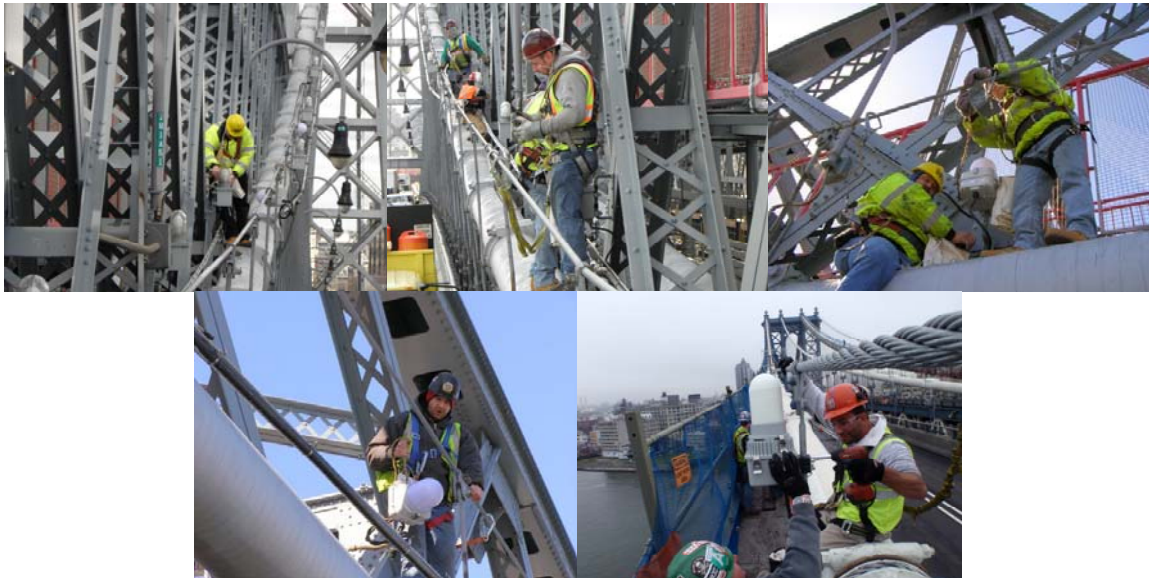
## ACCOMPLISHMENTS & PLANNED PROJECTS



December 2012: Brooklyn Main Span in Finish Coat.

### NECKLACE LIGHTS

In the fall of 2008, to compare options for energy efficiency, we replaced 20 100-watt mercury vapor lamps of the necklace lights on the Brooklyn and Manhattan Bridges with 10 LED fixtures and 10 induction fixtures. The test was completed in spring 2009; we chose an LED fixture in a dish style and will obtain them for the Ed Koch Queensboro, Williamsburg and Brooklyn Bridges. The test fixtures were removed on April 24, 2009. The replacement of the existing mercury vapor lights on the Williamsburg Bridge was completed in summer 2012. The replacement of the Brooklyn Bridge necklace lights will not be scheduled until the completion of Contract #6. The completion of the replacement of the existing lights on the Ed Koch Queensboro Bridge, and the start of the replacement work on the Manhattan Bridge with the new LED's will occur in the spring of 2013.



Installing New LED Necklace Lights on the Williamsburg Bridge in April 2012: Electrician Thomas Cipriano, Supervisor Bridge Repairer and Riveter Gean Pilipiak (in Front). (Credit: Thomas Whitehouse) May 2012: Electricians Thomas Cipriano and Robert Stackpole on the Williamsburg Bridge. Bridge Repairer and Riveter Neil Dalton. (Credit: Hany Soliman). Installing New LED Necklace Lights Along D Cable on the Manhattan Bridge in May 2012.

### MANHATTAN BRIDGE

The youngest of the three NYCDOT suspension bridges that traverse the East River, the Manhattan Bridge carries some 451,701 commuters – 85,392 vehicles, 4,703 bicyclists, and 361,606 mass transit riders - between Manhattan and Brooklyn daily. The bridge's total length is

## ACCOMPLISHMENTS & PLANNED PROJECTS

5,780 feet long abutment to abutment at the lower level, and 6,090 feet on the upper roadways portal to portal; its main span length is 1,470 feet and each of its four cables is 3,224 feet. It was designed by Leon Moisseiff and first opened in 1909. The bridge supports seven lanes of vehicular traffic, a bikeway and walkway, as well as four transit tracks upon which four different train lines operate.



Manhattan Bridge in July 2009. (Credit: Bernard Ente) Arch and Part of the Colonnades in March 2011. (Credit: Bojidar Yanev)

The \$918.6 million reconstruction program commenced in 1982 with Contract #1, and continues with Contract #14 (currently in progress) to rewrap the cables and replace the suspenders and 166 necklace lights. Completion is expected in summer 2013. Work completed on the bridge to date includes reconstruction of the south and north upper roadways, re-anchoring the north interior main cable, reconstruction of the north and south subway lines, installation of a truss stiffening system to reduce twisting, restoration of the Manhattan Plaza, including the historic arch and colonnades, reconstruction of the south walkway, installation of a new north bikeway, replacement of the lower roadway, and rehabilitation of the Brooklyn Plaza.

### Contract #14

Most of the existing suspenders on the Manhattan Bridge were installed under a \$2.2 million contract with Roebling and Sons in 1956 and was one of their last before closing their Bridge Division in 1964. Under Contract #14, the existing main cables are being rehabilitated with new wire wrapping and a neoprene barrier to insulate from weather. In addition, all vertical suspenders are being replaced. A Notice to Proceed for this \$149 million construction project was issued to the contractor with a start date of December 28, 2009.

Major activities undertaken during 2010 included the modifications to the approach span subway stringers (to repair flagged cracks), microsurfacing of the North upper roadway, truss vertical rehabilitation, beginning of the main cable rewrapping, suspender replacement, and continuity plate replacement.

Major activities completed during 2011 included the replacement of all suspenders along two of the four cables, replacement of the wire wrapping with new wire and neoprene wrapping along two of the four cables, and replacement of the cable band bolts along two of the cables.



March 2011: Removal of Existing Suspender, 'C' Truss. April 2011: Installation of New Hand Ropes for 'C' Cable. April 2011: Checking Bolt Tension in New Cable Band Bolts. August 2011: Checking Suspender Loads With an Accelerometer.

Major activities completed during 2012 included the replacement of suspenders on three cables, replacement of wire wrapping with new wires and neoprene wrapping on three cables, replacement of cable band bolts on all four cables and replacement of the necklace lights on the



## ACCOMPLISHMENTS & PLANNED PROJECTS

north exterior cable. Also completed was the bearing replacement for the north trusses at the towers during a weekend train outage.

On-going activities planned for completion in 2013 include the replacement of suspenders, wire wrapping and neoprene wrapping on the remaining south exterior cable, installation of maintenance platforms at the towers, bearing replacement for the south trusses at the towers during a weekend train outage, and replacement of light poles and conduit on the south upper roadway.



March 2012: View of Bridge From Tower Top. April 2012: Application of Anti-Skid Walking Surface on Main Cable. June 2012: Measuring New Cable Band Bolts. August 2012: Barge Carrying Temporary Work Platforms and Jacking Steel.



September 2012: Main Cable Work Platforms. New Suspenders Along Truss B. September 2012: Jacking Struts and Work Platforms. November 2012: Sidewalk Protection Sheds.



April and September 2012: Manhattan Bridge Suspender Replacement. (Credit: Bojidar Yanev) December 2012: Manhattan Bridge Engineer-in-Charge Brian Gill and Deputy Chief Engineer Russell Holcomb on the Bridge.

## **ACCOMPLISHMENTS & PLANNED PROJECTS**

### ***Movable Bridges***

As NYCDOT completes reconstruction work on the East River Bridges, more attention is being devoted to other key City-owned bridges, such as the movable bridges. Building on the success of the East River Bridge projects, the Department is implementing many of the innovative concepts originated during the rehabilitation of East River Bridges on these other major reconstruction projects.

### **BATTERY PARK UNDERPASS AND WEST STREET UNDERPASS (MANHATTAN) – EMERGENCY CONTRACT**

The Battery Park Underpass is a two-span rigid frame reinforced concrete tunnel structure connecting eastbound and westbound traffic between the FDR Drive and West Street (Route 9A) at the southern end of Manhattan. The West Street Underpass is a one-span rigid frame reinforced concrete tunnel structure connecting southbound traffic from West Street heading toward the entrance to the Brooklyn Battery Tunnel (Hugh L. Carey Tunnel).

On October 29, 2012, the New York Metropolitan area was impacted by Hurricane Sandy, causing flooding, loss of power and damage to many components of New York City's infrastructure. On October 30, 2012, a site inspection by the Department revealed major damage to both tunnels. Specifically, certain electrical, mechanical and structural issues with regard to the tunnels must be addressed.

Salt water penetrated the electrical and mechanical equipment in both tunnels, including but not limited to, motors, lighting and pumps. It is therefore, necessary to solicit the services of a specialty contractor to perform all necessary repairs.

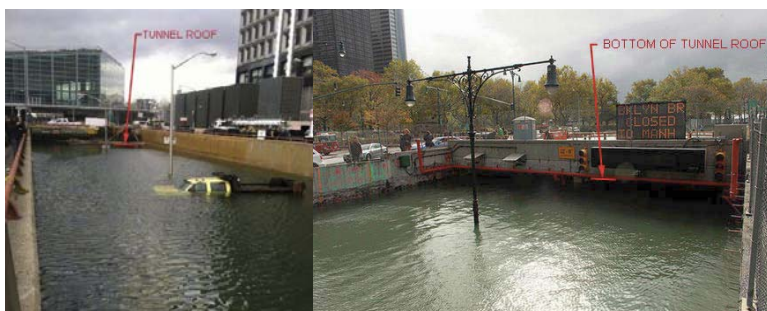
Due to the potentially serious danger to life and public safety posed by the current condition, it is critical that the repair work be performed as expeditiously as possible.

On November 7, 2012, in the interest of public safety, pursuant to Section 103(4) of the General Municipal Law and Section 315 of the New York City Charter, the Department declared that an emergency exists relative to the Battery Park Underpass and West Street Underpass on Route 9A in Manhattan.

A temporary repair of the Battery Park Underpass ventilation system which will allow normal traffic flow as opposed to single-lane traffic is expected to begin in Spring 2013. A permanent repair of the systems in the underpass is expected to begin in November 2013 and to be complete in July 2014.

A Letter of Intent for the emergency repairs of these underpasses is expected to be issued in late Fall 2013.

## ACCOMPLISHMENTS & PLANNED PROJECTS



Battery Park Underpass - View Looking West at the South Portal Entrance Near the FDR Drive. View Looking South at the North Portal Entrance Near West Street. Both Tunnels Were Flooded to Their Roofs, Which Means That all Tunnel Ventilation, Electrical, and Mechanical Systems Were Entirely Submerged in Saltwater.

**METROPOLITAN AVENUE BRIDGE OVER ENGLISH KILLS (BROOKLYN), GRAND STREET BRIDGE OVER NEWTOWN CREEK (BROOKLYN/QUEENS), GREENPOINT AVENUE BRIDGE OVER NEWTOWN CREEK (A.K.A. J. J. BYRNE MEMORIAL BRIDGE (BROOKLYN/QUEENS), PULASKI BRIDGE OVER NEWTOWN CREEK (BROOKLYN/QUEENS), BORDEN AVENUE BRIDGE OVER DUTCH KILLS (QUEENS), HUNTERS POINT AVENUE BRIDGE OVER DUTCH KILLS (QUEENS), UNION STREET BRIDGE OVER GOWANUS CANAL (BROOKLYN), CARROLL STREET BRIDGE OVER GOWANUS CANAL (BROOKLYN), THIRD STREET BRIDGE OVER GOWANUS CANAL (BROOKLYN), NINTH STREET BRIDGE OVER GOWANUS CANAL (BROOKLYN), THIRD AVENUE BRIDGE OVER HARLEM RIVER (BRONX/MANHATTAN), MADISON AVENUE BRIDGE OVER HARLEM RIVER (BRONX/MANHATTAN), 145<sup>TH</sup> STREET BRIDGE OVER HARLEM RIVER (BRONX/MANHATTAN), MACOMBS DAM BRIDGE OVER HARLEM RIVER (BRONX/MANHATTAN), AND WEST 207<sup>TH</sup> STREET/WEST FORDHAM ROAD BRIDGE OVER HARLEM RIVER (BRONX/MANHATTAN) (A.K.A. UNIVERSITY HEIGHTS BRIDGE) – EMERGENCY CONTRACT**

On October 29, 2012, the New York Metropolitan area was impacted by Hurricane Sandy, causing flooding, loss of power and damage to many components of New York City's infrastructure. On October 30, 2012, a site inspection by the Department revealed major damage to the operational portions of these bridges. Specifically, certain electrical and mechanical issues parts must be repaired or replaced immediately.

Salt water penetrated the electrical and mechanical equipment in the bridges, including but not limited to, motors, electric relays, lock control devices, gates, pier lights, and pumps. It is therefore, necessary to solicit the services of a specialty contractor to perform all necessary repairs.

These bridges provide a necessary service in compliance with federal law which requires that the bridges be operational for marine traffic. It is critical that the repair work be performed as expeditiously as possible.

On November 20, 2012, in the interest of public safety, pursuant to Section 103(4) of the General Municipal Law and Section 315 of the New York City Charter, the Department declared that an emergency exists relative to these 15 movable bridges in the Bronx, Brooklyn, Manhattan, and Queens.

A Letter of Intent for the emergency repairs of these bridges is expected to be issued in early Winter 2014.

## ACCOMPLISHMENTS & PLANNED PROJECTS



East End of the West 207<sup>th</sup> Street Bridge - Missing Traffic Signal was Knocked Down by the Hurricane Winds. Borden Avenue Bridge Operator's House Basement Level – Depicted Flood Line was Approximately 5 Feet Above the Floor. Grand Street Bridge – Standing Water in the Access Light Fixture at the East Wedge Walkway. Madison Avenue Bridge - General View of Fender and Center Pier—the Red Line Depicts the Approximate Water Level.

### BELT PARKWAY BRIDGE OVER MILL BASIN (BROOKLYN)

Opened on June 29, 1940, the Mill Basin Bridge is adjacent to the Jamaica Bay Wildlife Refuge and the Gateway National Recreation Area. It is the only movable bridge on the Belt Parkway. The current clearance over Mean High Water is 35-feet. When the Mill Basin Bridge was constructed during the first half of the 20<sup>th</sup> century, New York City's inland waterways were among the most heavily navigated thoroughfares in the country. However, as maritime traffic in New York City steadily decreased since the mid-1960s, the need for movable bridges lessened as well. In 1941, during its first full year of operation, the Mill Basin Bridge was opened 3,100 times; by 1953, that figure decreased to 2,173; by 2012, the number of openings declined further to a total of only 277 openings.

In addition, significant and costly traffic congestion results from the operation of this outmoded drawbridge. In 2011, the Mill Basin Bridge carried 139,835 vehicles per day. The average opening and closing time for the bridge (and others like it) is ten minutes. Thus, this structure's operation has a negative and significant effect on the efficiency of New York City's vehicular traffic flow.

In 2012, on a New York State-mandated scale from 1 to 7, this bridge had a condition rating of 3.179, or "fair." While the bridge is not in any immediate danger of structural failure, its reconstruction is required in order to maintain mobility and public safety on this vital artery.

The existing Mill Basin Bridge is 864-feet long and 14 spans, including double movable leaf bascule spans and a steel superstructure, supported on reinforced concrete pier on timber piles, and abutments supported on pre-cast concrete piles. The existing structure and immediate approaches will be demolished and replaced.



## ACCOMPLISHMENTS & PLANNED PROJECTS



Belt Parkway Bridge Over Mill Basin. Aerial View.

The replacement will be a 2,645-foot, 17 span fixed bridge. It will consist of a steel composite superstructure and reinforced concrete substructure on piled footings, and will be constructed on a new alignment set on the north side of the existing bridge and partially overlapping with the existing bridge. The new bridge and approach will have three 12-foot wide traffic lanes, a 12-foot wide right shoulder on the bridge, a 10-foot wide right shoulder on the approach, and a minimum left shoulder in each direction. The eastbound side will carry a dedicated pedestrian/bicycle path along the south fascia. The new bridge will be a fixed structure with a 60-foot vertical clearance over Mean High Water, obviating the need for opening and closing the structure to accommodate tall vessels. The new design of the bridge will result in increased sight distances, an increase in lane width from 11-feet 4-inches to 12-feet, and the inclusion of safety shoulders in both directions. The channel will remain navigable during construction, and the clear channel width will remain the same after the new structure is in place. A new fender system will be installed to protect the bridge substructure from marine traffic. Currently in its final design phase, the reconstruction of the Mill Basin Bridge (part of the second Belt Parkway Group) is scheduled to start in summer 2014, and to last approximately 4 years.

### BORDEN AVENUE BRIDGE OVER DUTCH KILLS (QUEENS)

The Borden Avenue Bridge over Dutch Kills is located just south of the Long Island Expressway between 27<sup>th</sup> Street and Review Avenue in the Sunnyside section of Queens. It is a retractile-type movable bridge. The original bridge construction was completed in 1908 and was opened to traffic on May 25, 1908.



1908 Borden Avenue Bridge Plaque. Waterside View in 2008. (Credit: Bernard Ente)

The bridge structure carries two lanes of vehicular traffic with sidewalks on either side. The roadway is 34 feet wide and the sidewalks are 8 feet wide. In 2011, the bridge carried 8,696 vehicles per day.

A project to rehabilitate the existing steel bridge, including approaches, and upgrade the operating system is currently scheduled to begin in August 2018. Construction is expected to be complete in February 2020.

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

### **BROADWAY BRIDGE OVER THE HARLEM RIVER (BRONX/MANHATTAN)**

Broadway extends from the southern tip of Manhattan, through the Bronx and terminates in Westchester County. The Broadway Bridge, a lift type movable bridge crossing the Harlem River, is located between West 220<sup>th</sup> Street in Manhattan and West 225<sup>th</sup> Street in the Bronx. In 2011, the bridge carried 35,770 vehicles per day. Three tracks of the IRT subway are carried on its upper deck and a five-lane two-way roadway with sidewalks on either side is carried on its lower deck. The two roadways each measure 34 feet and the sidewalks are 7 feet wide.

The vertical lift bridge is the third movable steel structure at this location. The original steam powered single-deck swing span built in 1895 carried only highway and pedestrian traffic. The second structure was built in 1905 to accommodate the extension of IRT subway into the Bronx from Manhattan. The second bridge was again a double deck swing span to carry the subway line on the upper deck and highway traffic on the lower deck. The current structure, a double deck vertical lift bridge to carry the subway and vehicular traffic, was built in 1960.



Broadway Bridge in December 2008.  
(Credit: Sergey Parayev)

The bridge underwent a protective coating project to protect the steel components of the bridge against the effects of corrosion. This project was completed in October 2003 at a cost of approximately \$8.7 million.

The bridge also underwent recent component rehabilitation, including miscellaneous steel repairs, grating replacement, sealing and waterproofing of its deck, repair of spalled concrete pavement, new expansion joints and new median barrier at an approximate cost of \$2.14 million. This project was completed in May 2004.

Currently in its final design phase, the reconstruction of the bridge is scheduled to start in August 2016. The project's scope of work includes a major rehabilitation of the roadway deck, superstructure steel and substructure elements of the vertical lift span, as well as the approach spans. It will also include the replacement and rehabilitation of the electrical and mechanical components of the vertical lift span, as well as replacement of the existing fender system with a new larger and stronger one. Construction is expected to be complete in July 2019.

### **BRUCKNER EXPRESSWAY (NB & SB SERVICE ROAD) OVER WESTCHESTER CREEK (UNIONPORT BRIDGE) (BRONX)**

This double leaf bascule bridge opened in 1953. In 2011, the bridge carried 61,619 vehicles per day. This 17-span structure (three waterway spans and fourteen concrete approach spans) carries five lanes of the Bruckner Boulevard Expressway service road traffic over Westchester Creek. This bridge opens for important fuel oil deliveries up to 300 times a year. The reconstruction design of the bridge underwent a Value Engineering Study by the Office of Management and Budget which recommended several changes to the design that are being incorporated.

## ACCOMPLISHMENTS & PLANNED PROJECTS

Subsequent to the study, concepts for two temporary movable bridges (for MPT purposes only) were developed in lieu of a complete bridge closure during construction. However, an assessment revealed a significant impact on local traffic would occur, due to the required traffic rerouting via local streets to the temporary bridges, and the location of the temporary bridges would have a severe impact on the operations of the Department of Sanitation and a Department of Environmental Protection pump station. In addition, the cost of implementing the temporary bridges for only a couple of years was very high, in the order of \$40 million. The concept of rehabilitating the bridge by constructing new temporary bridges for MPT purposes was then abandoned.

A follow-up feasibility study was conducted for completely replacing the existing bridge with a new wider bridge in phases while maintaining traffic on the existing bridge. The project's new scope of work includes: a complete replacement of the bascule, flanking, and approach substructures and superstructures, providing six 12-foot travel lanes with 10-foot shoulders on both sides of the bridge; a new 15-foot bicycle/pedestrian path on the south, separated from traffic with a barrier; replacement of the existing mechanical and electrical systems for the bascule span; reconstruction of the bridge operator and control houses, and replacement of the existing fender system, drainage system, street lighting, traffic signal facilities, and gates. Construction is expected to start in fall 2016.



Unionport Bridge in 1953 and 2009.



Unionport Bridge in 2002. (Credit: NYSDOT) Eastbound View.

### MADISON AVENUE BRIDGE OVER HARLEM RIVER (BRONX/MANHATTAN)

A project for electrical, mechanical, and miscellaneous operating system-related work is scheduled to be performed between March 2017 and September 2018. The bridge is currently operating with the very old machinery components, along with a temporary electrical system known as the "Interim Drive System" installed during the 1994 rehabilitation contract. Some of the machinery components currently in service are over 100 years old and have far exceeded their service life. Moreover, the bridge does not have any back-up operating system which renders the bridge inoperable in case of failure of any component of the Interim Drive System. The preliminary design phase of this project began in early 2011. In 2011, the bridge carried 41,423 vehicles per day.



## ACCOMPLISHMENTS & PLANNED PROJECTS



Madison Avenue Bridge Sign in 2007. (Credit: Duane Bailey-Castro) Bridge in 2009. (Credit: Bernard Ente)

### PARK AVENUE TUNNEL OVER 34<sup>TH</sup> STREET (MANHATTAN)

The Park Avenue Tunnel was originally built as an open cut in 1836 to accommodate horse drawn trolley cars between East 33<sup>rd</sup> Street and East 42<sup>nd</sup> Street. In 1854, a five course brick arch roof was constructed and the underground tunnel was used by the New York and Harlem River Railroad steam engine trains from East 42<sup>nd</sup> Street to its terminal then located at East 30<sup>th</sup> Street and Park Avenue. In 1870 the rail road was converted to electric powered trolleys.

The tunnel in its present form was converted to vehicular traffic only in 1917, when trolley tracks were covered with fill and roadway pavement was built. In its present form, the tunnel is located under the center mall of Park Avenue South. The roadway width inside the tunnel varies from 19'-2" to 22'-5" and used to carry a single lane of traffic in each direction. On August 3, 2008, the traffic in the tunnel was restricted to only a single northbound lane.

Some rehabilitation work was completed on the tunnel in November 2005. That contract included the rehabilitation of the fans and the ventilation system. The new project is currently in its final engineering design phase. The scope of work includes complete rehabilitation of civil and structural components of the tunnel as well as upgrading of fire detection and ventilation system of the tunnel. Construction is expected to start in 2014 and be complete in 2016.



Two Views of Park Avenue Tunnel in 2010. (Credit: NYSDOT)

### ROOSEVELT ISLAND BRIDGE OVER EAST RIVER/EAST CHANNEL (MANHATTAN/QUEENS)

This lift bridge opened in 1955, when it was known as the Welfare Island Bridge. In 2011, the bridge carried 9,103 vehicles per day. The 8 span structure carries two lanes of traffic over the East Channel of the East River. It is the only vehicular access to Roosevelt Island from the Borough of Queens.



## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

A Notice to Proceed for the \$86.5 million reconstruction of this bridge was issued to the contractor with a start date of March 12, 2007. The project's scope of work includes rehabilitation of the existing bridge superstructure, substructure and approaches, replacement of some of the existing mechanical and all of the electrical systems for the lift span, rehabilitation of the bridge operator house, installation of safety fences on the sidewalk, replacement of the street lighting, resurfacing of the approach roadways, installation of pigeon proofing systems and re-painting the entire structure. The project will also include the installation of a dedicated right-hand turn lane onto the southbound Vernon Boulevard in Queens, and the construction of a new back-up generator building under the Queens approach to provide power to allow operation of the bridge in an emergency. Fabrication and testing of mechanical and structural components was in progress by the end of 2007.

By the end of 2008, the rehabilitation of the existing bridge superstructure, substructure and approaches was nearly complete. The roadway was returned to full service on December 2, 2008 after the complete re-decking of the main bridge and approaches. The sidewalks were returned to service in 2009. Due to a design change, the replacement of some of the existing mechanical and all of the electrical systems for the lift span, and the rehabilitation of the bridge operator house was performed during a Navigation Channel closure between October 2009 and August 2010. The installation of safety fences on the sidewalk, replacement of the street lighting, resurfacing of the approach roadways, and installation of pigeon proofing systems was completed in 2009.

The cleaning and repainting of the bridge began in January 2008, and the structure painting was complete by the end of 2009. Local touch up painting followed the installation of the new lift machinery. The Department and its contractor strictly adhered to the safety requirements regarding lead paint removal as approved by the United States Environmental Protection Agency and the Occupational Safety and Health Administration, New York City Departments of Health and Environmental Protection, and the New York State Departments of Health and Environmental Conservation.

The work was performed within an entirely sealed Class 1A containment system (under negative pressure) which acted as an added safety measure to prevent any materials from escaping into the air. Filtration of the enclosed air prevented paint waste dust from being released. The Department placed several air monitoring stations in the area around the bridge. The Department performed continuous monitoring and testing of the soil and air quality as well as noise levels in the area surrounding the containment enclosure to minimize impacts and ensure the safety and quality of life for workers and residents nearby.

In 2010, the contractor completed the rehabilitation of the machinery, replacement of the bridge's power systems, installation of the bridge control systems, installation of new barrier gates, bridge railings, warning lights, new protective bollards, replacement of the sewer lines with new curbing, and the replacement of pavement. Under-deck temporary work platforms were removed and the bridge is now operational for the passage of marine traffic.

In 2011, the architectural work in the control and machinery rooms was completed. Bird screens were installed around the elevator shafts and a bird prevention system was installed at the piers. Security fences with gates were installed around the generator house and three land piers. Elevators at both east and west towers were rehabilitated and tested. The reconstruction of the bridge was substantially completed on June 27, 2012.

## ACCOMPLISHMENTS & PLANNED PROJECTS



January 2011: North Sidewalk With New Pedestrian Fence. Recently Painted Bridge With New Traffic Control Equipment. View of Bridge in August 2011.



Sidewalk and Pedestrian Fence in October 2011. (Credit: Chris George and Ryan Scatenato)  
View of the Bridge in October 2011. (Credit: Rafael Lopez)



Chief Bridge Officer Henry D. Perahia, Commissioner Janette Sadik-Khan and Executive Director of Bridge Inspections and Bridge Management Dr. Bojidar Yanev on the Roosevelt Island Bridge. (Bridge View Credit: Bojidar Yanev)

### SHORE ROAD BRIDGE OVER THE HUTCHINSON RIVER (BRONX)

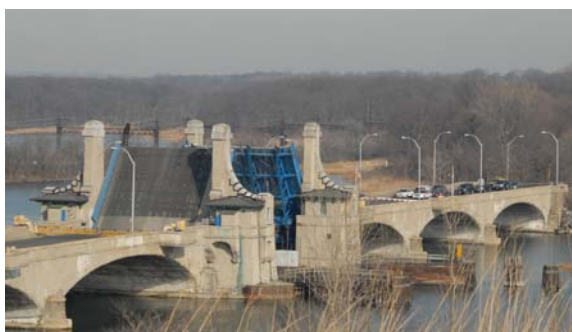
This bridge, built in 1908, was originally called the Pelham Parkway Bridge over Eastchester Bay. In 2011, the bridge carried 16,966 vehicles per day. The \$5 million interim rehabilitation of the existing bridge superstructure and substructure enables the Department to keep it operational while a new bridge is being designed and built adjacent to the existing bridge. The existing bridge will be demolished once the new bridge is in service. The rehabilitation project began in April 2001, and all traffic lanes were reopened to traffic on April 24, 2002, three days earlier than scheduled. The interim rehabilitation of this bridge was substantially completed on June 17, 2002.

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***



Shore Bridge in 2007. (Credit: Peter Basich)

As of the end of 2009, a mid-level, single leaf bascule movable bridge was in design. It will be constructed to the south of the existing bridge, with a wider navigation channel. An environmental impact study, co-sponsored by the Federal Highway Administration, is underway. The construction of a new bridge is scheduled to begin in October 2020.



Open Bridge in 2007. (Credit: Peter Basich)

### **UNION STREET BRIDGE OVER GOWANUS CANAL (BROOKLYN)**

The original Union Street Bridge over the Gowanus Canal was constructed in 1870 as part of the construction of Prospect Park. A major crossing over the Gowanus Canal, this bridge is the last in a series of five eastbound crossings, and it is 885 feet from the canal's end. The neighborhood, located in the Gowanus section of Brooklyn, is primarily industrial; however, public facilities such as schools, parks, and public transportation are nearby.

In its current configuration, the bridge is a double-leaf Scherzer type (rolling lift) bascule bridge, which was opened in 1905. The bridge carries two lanes of eastbound traffic, a delineated bike lane and a sidewalk.

During the preliminary design, eight alternatives were identified for the rehabilitation of the bridge. The recommended design alternative proposes a replacement of the entire bridge structure with a new single leaf fixed trunnion bascule bridge on a reinforced concrete substructure and new pile foundation. Preliminary plans have been developed. However, during the Value Engineering study in 2009, the team recommended converting the movable span into a low level fixed bridge. NYCDOT, OMB and other affected agencies are currently reviewing the feasibility of this alternative. The construction is anticipated to begin around April 2019.

## ACCOMPLISHMENTS & PLANNED PROJECTS



Union Street Bridge in 2010. (Credit: NYSDOT)

### WARDS ISLAND PEDESTRIAN BRIDGE OVER HARLEM RIVER (MANHATTAN)

The Wards Island Bridge is a pedestrian bridge connecting the East River Housing Project at East 103<sup>rd</sup> Street in Manhattan to Wards Island. Located on the East River, this bridge is located between exits 14 and 15 of the FDR Drive. This vertical-lift bridge has a total of twelve spans. Four spans are located on the Manhattan side of the bridge and are oriented in the south/north direction, whereas the remaining spans are oriented in the west/east direction. The curb-to-curb width of the lift span is 3.66 meters, the clear width of the Manhattan approach ramp is 3.66 meters and the clear width of the Wards Island approach ramp measures about 3.76 meters. The bridge's Wards Island approach provides immediate pedestrian access to the 68-acre Wards Island Park.



Wards Island Bridge August 2011. (Credit: Duane Bailey-Castro)

The bridge was built by the U.S. Army Corps of Engineers in 1951 and was designed by Othmar Hermann Ammann.

A protective coating project was completed in May 2003 at an approximate cost of \$1.2 million. A Notice to Proceed for the reconstruction of this bridge was issued to the contractor with a start date of June 14, 2010. The project's scope of work includes the replacement of the electrical components, the replacement of the walkway deck on the lift span, the repair and overlay of the deck on the other spans and approaches, the rehabilitation of the steel superstructure members, new fencing and lighting, and restoring the control and tender houses to their original condition.

In 2010, the contractor mobilized and began the installation of protective containment shielding. Following training from Division Bridge Operations personnel, the contractor took over operational control of the bridge on November 12, 2010. Deck cracks were repaired, and the old bridge railing and protective fencing were removed in preparation for removal of the steel grid decking.

In 2011, the contractor installed a new concrete-filled steel grid deck on the lift span. Concrete repairs were performed on piers over land as well as in the East River. The bridge was temporarily opened to pedestrians on June 30, 2011 for the summer months and was closed from November 21, 2011 through May 7, 2012 for remainder of the construction. The bridge was



## ACCOMPLISHMENTS & PLANNED PROJECTS

reopened to pedestrian and bicycle use at 10:45 AM on June 1, 2012. Construction is expected to be completed in March 2013.



January 2011: Under-Deck Shield Installation for Manhattan Approach Span 6. April 2011: Removing Concrete Decking Material. June 2011: Pouring Concrete Decking at Span 7.



Construction in August, October, and December 2011. Installing Handrails Between Spans 7 and 9.



Council Member Melissa Mark-Viverito, Commissioner Janette Sadik-Khan, and Chief Bridge Officer Henry D. Perahia at the Re-opening of the Bridge on June 1, 2012. Chief Staff Manager/Executive Director of Community Affairs Joannene Kidder and Associate Urban Designer Neil Gagliardi. Pedestrians on Bridge. (Credit: Nicole Garcia)

### WILLIS AVENUE BRIDGE OVER THE HARLEM RIVER (BRONX/MANHATTAN)

Measuring 3,212 feet in length and opened to traffic on August 23, 1901, the old Willis Avenue Bridge was one of New York City's most heavily traveled bridges. The bridge was a bowstring truss swing bridge which spanned the Harlem River, and connected Manhattan's First Avenue and 125<sup>th</sup> Street to Willis Avenue and Bruckner Boulevard in the Bronx. Engineered by Thomas C. Clarke, the bridge was designed to relieve traffic congestion on the Third Avenue Bridge.

A major hub between the FDR Drive in Manhattan, the Major Deegan Expressway and the Bruckner Boulevard in the Bronx, the Willis Avenue Bridge carried approximately 57,710 vehicles per day in 2011. Ten local and interstate bus lines use the bridge as a principal route from New York City to points throughout the northeastern United States.

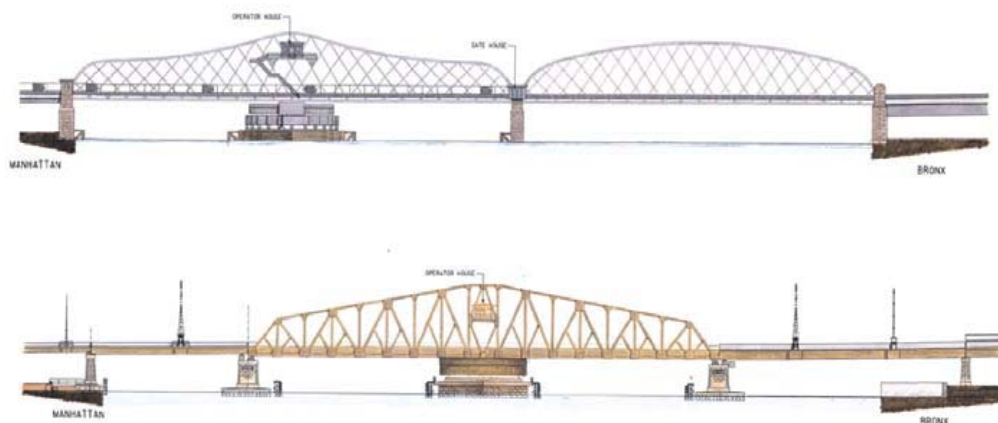
Because of substandard curves that were present on the structure's approaches, the Willis Avenue Bridge was one of the City's most accident-prone crossings. Between 1992 and 1994, there were 809 vehicular accidents on the bridge, for an average of 269 per year.

Because of the advanced age and condition of the Willis Avenue Bridge, the City of New York decided to replace the existing bowstring truss swing bridge with a new swing span bridge constructed just to the south of the existing bridge. The project also replaced the FDR Drive approach ramp and the ramp onto Bruckner Boulevard, and improved the alignment. NYCDOT

## ACCOMPLISHMENTS & PLANNED PROJECTS

will also reconstruct Willis Avenue over the Major Deegan Expressway for the New York State Department of Transportation. It also included a direct connection to the northbound Major Deegan Expressway in the Bronx with wider travel lanes and shoulders, and a broader, combined pedestrian/bicycle pathway along the north side of the bridge.

The old swing bridge, which opened for tall vessels, had a vertical clearance of 24 feet above Mean High Water Level (MHWL) when closed. The new swing bridge when closed has a 25 foot clearance above the Mean High Water Line which makes it consistent with other bridges along the river. It also incorporated the placement of a solid riding surface on the swing span instead of the existing open grating deck. In addition, modern electrical, mechanical and communications systems are being installed.



Old and New Willis Avenue Bridge Span.

A Notice to Proceed for the replacement of this bridge was issued to the contractor with a start date of August 27, 2007. Foundation construction work was in progress by the end of 2007.

Traffic continued to use the current bridge until the new bridge opened, resulting in limited impact to motorists and nearby communities. The NYC Marathon was not impacted: runners continued to use the old bridge each year until the new swing span was completed.

Throughout the project, little impact to marine traffic was experienced. The new swing span was fabricated and assembled off site, and floated into place once the foundations, center pier and rest piers were ready to receive it.

On January 3, 2008, the East 125<sup>th</sup> Street exit ramp off the northbound FDR Drive was closed. This closure was necessary so that work on the construction of a temporary loop ramp, as well as construction of the new north-bound FDR Drive ramp to the Willis Avenue Bridge, could begin. The East 125<sup>th</sup> Street exit ramp, which typically carries only a low volume of traffic, was reopened after its reconstruction in June 2012.

In 2008, the project focused on foundation construction work, along with construction of a temporary ramp from the north-bound FDR Drive onto the bridge. At the end of 2008 the loop ramp was nearing completion. It went into service on January 24, 2009. This allowed the removal of the existing ramp and the construction of the new ramp to proceed. One half of the foundations for the new FDR Ramp were installed. Additionally one of the four piers in the river was in place, and work on a second had begun. The foundations in the Harlem River Rail Yard were more than 50 percent complete, and work had begun on the footings for the new Bruckner Boulevard Ramp.

In 2009, the project continued to focus on foundation construction work, with the installation of footings and piers for the new ramp from the FDR Drive as well as the one-half of the 1<sup>st</sup> Avenue Approach. The precast concrete pier box for River Pier 5 was transported in February 2009 by

## ACCOMPLISHMENTS & PLANNED PROJECTS

oceangoing tug and barge from the fabrication yard in Virginia to the contractor's yard in Jersey City, New Jersey. Over 30 automobiles were removed from the Manhattan channel in spring 2009. At the end of 2009 the contractor began the installation of the steel superstructure over the FDR Drive. The work in the river consisted of the installation of the drilled shafts for the four river piers and the installation of three of the four precast pier boxes in the river. The assembly of the new swing span began in Coeymans, near Albany, New York in June 2009.

In the Bronx, a temporary pedestrian bridge was installed in May 2009 over the Major Deegan Expressway, just south of the existing bridge, to carry pedestrians until the new bridge is constructed. More than half of the paving and drainage work on the expressway was completed. One-half of the bridge over the Major Deegan was removed and work on the new abutment wall began. One-half of the abutment at Bruckner Boulevard was reconstructed and the piers to carry the south half of the new bridge were installed. The foundations in the Harlem River Rail Yard were completed and the first phase of the new Bruckner Boulevard exit ramp was also completed.

The contractor began 2010 with construction of the FDR Drive entrance ramp, and the First Avenue Approach on the Manhattan side of the bridge. On the Bronx side, the new Bruckner Boulevard exit ramp was partially opened to traffic on February 12, 2010. The work then proceeded with the demolition of the existing ramp. Assembly of the new swing span along with new machinery and electrical system was continued.

The swing span was floated down the river and towed to the bridge site on July 26, 2010. The new swing span was floated on to the new pier on August 9, 2010.



Voyage up the East River on July 26, 2010. New Willis Avenue Bridge Span Passing Under the Brooklyn Bridge. (Credit: Douglas Reese)

Work continued on the new bridge span in August 2010 with the placement of a new lightweight concrete deck surface, bridge machinery and electrical utility work. Demolition of the existing Willis Avenue Overpass over the Major Deegan Expressway was completed by September 2010.

On October 2, 2010, with the completion of the FDR Drive approach, partial First Avenue Approach, and the Willis Approach in Bronx, traffic was allowed over the new swing span and the existing bridge was closed to traffic. The old bridge was retired after 109 years of service.



New and Old Willis Avenue Bridges on October 2, 2010. Old Willis Avenue Spans in December 2010. (Credit: Duane Bailey-Castro) Aerial View in September 2011. (Credit: Hardesty and Hanover)

The float-out of the old existing swing span took place on October 21, 2010, and the adjacent, flanking bow-string arch span was floated out on November 3, 2010. Both spans remained on



## ACCOMPLISHMENTS & PLANNED PROJECTS

site through November for the asbestos abatement process before being floated to the contractor yard in Jersey City. The first bridge test operation of the new swing span was conducted successfully during the early morning hours of December 23, 2010.

In 2011, the contractor completed work on the existing swing and flanking spans and towed them to the recycling facility in New Jersey. In Manhattan, work continued on the remaining half of the First Avenue approach roadway and spans, the demolition of the temporary loop ramp, and the reconstruction of the 125<sup>th</sup> Street exit and local streets. In the last quarter of 2011, work also continued on the Manhattan ramp and stairs and the auxiliary bridge operator's house.

In the river, the contractor started removal of the river piers and continues work to complete the demolition of center pier and the west rest pier by blasting. They also worked on the installation of the fender system for the new piers as well as the final alignment of the bridge machinery and testing of the electrical and mechanical system. In the last quarter of 2011, the contractor completed demolition work at pier 10 and carried out blasting of pier 9. Post-blasting excavation continued at Pier 9 for removal of the pier, and fender building work continued in the river. Work also continued for the construction of bridge machinery and testing of the electrical and mechanical systems. Installation of granite continued throughout the project.

In the Bronx, the contractor continued work on the relieving platforms, construction of the remaining superstructure and decks for the spans over the Harlem River Yard and mainline. They also worked on the construction of combined pedestrian/bicycle bridge over the Major Deegan Expressway as well as the new direct ramp to the northbound Major Deegan Expressway.



June 2011 River Work: Picking Up Waste With a Clamshell Bucket. July 2011: Demolition of Old Pier 9. March 2011: Stage III Caisson Concrete Placement at Caisson #2 at Pier 11. Setting Granite Stone Facing at Pier 11. Finished Stage VB Removal of Steel Girder at South Bay at Existing Span 15.



February 2011: Pedestrian/Bicycle Bridge and Ramp to Major Deegan Expressway. September 2011: Granite Installation for Approach to Connector Ramp. Bridge in November 2011. (November Credit: Hardesty and Hanover)

2012 started with the opening of the ramp to the northbound Major Deegan Expressway as well as the complete opening of the Bruckner Ramp and Bruckner Boulevard. Ramp C, which provides a direct connection to the Major Deegan Expressway, was opened on January 10. The contractor opened the sidewalk to the North Access Road on January 30. Most of the landscaping was done in the spring with some minor work left for the fall. Reconstruction of the 125<sup>th</sup> Street exit ramp and the 127<sup>th</sup> Street work was completed and opened to traffic. In the river, fenders for the new piers were completed and testing of electrical, machinery and control system continued. Reconstruction of Willis Avenue between 132<sup>nd</sup> Street and Bruckner Boulevard was completed and was opened to traffic on September 24, 2012.



## ACCOMPLISHMENTS & PLANNED PROJECTS

Architectural work at the bridge operator house is near completion. By October 2012, all of the traffic lanes and shoulders throughout the project were completed with final pavement markings. The pedestrian bridge over the Major Deegan Expressway and the adjacent walkway/bikeway were opened to the public on November 1, 2012.

In the Bronx, granite masonry work is expected to be complete in early summer 2013. The project is slated for completion in summer 2014.



Demolition of Old Piers 13 – 15 in May and June 2012.



May 2012: Pier 6 North Fender. Touch-up Paint Operations at the Underside of Span 5. Finished Span 10 Parapet Wall Concrete Placement. Girder Touch-up Painting at Span 12. Preparing and Installing Granite Stone Pavers at Ramp-C End Abutment.

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***



September 2012: Bridge Fender North Elevation Looking South. Bridge South Elevation Looking North. Pier 6 South Fender Looking South. Pier 7 West Face Looking East.

### **WILLIS AVENUE GRANITE IN PUBLIC PLAZAS**

New York City has a program to encourage public plazas in neighborhoods lacking in open space. The program plays a key role in ensuring that all New Yorkers live within a 10-minute walk of quality open space, as proposed in the PlaNYC 2030. Public plazas improve the quality of life and transform the cityscape by providing spaces where people can sit, socialize, and enjoy public life. Granite slabs from the old Willis Avenue Bridge have been repurposed as seating in several of these plazas.

## ACCOMPLISHMENTS & PLANNED PROJECTS



Old Fulton Street. Delancey Street Near the Williamsburg Bridge. Bogardus Plaza in Tribeca.  
Belmont Plaza. New Lots Triangle in East New York.



## **ACCOMPLISHMENTS & PLANNED PROJECTS**

### **Roadway Bridges**

#### **INNOVATIONS**

Innovations in the design and construction of Roadway Bridges continued in 2012. Where feasible, the continued use of precast elements in bridge reconstruction reduces construction duration and the resulting negative impacts on the traveling public. In addition, the implementation of applicable Environmentally Preferable Purchasing (EPP) standards on bridge projects will ease the impact of the increased demands on resources and surrounding environment, and Best Management Practices (BMP) in all applicable projects will mitigate the impact of the project on the surrounding environment.

#### **BROOKLYN AND MANHATTAN BRIDGES**

##### **ATLANTIC AVENUE BRIDGE OVER LIRR – ATLANTIC BRANCH (BROOKLYN)**

The Atlantic Avenue Bridge is a 75 span viaduct located between Eastern Parkway and Georgia Avenue in Brooklyn. The bridge carries two traffic lanes each eastbound and westbound, divided by a center median. Two LIRR tracks (of the Atlantic Branch) run under and parallel to the bridge for its entire length. The bridge was built in 1942 by the Transit Commission. The bridge superstructure consists of steel stringers and floor beams. The substructure consists of steel piers and concrete bearing walls founded on spread footings. The Agency replaced the structural deck in 1985 with a new concrete deck slab overlay. The project will include rehabilitating the deteriorated steel members, concrete abutments and bearing walls; replacing the bridge wearing surface, drainage scuppers, and expansion joints; performing localized concrete deck repairs; and retrofitting the viaduct to meet current seismic requirements. Construction is expected to begin in early 2016.



Aerial View in 2009. Elevation Left Spans 38 -43 and Elevation Right Spans 20 – 34. (Credit: NYSDOT)

##### **BELT PARKWAY BRIDGES OVER PAERDEGAT BASIN, FRESH CREEK, ROCKAWAY PARKWAY, GERRITSEN INLET, MILL BASIN, BAY RIDGE AVENUE, AND NOSTRAND AVENUE (BROOKLYN)**

On a New York State-mandated scale from 1 to 7, these seven bridges possess a condition rating of “fair” (3.001 – 4.999). In 2012, the Paerdegat Basin Bridge was 3.340; the Fresh Creek Bridge was 6.915; the Rockaway Parkway Bridge was 6.644; the Gerritsen Inlet Bridge was 3.463; the Mill Basin Bridge was 3.179; the Bay Ridge Avenue Bridge was 3.625; and the Nostrand Avenue Bridge was 3.986. All are original structures, which were built beginning in 1939. While none of the bridges are in any immediate danger of structural failure, their reconstruction is required in order to maintain mobility and public safety on this vital artery.



## ACCOMPLISHMENTS & PLANNED PROJECTS



The Seven Belt Parkway Bridges.

Reconstruction of the seven bridges and their approaches on the Belt Parkway (over three local streets and four waterways) began in the fall of 2009. Group 1 (Paerdegat Basin, Fresh Creek, and Rockaway Parkway Bridges) is expected to be complete in fall 2014. Gerritsen Inlet Bridge is expected to start in spring 2013 and to be complete in summer 2017. Mill Basin Bridge is expected to start in summer 2014, and to be complete in fall 2018. Bay Ridge Avenue Bridge is expected to start in fall 2013 and to be complete in summer 2015. Nostrand Avenue Bridge is expected to start in Fiscal Year 2022.

During the past 65 years, traffic demand along the Belt Parkway corridor has increased dramatically. The opening of New York International Airport (now JFK Airport) in 1948, the development of suburban communities on Long Island post World War II, and the opening of the Verrazano-Narrows Bridge in 1964 have dramatically increased demand on the Belt Parkway. When the parkway first opened the two-way average daily traffic was about 20,000 vehicles per day. Presently it is about 150,000 vehicles per day.

Reconstruction of these bridges and their approach roadways is necessary to alleviate substandard conditions and bring these areas into compliance with current state and federal standards. These standards require wider lanes, safety shoulders, concrete median barriers, super-elevation of the roadway around curves, and realignment of the approach roadways to improve sight distances. The Department anticipates that these improvements will reduce the current accident rate on this section of the Belt Parkway by approximately 45%.

NYCDOT conducted research to provide recommendations and design guidelines for the treatment of the parkway corridor. The goals of the analysis were threefold: first, to propose improvements to the parkway to satisfy safety and accessibility standards; second, to preserve and re-establish the historic character of the parkway; and third, to retain and improve public access for all parkway users. The recommendations also include complementary designs of the seven bridges.

The research provided detailed recommendations on how common elements should be incorporated to achieve a consistent and historical character to the corridor. Items considered included trees and vegetation, lighting fixtures, railings and fences, design of bicycle and pedestrian paths across the bridges, as well as stonework detailing on bridge abutments with relief detailing on bridge parapets.

On July 18, 2006, the Art Commission (now known as the Public Design Commission) selected the Seven Belt Parkway Bridge reconstruction project for a Design Award in its 24<sup>th</sup> annual Excellence in Design Awards.

All of the bridges, except for the Bay Ridge Avenue and Nostrand Avenue Bridges, are located adjacent to the Gateway National Recreation Area, (GNRA) a division of the National Park Service. This bridge and highway program is in full compliance with New York City Department of Environmental Protection requirements for the initiation of a long-term plan that will increase wetlands, decrease pollution into the bay, and decrease the highway's footprint around the rim of Jamaica Bay. NYCDOT is also working closely with New York City Department of Parks and Recreation, the New York State Department of Environmental Conservation, Gateway National

## ACCOMPLISHMENTS & PLANNED PROJECTS

Recreation Area, the US Coast Guard, and the US Army Corps of Engineers to ensure compliance with all environmental protocols.

An upland mitigation project, to be administered by the New York City Department of Parks and Recreation, will include the planting of replacement trees to offset the number of trees being removed during the course of the bridge replacement project. The number of trees that will be planted in will be determined in accordance with the caliper rule for tree replacement.

In addition to mitigating environmental impacts along the Belt Parkway corridor, an off-site Tidal Wetland Mitigation project was performed. A Notice to Proceed was issued to the contractor with a start date of March 8, 2011. The plan focused on compensating for wetland losses at the waterway bridges by increasing and improving the quality of habitats at a nearby location. Approximately 2.3 acres of land at Floyd Bennett Field was cleaned of rubbish and debris and converted to tidal wetland area. The project was substantially completed during 2012.

The overall goal of the mitigation project was to restore selected areas of the Floyd Bennett shoreline with productive habitats, including unvegetated intertidal areas, vegetated intertidal areas restored with naturally occurring *Spartina* marsh, and high marsh habitats. A significant portion of the area involved the removal of approximately 20,000 cubic yards of previously filled areas and the restoration of the areas to productive vegetated and unvegetated wetland resources.

Restoration of the area, specifically, the removal of existing fill and debris from the Floyd Bennett Field Mitigation site has increased the functional value of the area. This area is an important contributor to primary production and breakdown of organic materials. In addition, algal communities often found in these areas are producers, and provide a food source for snails and other benthic organisms, which in turn, provide food sources for larger animals that forage along the shorelines of Jamaica Bay.

Planting at the intertidal wetland and the high marsh zones was completed in summer 2011. The installation of cabled concrete erosion control revetment was started in June 2011 and completed in July 2011. In fall 2012, all replacement and final upland tree plantings were completed. Monitoring of the wetland mitigation project, as mandated by the New York State Department of Environmental Conservation, is expected to be complete in early 2017.



Tidal Wetland Mitigation Site. On June 16, 2011, Work Stopped When Ordnance was Found During Excavation at the Mitigation Site, Floyd Bennett Field. The Bomb Squad was On-Site to Inspect and Remove the Items, Which Were Determined to be Inert World War II Era Torpedoes That Were Buried at the Site.

The old Paerdegat Basin Bridge was a 692-foot long, 13 span, multi-girder, simple supported steel superstructure, supported on reinforced concrete pier cap beams and abutments supported on reinforced concrete piles. The bridge has two 34-foot wide roadways carrying three lanes of traffic in each direction; with a 3-foot safety walk on the north side, a 4-foot wide center median/barrier, and an 8-foot wide south pedestrian/bicycle sidewalk. The existing structure and immediate approaches will be demolished and replaced by two new bridges and new approach roadways on split alignments. The existing structure was permanently closed to traffic on December 20, 2012, upon opening of the new westbound structure. Demolition of the existing structure will be completed in early 2013.

The old bridge consisted of 12 cast-in-place concrete bents. Two navigation channels cross under the bridge. At one of these channels (bent number 7) a concrete pier was damaged.

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

Because of this damage and other structural concerns, the Paerdegat Basin Bridge has been under continuous monitoring since September of 2004.

The replacement bridges will consist of two trapezoidal steel box girder structures: the 825-foot, 3 span westbound bridge, north of the existing structure, and the 1,227-foot, 5 span eastbound bridge, south of the existing structure, remaining at 28 feet over the navigable channel. Both bridges will have a 36-foot wide roadway with a 12-foot wide right shoulder. The eastbound bridge will have a 4-foot wide left shoulder, while the westbound bridge will have a 10-foot wide left shoulder. The southern structure will carry eastbound traffic while the northern structure will accommodate westbound traffic. Both the horizontal and vertical alignments will change resulting in improved sight distances on the bridge and its approach roadways. The bridge carrying eastbound traffic will also have a dedicated pedestrian/ bicycle path along the south side. The pedestrian/bicycle path will be separated from traffic lanes by a concrete barrier on the bridge, and by a 15-foot wide grass mall on the approach roadways.



Old Paerdegat Basin Bridge.

The Fresh Creek Bridge was a 264.5 foot, 5 span, multi-girder, simple supported steel superstructure, supported on pre-cast concrete columns founded on four reinforced concrete piers on concrete piles with concrete gravity abutment walls on timber piles. One navigation channel crosses under the bridge. The bridge had two 34'-2" wide roadways, a 5-foot wide center median/barrier, and a 10-foot wide south sidewalk. The parkway, east and west of the bridge, has a 10-foot wide bicycle/pedestrian path on the south side. The existing structure and immediate approaches were demolished in spring 2012, and the replacement structure will be fully opened in 2013.

The replacement bridge will be a 316-foot, 3 span structure; the new structure will have only two support piers, resulting in a wider channel. The bridge deck and approaches will be widened to 126 feet from the existing 86 feet to accommodate three 12-foot lanes in each direction, 12-foot wide shoulders, and a 12-foot wide bicycle/pedestrian path, separated from the traffic lanes by a barrier system. The profiles of the approach roadways and bridge structure accommodate stopping sight distances for a design speed of 60 miles per hour. The proposed construction will result in improved landscaping on the bridge approaches. The existing pedestrian and bicycle pathway will be maintained and open at all times during construction.



Fresh Creek Bridge in 2002. (2002 Credit: NYSDOT)

The Rockaway Parkway Bridge was a 150-foot, 4 span, multi-stringer, simple supported steel superstructure, supported on steel cap beams on concrete filled steel pipe columns, and reinforced concrete abutment walls supported by concrete pile foundations. The bridge has two

## ACCOMPLISHMENTS & PLANNED PROJECTS

34'-2" wide roadways, a 5-foot wide center median/barrier, and a 10-foot wide south sidewalk. The existing structure and immediate approaches were demolished in fall 2012, and the replacement structure will be fully opened in 2013.

The replacement bridge will be a single span structure to improve visibility along Rockaway Parkway. The new structure will be built in the same alignment as the existing bridge. The bridge deck will be widened to 109 ½ feet from the existing 84 feet to accommodate three 12-foot lanes with a 12-foot wide right shoulder and 4-foot left shoulder in each direction, including 5 ½ feet for median and parapet width. The right shoulder lane on each approach will be 10 feet (while the width of the right shoulders on the bridge structure will be 12 feet), with the other dimensions the same width as those on the bridge. In addition to reconstruction of the bridge, four access ramps will also be reconstructed as will Rockaway Parkway in the vicinity of the Belt Parkway.



Rockaway Parkway Bridge in 2002. (Credit: NYSDOT)

A Notice to Proceed for the reconstruction of the Group 1 bridges was issued to the contractor with a start date of October 26, 2009.

In 2010, 2011, and 2012, work on the Paerdegat Basin bridges progressed on the construction of the new eastbound and westbound bridges, and the project is currently in Stage IV of the proposed construction sequence. Various construction milestones have been completed to date, including the temporary relocation of the bicycle/pedestrian path which runs along the eastbound roadway; the removal of the existing median and installation of temporary roadway lighting; the replacement of the existing sludge force main within the project area using open cut and directional boring methods; the installation of earth embankments for the new eastbound and westbound approach roadways; the installation of new drainage structures and pipe, and the opening of both the new eastbound bridge (including the new bicycle/pedestrian path), and the new westbound bridge.

All substructure work for the new eastbound bridge, including the pier and abutment footings, pier columns, pier caps and abutments, was completed during the spring of 2011. The erection of the 51 sections of trapezoidal steel box girders was completed during the summer and was followed by nine concrete deck placements in the early fall. Installation of the concrete barrier sections and modular joints were completed during the fall, as was the construction of the eastbound approach roadway sections, drainage and electrical work. The new eastbound bridge, including the new bicycle/pedestrian path, was formally opened to traffic on December 19, 2011. Traffic was switched from the existing westbound bridge to the existing eastbound bridge on December 29 to enable construction of the new westbound bridge.



February 2011: Pumping Concrete at Paerdegat Basin Cofferdam for Pier No.3. April 2011: Setting Tub Girder Sections at Eastbound Bridge Between West Abutment and Pier No. 1. June 2011: Hammer Being Positioned to Drive Steel Sheet Piling for Cofferdam at Westbound Bridge – Pier # 2. July 2011: Setting Final Tub Girder Section at East Abutment.



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Paerdegat Bridge in August 2011. (Credit: Daniel Hom) Placing Concrete at Headers for Modular Joints in November 2011. November Aerial View. December 2011: New Eastbound Bridge.

For the new westbound bridge, cofferdams were constructed in 2011 and pile installation commenced for the construction of the new bridge piers and abutment substructures. All substructure work for the new westbound bridge, including the pier and abutment footings, pier columns, pier caps and abutments, was completed during the summer of 2012. The erection of the 33 sections of trapezoidal steel box girders was completed during the summer and was followed by five concrete deck placements in the early fall. Installation of the concrete barrier sections and modular joints were completed during the fall, as was the construction of the westbound approach roadway sections, drainage and electrical work. The new westbound bridge was formally opened to traffic on December 19, 2012. Final demolition of the existing bridge commenced at the end of 2012 and is scheduled to be completed in early 2013.



Paerdegat Basin Bridge in January 2012: Removal of Existing Westbound Lanes. February 2012: North Side Cofferdam and Pier for New Westbound Bridge. Driving Piles for Temporary Work Trestles on the North Side for the Future Westbound Bridge. April 2012: Galvanized Steel Rebars for Westbound Pier 1 Cap Beam. May 2012: Pumping Concrete for Footing of Westbound Bridge Pier 2 Cofferdam. Galvanized Rebars for Footing and Piers Shown. June 2012: Erecting Steel Falsework Temporary Supports for the Westbound Paerdegat Tub Girders. Unloading Tub Girder Section for Westbound Paerdegat Basin Bridge at Contractor's Storage Yard. October 2012: Finished Concrete Deck on Westbound Paerdegat Basin Bridge. Finishing Machine and Mason's Bridge at Left. November 2012.

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Site Visit in September 2012: Acting Director of Bridge Preventive Maintenance Paul Schwartz, Assistant Civil Engineer Evgenia Campbell, Interim Director of In-House Design Ferdinand John, and Civil Engineers Jagdish Patel, Gregory Novofastovsky, and Serge Rigaud.

To date, various construction milestones have been completed on the Fresh Creek Bridge, including the removal of the existing median, the placement of temporary median asphalt pavement, and the installation of temporary roadway lighting. During 2011, the contractor's Value Engineering proposal to utilize a temporary bridge to facilitate the reconstruction of the existing bridge was implemented. The temporary bridge was opened to traffic in March and traffic was shifted to allow for the demolition of the south half of the bridge during the summer. As demolition was completed, deep foundation cofferdams were constructed in advance of the pile installation work, which was completed in late summer. Substructure work, including the pier and abutment footings, pier columns, pier caps and abutments, proceeded accordingly through the fall and were completed in advance of steel erection. All steel was erected during November and concrete deck placements continued through the winter of 2011-2012 in tight adherence to the Agency's winter concrete guidelines and procedures. Relocation of the existing sludge force main within the project area, using open cut and jacking methods, was also completed during 2011, as was the installation of permanent drainage structures and outfalls. The contractor also continued the installation of new permanent lighting, and completed the lead abatement of the existing superstructure steel in advance of demolition.



Fresh Creek Bridge March 2011: Westbound Temporary Bridge at Left, Existing Bridge at Right. July 2011: Concrete Pouring in Piles. November 2011: The Remaining Bridge Carrying East Bound Traffic and Temporary Bridge Carrying West Bound Traffic. (Credit: NYSDOT) December 2011: Commenced Installation of Winter Tent Enclosure for Stage IIB Concrete Bridge Deck Placement. (Tent Credit: Daniel Horn)

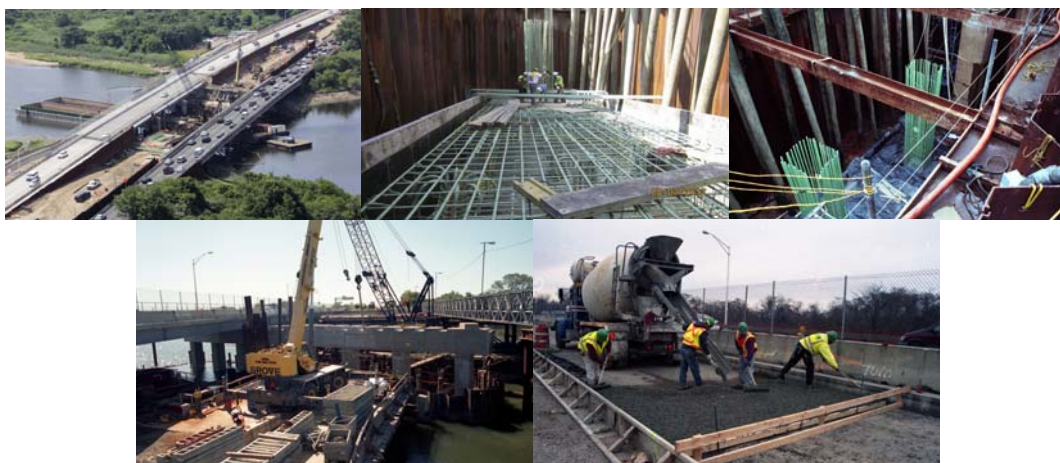
On March 24, 2012, the new eastbound side of the bridge, including the new bicycle/pedestrian path, was formally opened to traffic. Demolition of the final half of the existing bridge continued and was completed in the spring. As demolition was completed, deep foundation cofferdams were constructed in advance of the pile installation work, which was completed in the spring, followed by the substructure work, which was completed in the summer. Steel erection commenced and was completed in the fall, and concrete deck placements will continue through the winter in accordance with specified winter concrete guidelines and procedures. The new westbound side of the bridge is scheduled to open to traffic in winter 2013.



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Fresh Creek Bridge in February 2012: Concrete Placement. Fresh Creek Bridge in April 2012: Facing East. New Eastbound Approach Roadways, Bridge Deck, Bicycle/Pedestrian Walkway on Right. Temporary Bridge for Westbound Traffic at Left. Old Bridge Demolition at Center. Fresh Creek Facing East. Stage 3 Demolition of Piers of Old Fresh Creek Westbound Bridge. Workers Cutting off Excess Steel Pipe Casing for Cast-in-Place Concrete Piles at Future Westbound Bridge. Temporary Bridge at Left.



July 2012: Temporary Westbound Bridge at Right. New Eastbound Bridge With Pedestrian/Bicycle Walkway at Left. Work Barges in Channel for Pier Construction. August 2012: Pier #1 Westbound. Setting Rebar for Piers and Footing Inside the Cofferdam. September 2012. November 2012.

In 2010, significant progress was made in moving the Rockaway Parkway Bridge through Stage 1 and into Stage 2A. Stage 1 activities that were completed included the removal of the center median slab and curb; the installation of a temporary center median barrier; the paving of the center median and right shoulders to create the additional travel lanes necessary to allow for construction shifts; the installation of temporary street lighting in the center median and along the shoulders; the installation of construction fences and tree protection; the removal of existing trees as specified in the contract; and the installation of soil stabilization and erosion control measures. The existing water main along the east side of Rockaway Parkway was also relocated.

In 2011, construction moved through Stages 2A and 2B, and into Stage 3. Stage 2A began with the shift of traffic to the south side on the approaches and over the bridge to create a work zone for the removal of the north portion of the existing Rockaway Parkway Bridge. Work on the bridge and approaches included the installation of temporary support steel; and the removal of existing deck and support steel. In addition, the widths of the existing westbound entrance and exit ramps were reduced to allow for construction of the new portion of the highway along the west bound shoulder. Excavation, fill and grading to elevation for the new north section of the bridge on the northeast and northwest slopes between the main line and the two ramps was completed and approach pavement sections were placed. The contractor completed the excavation and removal of the existing substructure and the installation of piles and new abutments. Steel erection was completed during overnight hours in early August 2011, and the new concrete bridge deck was placed in late September. Barrier and approach roadway construction, including drainage and electrical work, continued through the fall. The northern section of the new bridge was opened to traffic on December 8 and the traffic pattern shifted to Stage 3 to replace the center portion of the structure. The new ramps were opened in sections with the northern sides of the ramps (Stage 2A) opening in the early summer and the southern

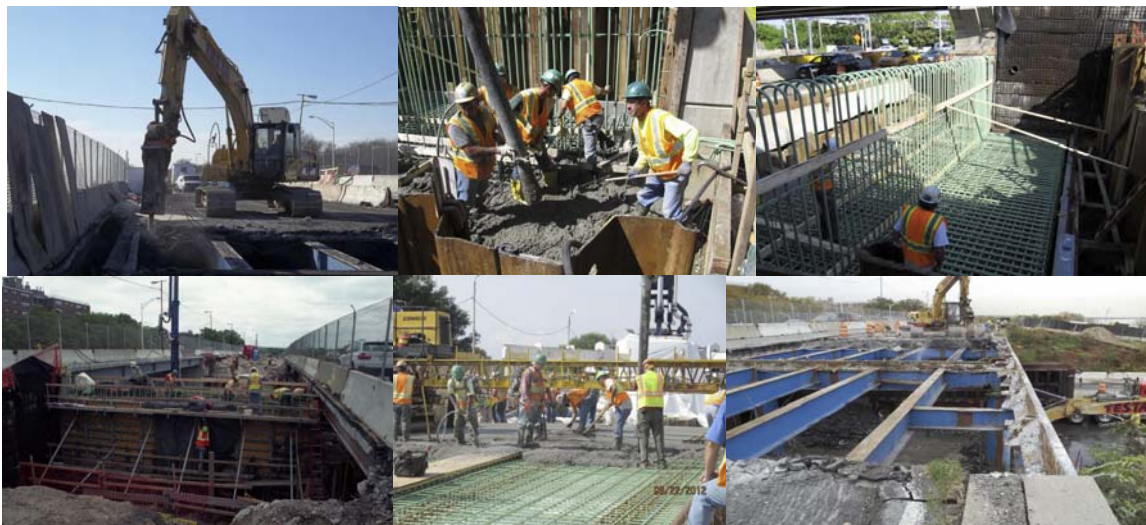
## ACCOMPLISHMENTS & PLANNED PROJECTS

sides of the ramps (Stage 2B) opening in line with the December opening of the bridge and the shift to Stage 3. Work also continued on the installation of new street lighting around Canarsie Circle to the south of the bridge.



May 2011: Preparing Rebar for Northeast Abutment Footing. October 2011: Pouring Concrete for Northeast Approach. Aerial View in November 2011.

In 2012, construction moved through Stage 3 and into Stage 4. Excavation, fill and grading to elevation for the new center section of the bridge along the main line were completed and approach pavement sections were placed. The contractor completed the excavation and removal of the existing substructure and the installation of piles and new abutments in the spring. Steel erection was completed during overnight hours in July 2012, and the new concrete bridge deck was placed in August. Approach roadway construction, including drainage and electrical work, continued into the fall. The center section of the new bridge was opened to traffic on October 18, and the traffic pattern shifted to Stage 4 to replace the southern section of the structure and the ramps on the south side of the parkway. The final section of the existing bridge was demolished in the fall, and excavation, fill and grading to elevation for the new southern section of the bridge between the main line and ramps commenced. Excavation and removal of the existing substructure and the installation of piles and new abutments will continue through winter 2012 - 2013. The final section of the new bridge and ramps are scheduled to open to traffic in spring 2013.



Rockaway Parkway Bridge in January 2012: Stage III Deck Removal and Concrete Demolition. May 2012: Pumping and Vibrating Plastic Concrete Into West Abutment Forms. June 2012: Rebars for Footing and East Abutment Wall of Eastbound Bridge. August 2012: Placing Deck Concrete at Eastbound Bridge. October 2012: South Side of Old Bridge Under Demolition, Facing East. Eastbound Traffic on New Bridge at Left.

Milestone A consists of all work required to complete the reconstruction of the Paerdegat Basin, Fresh Creek, and Rockaway Parkway Bridges, including all roadway sections and ramps, within the limits of the construction, adjacent to and between the bridge structures. The contract provides for an incentive of \$35,000 per day for each day that milestone A is finished early, with a



## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

maximum incentive of \$14.98 million. There is a similar disincentive if the milestone date is exceeded, with no maximum.

On October 29, 2012, the New York Metropolitan area was impacted by Hurricane Sandy, causing flooding, loss of power and damage to the bridge and roadway infrastructure. While this damage occurred throughout the City, some of the hardest hit areas were the various highways near the waterfront throughout the City, including the section of the Belt Parkway that is under construction. The damage included: roadway and pedestrian/ bicycle paths that were completely covered with storm wash up and debris and rendered impassable; concrete bridge elements and pedestrian/bicycle paths that were undermined or washed away, including portions of the pedestrian/bicycle paths that were damaged beyond repair or destroyed by the high winds and storm surge; maintenance and protection of traffic devices, including concrete barriers and construction signs, that were displaced or blown away; erosion and sediment control facilities, including the turbidity curtain, silt fence and straw bales, that were displaced or washed away. At Floyd Bennett Field, the established site grades were overwhelmed by the storm surge, ground protection and slope stabilization measures were displaced, and the plantings were uprooted and washed away.

The existing Gerritsen Inlet Bridge is a 520-foot long, 9 span, steel girder and reinforced concrete beam superstructure, supported on reinforced concrete piers, and abutments supported on timber piles. The existing structure and immediate approaches will be demolished and replaced.

The replacement bridge will consist of a 496-foot, 3 span bridge, aligned 10'-6" north of the centerline of the existing structure, and remaining 35 feet over the navigable channel. The bridge will have a 36-foot wide roadway with a 12-foot wide right shoulder and a 4-foot wide left shoulder in each direction. The eastbound side will carry a dedicated pedestrian/bicycle path along the south fascia. Construction is scheduled to begin in early 2013.



Gerritsen Inlet Bridge in 2002. (Credit: NYSDOT) Proposed Gerritsen Inlet Bridge.

Opened on June 29, 1940, the Mill Basin Bridge is adjacent to the Jamaica Bay Wildlife Refuge and the Gateway National Recreation Area. It is the only movable bridge on the Belt Parkway. The current clearance over Mean High Water is 35-feet. When the Mill Basin Bridge was constructed during the first half of the 20<sup>th</sup> century, New York City's inland waterways were among the most heavily navigated thoroughfares in the country. However, as maritime traffic in New York City steadily decreased since the mid-1960s, the need for movable bridges lessened as well. In 1941, during its first full year of operation, the Mill Basin Bridge was opened 3,100 times; by 1953, that figure decreased to 2,173; by 2012, the number of openings declined further to a total of only 277 openings.

In addition, significant and costly traffic congestion results from the operation of this outmoded drawbridge. In 2011, the Mill Basin Bridge carried 139,835 vehicles per day. The average opening and closing time for the bridge (and others like it) is ten minutes. Thus, this structure's operation has a negative and significant effect on the efficiency of New York City's vehicular traffic flow.

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The existing Mill Basin Bridge is 864-feet long and 14 spans, including double movable leaf bascule spans and a steel superstructure, supported on reinforced concrete piers on timber piles, and abutments supported on pre-cast concrete piles. The existing structure and immediate approaches will be demolished and replaced.

The replacement will be a 2,645-foot, 17 span fixed bridge. It will consist of a steel composite superstructure and reinforced concrete substructure on piled footings, and will be constructed on a new alignment set on the north side of the existing bridge and partially overlapping with the existing bridge. The new bridge and approach will have three 12-foot wide traffic lanes, a 12-foot wide right shoulder on the bridge, a 10-foot wide right shoulder on the approach, and a minimum left shoulder in each direction. The eastbound side will carry a dedicated pedestrian/bicycle path along the south fascia. The new bridge will be a fixed structure with a 60-foot vertical clearance over Mean High Water, obviating the need for opening and closing the structure to accommodate tall vessels. The channel will remain navigable during construction, and the clear channel width will remain the same after the new structure is in place. A new fender system will be installed to protect the bridge substructure from marine traffic.



Current and Proposed Mill Basin Bridge. Open Bridge.

The existing Bay Ridge Avenue Bridge is a 58-foot long, single span, reinforced concrete deck on a multi-girder system superstructure over Bay Ridge Avenue. The superstructure is supported by concrete gravity type abutments on pile foundations. The underpass is access to the NYCDEP Owl's Head Waste Treatment Plant. The existing superstructure will be demolished and replaced.

The replacement bridge superstructure will consist of pre-stressed concrete box beams and a reinforced concrete slab. The bridge will have three 12-foot wide lanes in the eastbound direction and two 12-foot wide lanes separated by a 4-foot wide painted stripe flush median in the westbound direction. There is no pedestrian/bicycle path on the structure. The existing bridge will be reconstructed using pre-cast deck sections. The clearance will be increased to 14-feet 6-inches, which removes the need for clearance signs currently posted for a substandard condition and will obviate the need for underdeck wood shielding.

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Bay Ridge Avenue Bridge in 2011. (Credit: NYSDOT) Proposed Bay Ridge Avenue Bridge.

The existing Nostrand Avenue Bridge is a 140-foot long, 3 span, multi-girder superstructure, consisting of a concrete deck with an asphalt overlay over Nostrand Avenue. The superstructure is supported by concrete pier columns with a steel cap beam, and abutments on concrete filled steel pile foundations. The existing structure and immediate approaches will be demolished and replaced.

A computerized traffic simulation model was developed to analyze traffic conditions in connection with the Division's plans to reconstruct these seven bridges on the Belt Parkway. This model was a useful tool for understanding the impact of construction on the traveling public and helped us determine appropriate construction schedules. It enabled us to rapidly evaluate the impact of a variety of combinations of construction staging.

### BEVERLY ROAD BRIDGE OVER BMT SUBWAY (BROOKLYN)

This bridge is a three span structure and was built in 1907. The superstructure consists of two built-up through girders, floor beams and stringers. The stringers are encased in a concrete jack arch deck. The superstructure is supported by concrete gravity wall abutments and piers. The project will involve the replacement of the existing deck with a new floor system using a concrete exodermic deck, and the repair of the existing primary members. The work will also include cleaning and painting the steel, and repairing the bridge seat and deteriorated concrete abutments. The bridge will be constructed in three stages and will remain open to traffic and pedestrians at all times. This project, in the final design stage and currently on hold, is expected to begin in early 2016, and is expected to be completed in early 2018.



Beverly Road Bridge in 2009. (Credit: NYSDOT)

### HENRY HUDSON PARKWAY OVER 72<sup>ND</sup> STREET VIADUCT (MANHATTAN)

The viaduct was originally constructed in 1937. Since then, several rehabilitation projects were performed, including deck replacement and structural steel repair at various locations. The

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

reconstruction project will consist of repairs of the deck and steel elements of the viaduct superstructure in ten spans from West 72<sup>nd</sup> Street to West 82<sup>nd</sup> Street. The deck repairs will include top pavement replacement, concrete barrier repairs and deck joints replacement. The steel repairs will include installation of reinforcements to the deteriorated girders, columns, connections and bearings. The deck top work will be performed in stages to minimize the parkway closures. Construction is expected to begin in 2015.



Aerial View of the Viaduct.

### **HILL DRIVE BRIDGE (TERRACE BRIDGE) OVER PROSPECT PARK LAKE (BROOKLYN)**

The landmark Hill Drive Bridge was built in 1890, and was designed by Calvert Vaux. It was previously known as the Breeze Hill Bridge. The existing Parks bridge is a three span simply supported steel girder/beam structure, with the center arch span crossing Prospect Park Lake, and the other two spans consisting of underground masonry cellular structures with multiple interior masonry-bearing walls and non-composite concrete deck and concrete sidewalk. The substructure of the bridge consists of solid gravity masonry abutments with U-type wing walls.

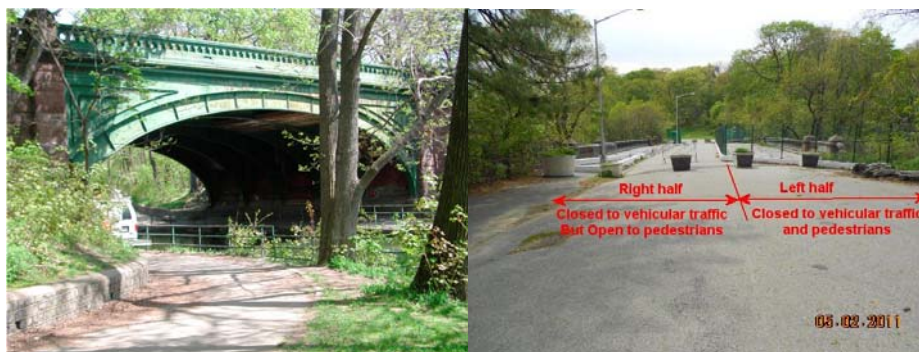
This project will include the replacement of the existing masonry cellular abutments with new reinforced concrete abutments clad with existing stone and new brick masonry; the removal, storage, and reinstallation of the existing stone wing walls with a new reinforced concrete core; the replacement of the existing stringers and floor beams with new steel stringers; the reinforcement of the existing arch girders with new cover plates; the reinstallation of the steel arch girders at their current locations to replicate original construction; and the replacement of the existing masonry arches spanning between floor beams by masonry cladding on the underside of the new arched concrete deck. The concrete deck, approaches, sidewalk, and roadway will be replaced within the project limits.

The ornamental cast iron and stones will be rehabilitated and reinstalled, replicating all the historic features and aesthetics of the original bridge. New bridge lighting and drainage systems will be installed. The park landscape will be restored, and trees identified by the Prospect Park Alliance as rare and/or historic shall remain undisturbed during construction.

The project to reconstruct the bridge has been suspended until such time as Parks funding is available. Repairs requiring immediate attention are performed by the When and Where contractor. This bridge is closed to vehicular traffic.



## ACCOMPLISHMENTS & PLANNED PROJECTS



Hill Drive Bridge in 2001. End Approach in May 2011: The Bridge is Closed to Vehicular Traffic. The Left Half of the Bridge is Closed to Pedestrians. (Credit: NYSDOT)

### MARINE BORER REMEDIATION (MANHATTAN & BROOKLYN)

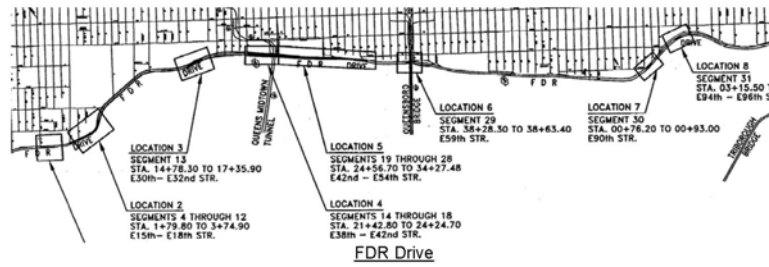
Marine borers pose an immediate and serious danger to the thousands of piles and other structures of timber built in the marine environment. In New York Harbor, as the water quality improved due to many years of clean-up efforts, marine borer (limnoria, teredo, etc.) activity has increased significantly in recent years. The recent inspections of timber structures by various local agencies (such as The Port Authority of NY & NJ, NYS Department of Transportation, NYC Department of Sanitation, and NYC Economic Development Corporation) indicate increasing damage to their structures resulting from marine borer activity. These agencies are implementing measures to protect the structures against marine borers.



Marine Borer – Limnoria Species. Marine Borer – Teredo Species. Teredo Damage (Holes up to ¼" Diameter).

In October 1999, the Department began a study to assess the existing 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 (from East 15<sup>th</sup> to East 96<sup>th</sup> Street) Drive, 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. An updated underwater inspection was performed within the limits of the proposed contract in 2009.

## ACCOMPLISHMENTS & PLANNED PROJECTS



Project Locations.



Severe Marine Borer Infestation in Timber Cribbing of Carroll Street Bridge and Moderate Marine Growth Below Waterline on the Ocean Avenue Pedestrian Bridge in 2009. (Credit: NYSDOT)

The construction project will be performed almost entirely underwater and will include barrier wrapping (placement of plastic barrier wrap around a timber pile to prevent marine borers from settling on and penetration into exposed wood); pile encasement (concrete encasement of selected severely damaged piles to reinforce and protect them from marine borers); pile posting (cutting off deteriorated upper portion of pile and replacing it with a new treated timber post); pile cap encapsulation (encapsulation of submerged timber pile caps and timber fascia with plastic lumber and synthetic mastic); bracing replacement (replacement of structural timber bracing with new treated lumber); timber removal (removing timber stays, bracing and formwork located at the top of the piles); installation of additional two-way bracing (installation of two-way bracing using tread lumber to upgrade the strength of piles by reducing the unbraced length); placement of light

## **ACCOMPLISHMENTS & PLANNED PROJECTS**

weight concrete fill (filling in locations where the distance from underside of the platform deck to the top of the mudline is less than one meter creating insufficient headroom for divers to wrap or jacket piles); and superstructure timber replacement (timber pile caps, railing members and other timber superstructure elements along with severely corroded steel correction hardware located above the high water line will be replaced in kind). A Notice to Proceed was issued to the contractor with a start date of April 2, 2012. The construction work is expected to be complete in April 2016.

### **RIVERSIDE DRIVE BRIDGE OVER WEST 158<sup>TH</sup> STREET (MANHATTAN)**

The Riverside Drive Viaduct is located between West 153<sup>rd</sup> Street and West 161<sup>st</sup> Street. It is approximately 1,924 feet long and has 77 spans. This viaduct consists of intermittent straight portions, and six curves of different radii. The bridge carries four lanes (two each way). The superstructure is made of two types of framing. The northern part is a steel bent type structure, whereas the southern part is a steel cantilever type structure with half of the deck over Amtrak railroad tracks. The area below the entire bridge is utilized for storage of Agency vehicles and roadway maintenance materials. Construction is expected to begin in 2017.



Riverside Drive Bridge in 2010. (Credit: NYSDOT)

### **TRANS-MANHATTAN EXPRESSWAY CONNECTOR RAMP FROM THE HARLEM RIVER DRIVE (HARLEM RIVER DRIVE RAMP TO GEORGE WASHINGTON BRIDGE OVER HARLEM RIVER DRIVE SOUTHBOUND) (MANHATTAN)**

The Trans-Manhattan Expressway Connector Ramp is an elevated viaduct that consists of a multi-span steel superstructure supporting a concrete deck. The ramp connects the Trans-Manhattan Expressway to the Harlem River Drive and it was built in 1939. The project will rehabilitate the bridge steel and concrete components. Construction is expected to begin in summer 2014.



Trans-Manhattan Expressway Connector Ramp in 2009. (Credit: NYSDOT)



## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

### **5<sup>TH</sup> AVENUE BRIDGE OVER LIRR & SEA BEACH NYCT (BROOKLYN)**

The bridge is a four span concrete-encased steel girder and floor beam structure, built in 1914. The reconstruction project will include replacement of the superstructure, rehabilitation of the abutments and wingwalls, reinforcement of existing piers, construction of new reinforced concrete sidewalks, approach slabs, new concrete parapet, and bridge fence. Construction is expected to begin in May 2019, and is expected to be complete in June 2021.



5<sup>th</sup> Avenue Bridge in 2011. (Credit: NYSDOT) Aerial View in 2009.

### **EAST 8<sup>TH</sup> STREET ACCESS RAMP (GUIDER AVENUE RAMP TO BELT PARKWAY) OVER BELT PARKWAY (BROOKLYN)**

The East 8<sup>th</sup> Street access ramp (Guider Avenue ramp), built in 1942, provides vehicular access to the westbound Belt Parkway from Coney Island Avenue and the surrounding area, south of the Belt Parkway. The bridge also serves pedestrian traffic crossing the Belt Parkway. The bridge was a four span, simply supported, multi-girder steel superstructure with a reinforced concrete deck. The abutments and wingwalls are also reinforced concrete, as are the three piers. The entire substructure is supported on reinforced concrete pile caps and steel piles. The project included the replacement of the superstructure with new steel stringers, a cast-in-place deck including a new sidewalk, a new steel bridge railing with protective screen fencing, and the replacement of the tops of the existing pier columns and abutments. In addition, the piers were modified by adding two columns on new steel pile foundation at each pier, and underdeck and ramp lighting was installed, as well as new storm drainage systems. The ramp was closed to both vehicular and pedestrian traffic for the duration of the reconstruction. Traffic was diverted to local streets.



East 8<sup>th</sup> Street Bridge Aerial View in 2009.

A Notice to Proceed for the project was issued to the contractor with a start date of August 10, 2009. The bridge was closed to vehicular and pedestrian traffic on February 16, 2010. A temporary detour route was implemented, routing traffic via local streets to access the westbound Belt Parkway. The bridge deck demolition work began in March 2010 and was completed in June 2010. The north and south abutments were partially removed and were reconstructed. New pile



## ACCOMPLISHMENTS & PLANNED PROJECTS

foundations were installed at piers 1, 2, and 3. The new reinforced concrete bridge columns were completed in February 2011.

The structural steel for the new bridge superstructure was fabricated off site, along with new bridge bearings. The bridge bearings were delivered to the site in March of 2011. The structural steel was delivered in June 2011, and its installation commenced immediately. This was followed by the installation of the bridge deck, which was completed in August 2011. The north and south approach roadways were completed in November 2011. The bridge opened to vehicular traffic on December 2, 2011. The reconstruction of the bridge was substantially completed on May 4, 2012.



2011: Installation of Steel Girders over the South Service Road and Eastbound Belt Parkway. August 2011: Concrete Deck Placement. November 2011: Completed North and South Approach Roadways. December 2, 2011: Bridge Open to Traffic.



East 8<sup>th</sup> Street Access Ramp – West Side View.

### 17<sup>TH</sup> AVENUE AND 27<sup>TH</sup> AVENUE PEDESTRIAN BRIDGES OVER BELT PARKWAY (BROOKLYN)

The 17<sup>th</sup> Avenue and 27<sup>th</sup> Avenue Bridges are three-hinged, steel arch girder bridges with granite-faced concrete abutments and Art Deco steel railings. These two pedestrian overpasses have deteriorated over time, and due to low vertical clearance, have suffered impact damage from overheight vehicle traffic on the Belt Parkway below. In addition, these structures are not in compliance with American Disability Act (ADA) requirements.

The 17<sup>th</sup> Avenue Bridge provides the only pedestrian access to the shoreline promenade from the

## ACCOMPLISHMENTS & PLANNED PROJECTS

surrounding Bath Beach and Bensonhurst communities. The 27<sup>th</sup> Avenue Bridge provides the main pedestrian access from the community to Dreier Offerman-Calvert Vaux Park.

In this project, the overpasses at 17<sup>th</sup> and 27<sup>th</sup> Avenues will be completely replaced. The structures will be designed to current codes and standards and all substandard features will be eliminated. Additionally, as the existing bridges were constructed under the Robert Moses era Master Plan for NYC, the proposed bridge designs will follow the Shore (Belt) Parkway Design Guidelines which were developed in November 2006, in order to preserve and reestablish the historic character of the parkway for drivers and pedestrians while enhancing and strengthening the visual cohesiveness of the greenspace connected to the adjacent park and recreation land. Construction is anticipated to begin in July 2014, and is expected to be complete in July 2016.



17<sup>th</sup> Avenue Bridge. 27<sup>th</sup> Avenue Bridge in 2012.

### EAST 78<sup>TH</sup> STREET PEDESTRIAN BRIDGE OVER FDR DRIVE (MANHATTAN)

The old bridge was a nine span reinforced concrete structure over the FDR Drive. The bridge provides access from East 78<sup>th</sup> Street to the East River esplanade by going over the entrance ramp to the southbound FDR Drive and six travel lanes of the Drive. There is a ferry house on the East River Esplanade which was used for storage for the old ferry when the bridge was built in 1940. The bridge was supported on the ferry house structure on the Esplanade side. This project will include the removal of the entire superstructure; concrete deck, floor beams, parapet, girders, railing, protective screening, encased steel beams in the ferry house, existing concrete stair case on the esplanade side, existing substructure of piers, and ramp walls and wall of the ferry house, as well as a portion of the pier foundations below grade. The new fourteen span bridge includes steel piers with caisson foundations, a ramp retaining wall, and new superstructure using welded structural tubing, vertical steel railing, and horizontal hand rails, as well as protective fencing. A new cast-in-place reinforced concrete deck was installed. The west ramp is enclosed with a stone masonry wall to match the existing park wall. The new bridge complies with ADA regulations.

During construction, pedestrian traffic was detoured to the 71<sup>st</sup> and 81<sup>st</sup> Street pedestrian bridges. A Notice to Proceed for the project was issued to the contractor with a start date of July 12, 2010. The bridge was closed to pedestrians on October 19, 2010.



Old East 78<sup>th</sup> Street Bridge. February 2011 at the East Ramp Area: Installing Interim Steel Sheetting on East Side, at Pier Footings # 10 and 11. May 2011.



## ACCOMPLISHMENTS & PLANNED PROJECTS

In summer 2011, construction of the ramps was in progress. On the night of July 31, 2011, the old bridge and the piers supporting the structure were demolished and moved onto a barge on the East River between 2 AM and 7 AM. To speed the process, temporary support columns, brackets and hydraulic jacks were installed in advance, and the superstructure and pier walls were saw cut. Both the side and main spans were removed using a 500 ton crane.



Removal of the Old Bridge in July 2011.

On the night of October 23, 2011, the new steel for the main span of the bridge was installed, using a crane, between 2 AM and 7 AM. It had previously been assembled in the steel fabricator's yard and transported to the site on barges. The reconstruction of the bridge was substantially completed on January 20, 2012.



The New Bridge Span in Transit from Just North of Philadelphia to Jersey City. It was Then Loaded on the Barge and Brought up the East River to the Site. The Span Size was 26' x 135' and Weighed Approximately 80 Tons.  
New Main Span Steel Erection in October 2011. New West Ramp Masonry Wall.



New East 78<sup>th</sup> Street Bridge in January 2012.

### WEST 79<sup>TH</sup> STREET BRIDGE OVER AMTRAK (MANHATTAN)

The West 79<sup>th</sup> Street Bridge over Amtrak, built in 1937, is a single span structure, with steel, non-composite girders and a reinforced concrete slab. The bridge carries two lanes of traffic in each direction and has a sidewalk on each side. The project work will include the removal of the existing concrete deck, sidewalks and the pedestrian safety barrier. The deck will be replaced with a 9.5 inch concrete slab with integral wearing surface, a new sidewalk and safety barriers on a rehabilitated superstructure. Construction is expected to begin in March 2017.

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***



West 79<sup>th</sup> Street Bridge Over Amtrak  
in 2010. (Credit: NYSDOT)



## **ACCOMPLISHMENTS & PLANNED PROJECTS**

### **BRONX, QUEENS, AND STATEN ISLAND BRIDGES**

**TEN CULVERTS: GALLOWAY AVENUE OVER MARIANNE STREET, FOREST AVENUE OVER CRYSTAL AVENUE, NAUGHTON AVENUE OVER PATTERSON AVENUE, MIDLAND AVENUE OVER HYLAN BOULEVARD, ROCKLAND AVENUE OVER BRIELLE AVENUE, FOREST AVENUE OVER RANDALL AVENUE, GREGG PLACE OVER RANDALL AVENUE, ARTHUR KILL ROAD OVER MULDOON AVENUE, RICHMOND HILL ROAD OVER RICHMOND ROAD, AND ARTHUR KILL ROAD OVER RIDGEWOOD AVENUE (STATEN ISLAND)**

This ten culvert reconstruction project is in the final design stage.

The Galloway Avenue culvert is a single span timber pedestrian bridge supported on a concrete abutment. It is located approximately 262.4' east of the intersection of Galloway Avenue and Crystal Avenue. The channel beneath the bridge bisects Galloway Avenue, thereby making the bridge the only means of carrying pedestrians from one side of the channel to the other. The existing bridge will be removed and a new bridge will be constructed. The bridge will be closed during construction.

The Forest Avenue culvert over Crystal Avenue is a single span reinforced concrete box culvert. It is located approximately 230' east of the intersection of Forest Avenue with Crystal Avenue. The reconstruction will consist of the demolition of the existing culvert, clearance of debris from the channel, replacement of the culvert with a concrete deck slab supported on steel beams on reinforced concrete abutment and wingwalls. The construction work is planned to be performed in four stages with proposed two traffic lanes being maintained in each direction (during rush hours) and two lanes at other times.

The Naughton Avenue culvert consists of three parallel reinforced concrete pipes at the north and south ends separated by a twin barrel box culvert. It is barricaded at the east end by guide rail and bordered at the west by a wooded area. The rehabilitation will include repairing the concrete cracks and spalls, cleaning the debris, and replacing the missing anchor bolts for the retractable steel grates.

The Midland Avenue culvert consists of a single span reinforced concrete box, which will be replaced with a new pre-cast box culvert. It is located on Midland Avenue between Boundary Avenue and Mason Avenue. The work will be performed in two stages, with one lane of traffic maintained in each direction.

The Rockland Avenue reinforced concrete culvert project will include concrete repair and a lined and stabilized north embankment. It is located approximately 361' west of the intersection of Rockland and Manor Avenue.

The Forest Avenue culvert over Randall Avenue is a single span concrete box culvert, located at Forest Avenue between Randall Avenue and University Place. It will be replaced with a new precast concrete box culvert with new sidewalks and asphalt pavement. The work will take place in three stages while maintaining one traffic lane in each direction during construction.

The Gregg Place culvert is a single span reinforced concrete box culvert, located approximately 98.4' west of the intersection of Gregg Place and Randall Avenue. It will be replaced at the southern portion with a new precast box culvert with new pavement. The north side of the road will remain open to through traffic.

The Arthur Kill Road culvert over Muldoon Avenue consists of a reinforced concrete pipe at north and a reinforced box culvert at south. It is located on Arthur Kill Road between Muldoon Avenue and Arden Avenue. The box culvert will be replaced with a new box culvert, and a structural lining will be installed in the pipe culvert. The construction will be performed in one stage with one lane of traffic maintained in each direction.

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

The Richmond Hill Road culvert consists of a single span stone masonry arch, built in 1845 according to a sign posted by the wingwall of the culvert. It is located on Richmond Hill Road between Richmond and Old Mill Roads. The rehabilitation work will include removing and re-pointing the stone masonry, removing and replacing the fill and asphalt wearing surface above the arch, and cleaning the vegetation and sedimentation. The work is proposed to be completed in one stage utilizing night time hours, when the northbound lanes on Richmond Hill Road will be closed and a detour route will be offered.

The Arthur Kill Road culvert over Ridgewood Avenue consists of a non-reinforced concrete pipe at south and a corrugated metal pipe at north. It is located approximately 100' west of the intersection of Arthur Kill Road and Ridgewood Avenue. The rehabilitation work will include installing a structural lining inside the concrete pipe and repairing the concrete at the head walls and catch basins. There will be two stages of construction and one lane of traffic will be maintained in each direction.

This project to rehabilitate and/or replace the ten culverts is currently in the final design stage, and is expected to begin in August 2014 and to be complete in 2015.



Galloway Avenue over Marianne Street, Forest Avenue over Crystal Avenue. Naughton Avenue over Patterson Avenue, Midland Avenue over Hylan Boulevard. Rockland Avenue over Brielle Avenue, Forest Avenue over Randall Avenue. Gregg Place over Randall Avenue, Arthur Kill Road over Muldoon Avenue. Richmond Hill Road over Richmond Road, Arthur Kill Road over Ridgewood Avenue.

### **BRYANT AVENUE BRIDGE OVER AMTRAK AND CSX (BRONX)**

The Bryant Avenue Bridge, oriented east to west between Buckner Boulevard and Garrison Avenue, is a one span structure constructed in 1908. It spans 90 feet over four railroad tracks. This project includes replacement of the steel superstructure, bearings, approaches, water mains and rehabilitation of the existing substructures by removing and replacing the top portion of the concrete abutments to accommodate the new superstructure. The abutments will be retrofitted to meet seismic criteria. The proposed superstructure will consist of a reinforced concrete deck over pre-stressed concrete adjacent box beams. The two existing water mains will be removed and replaced. Both water mains will be installed on top of the north sidewalk in a fenced-off area. The Division's in-house design staff will now complete the design for this project. Construction is expected to begin in spring 2014, with a duration of eighteen months.

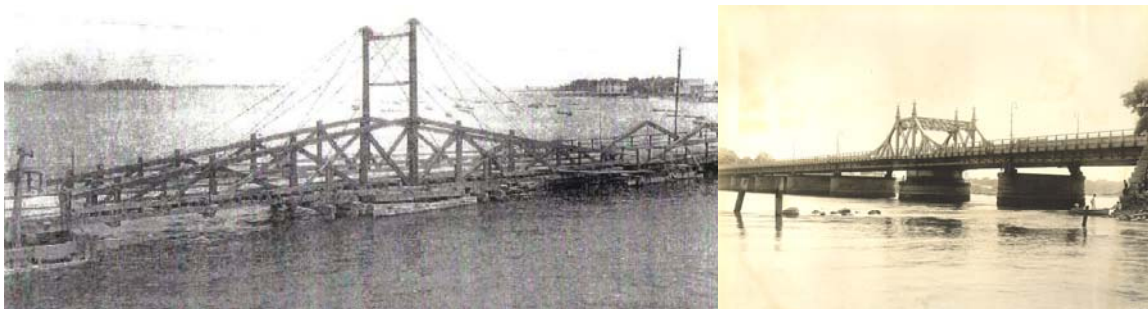
## ACCOMPLISHMENTS & PLANNED PROJECTS



Bryant Avenue Bridge in 2011. (Credit: NYSDOT)

### CITY ISLAND ROAD BRIDGE OVER EASTCHESTER BAY (BRONX)

The existing City Island Road Bridge was built in 1901 and is the only vehicular, bicycle and pedestrian access between the mainland Bronx and City Island. In 2011, the bridge carried 14,480 vehicles per day. The bridge is part of City Island Road, which is located within Pelham Bay Park and crosses over Eastchester Bay. With seven spans and six piers in the water, the bridge has outlived its useful life and requires extensive continuous maintenance.



Original City Island Bridge in 1873. Bridge in 1928.



Aerial View of Current Bridge. Welcome Sign.

The existing bridge will be replaced along the same alignment with a new single span, single tower cable-stayed bridge which will be a unique structure type in the NYC area. The new bridge will be approximately 17 feet wider than the existing one to accommodate three standard 12-foot wide traffic lanes, a 6-foot wide bicycle lane and a 6-foot wide pedestrian walkway on each side. The tower and concrete counterweight for backstay anchorage of the new bridge will be located in Pelham Bay Park. The new bridge will be designed to current standards and with its wider roadway width, will allow future repair and rehabilitation to be carried out while maintaining one 12-foot lane in each direction. It will also eliminate the vehicle height restriction caused by the existing overhead truss. In order to maintain traffic during the demolition of the existing bridge and construction of the new bridge, a temporary bridge will be constructed on the south side of



## ACCOMPLISHMENTS & PLANNED PROJECTS

the existing bridge. Marine traffic will remain undisturbed beneath the bridge during peak boating season.

At the City Island side there is a seawall along the shore which is about 500 feet in length starting from the bridge and heading in a southerly direction. This seawall will be rehabilitated and turned over to the Department of Parks and Recreation along with the esplanade which it is supporting.



Existing Seawall.

Turtle Cove Culvert is located under City Island Road approximately half a mile west of the existing bridge. As part of the wetland impact mitigation activities for the project, this culvert will be replaced with a larger one that will allow for greater tidal flooding from Eastchester Bay to the upland portions of Turtle Cove.



City Island Road Bridge in 2010. (Credit: Bojidar Yanev) Vertical Clearance Posting. (Credit: NYSDOT) 9 Foot Tall Ornamental Finial.

The project is currently in its final design phase. The construction phase for this Federally-funded project is scheduled to begin in summer 2013 with an approximate duration of 3 years.



Rendering of New City Island Road Bridge. Side View Rendering of New City Island Road Bridge.

### CLAREMONT PARKWAY BRIDGE OVER METRO NORTH RR (BRONX)

The Claremont Parkway Bridge was built in 1889, with major reconstruction in 1938. Claremont Parkway is a roadway link in the Crotona Park section of the Bronx where the street system features few continuous east-west routes. The existing bridge is a steel superstructure encased



## ACCOMPLISHMENTS & PLANNED PROJECTS

in concrete supported on the original stone masonry abutments. It spans the tracks of the extremely busy Harlem Valley and New Haven lines of Metro-North Railroad, an essential regional commuter link between the northern areas of the metropolitan region, key points in the Bronx and Harlem, and the Manhattan central business district. Reconstruction will extend the life of the bridge by 40 years.



Claremont Parkway Bridge. (Credit: NYSDOT) Looking Northwest in 2008.

The reconstruction of the bridge will include removal of the entire superstructure and approaches. The new bridge will consist of pre-stressed concrete box beams supporting a reinforced concrete deck and approach slab, concrete sidewalks and reinforced concrete parapet walls with protective fencing, and reconstructed approach roadways. A portion of both existing abutments will be removed to accommodate the new bridge profile. The utility work will include the installation of two new water mains, a gas main, and electrical conduits. The bridge will be constructed in four stages, with one traffic lane and one sidewalk open in each direction at all times during construction. A Notice to Proceed for the project was issued to the contractor with a start date of April 4, 2011.

The contractor began setting up the maintenance and protection of traffic for stage 1 construction on July 11, 2011. All Stage 1 demolition was completed in October 2011. By the end of 2011, the contractor completed the installation of vertical protective shielding above the existing abutment, the demolition of the existing abutment caps and forming, the placement of reinforcing bars, and the placement of concrete on each of the abutment caps.



Existing North Side Guardrail and Fence. Proposed Guardrail and Fence. Stage 1 in October 2011: Removal of the Existing Bridge Girders.



Installation of Pre-Cast Box Beams for Stage 1 in November 2011.

In 2012, the contractor completed the removal and reconstruction of the southern half of the bridge (Stage 1 Construction) and reconfigured the work zone traffic control. Traffic was detoured onto the newly constructed half of the bridge in August 2012. The contractor then began

## ACCOMPLISHMENTS & PLANNED PROJECTS

preparatory work (such removing existing utilities, saw cutting concrete deck for removal, removing exiting bridge rails and the protective fence) for the removal and reconstruction of the remaining portion of the existing structure as part of Stage 2 Construction activities. Construction is expected to be complete by May 2013.



October 2012: Second Stage Demolition: Removal of the Remaining Portion (10 Concrete-Encased Steel Girders) of the Existing Bridge Superstructure.

### GRAND CONCOURSE BRIDGE OVER METRO NORTH (BRONX)

The bridge was originally built in 1906. It is a single span bridge consisting of a concrete deck supported on five steel plate girders, one truss, and a steel truss subway structure located in the center of the bridge. The bridge carries three lanes of vehicular traffic in each northbound and southbound direction as well as NYCT subway traffic underneath the Grand Concourse Boulevard and above the Metro North railroad right of way. The upper portion of the bridge carrying the roadway is now structurally supported by the lower portion carrying the subway. The two portions of the bridge are dependent upon each other for support and stability but are being maintained individually by two separate agencies, the NYC Department of Transportation, and NYC Transit Subways respectively. The subway portion of the structure, comprised of four warren trusses, is stabilized by the roadway portion floor beams and the roadway portion is supported by the subway trusses.

In the new rehabilitation scheme, the roadway will be supported independently from the subway structure: the structures will be physically separated. Steel members will be added to the subway trusses to provide the stability previously provided by the roadway portion floor beams. The substructure consists of two concrete abutments bearing on rock ledges. The tops of these abutments lie at two levels, an upper level which supports the bridge stringers and a lower level which supports the subway trusses. The bridges stringers over the subway tracks bear on a composite steel beam/concrete backwall which will be replaced as part of this project. The foundation for the new trusses being installed to carry the roadway superstructure will bear on the rock behind the existing abutments.

The reconstruction project will also include building new sidewalks, as well as bridge railings with protective fencing, expansion deck joints, electrical conduits and fixtures, and the relocation of the existing water main under the sidewalk. Two lanes of vehicular traffic and the pedestrian

## ACCOMPLISHMENTS & PLANNED PROJECTS

walkway will be maintained in each direction on the Grand Concourse. Deterioration was discovered during a final design inspection to assess the structural condition of the bridge, and the consultant has been instructed to prepare an interim load rating to establish the structural capacity. This project, currently in the final design phase, is expected to begin construction in February 2018, and is expected to be complete in May 2020.



Grand Concourse Bridge over Metro North in 2002. (Credit: NYSDOT) Aerial View. Sidewalk.

### GRAND CONCOURSE BRIDGE OVER EAST 174<sup>TH</sup> STREET (BRONX)

The bridge was originally built in 1914 as a reinforced concrete arch and in early 1931, a major reconstruction was performed to accommodate a truss bridge structure to carry subway trains. The subway structure is supported on its own concrete piers. The superstructure consists of two single in-fill concrete arches carrying Grand Concourse across East 174<sup>th</sup> Street. In between those two arches, NYCT has a steel structure supporting their tracks underneath Grand Concourse and crossing above East 174<sup>th</sup> Street. The arch substructures consist of massive reinforced stem walls bearing on rock. The subway structure piers are supported on individual concrete footings with steel grillage bearing on rock.

The project will include replacing the existing roadway, sidewalks and parapets with new reinforced concrete deck slab, providing bridge railing and fencing, repairing concrete arches by adding reinforcing bars with concrete encasements to the entire underside and top of arches to make the bridge seismically resistant, repairing east/west spandrel walls, and replacing the subway bearings at pier support.

This project is expected to begin construction in September 2018, and is expected to be completed in August 2020.



Grand Concourse Bridge over East 174<sup>th</sup> Street in 2007.

### HIGH BRIDGE PEDESTRIAN BRIDGE OVER THE HARLEM RIVER (BRONX/MANHATTAN)

This eleven span landmark structure is the oldest (circa 1848) bridge over the Harlem River. The bridge is under the Department of Parks and Recreation's (DPR) jurisdiction. It was erected to



## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

carry water from the Croton aqueduct, and has been closed since 1970. The bridge spans the Harlem River, connecting the neighborhoods of Highbridge in the Bronx and Washington Heights in Manhattan.

Designed on principles of Roman aqueduct architecture, the granite bridge is about 116 feet in height, with the peak of its arches 100 feet above the Harlem River. The bridge is 1,450 feet long, measured from gatehouse to gatehouse, with a 1,200-foot-long brick walkway. The High Bridge was begun in 1839 and completed in 1848. Larger water pipes were added and the walkway was built in 1861-64. In 1927-28, after many years of calls for complete demolition of the bridge, the city replaced five of the original 15 arches with a central steel span to ease the passage of large ships. The rest of the majestic stone arches still stand, the majority on the Bronx side of the river. The bridge has never carried vehicles.

In support of DPR, the Division prepared a detailed scope of work for the comprehensive in-depth inspection of the bridge. Engineering consultants conducted this inspection, which was completed in the summer of 2006, at an estimated cost of \$2.5 million. The Division administered and supervised this work.



High Bridge Pedestrian Bridge in 2004. (Credit: Michele N. Vulcan)

The \$61.73 million restoration of the bridge is being managed by the New York City Department of Design and Construction in partnership with DPR. The reopened High Bridge will be an essential link in New York City's expanding waterfront Greenway. It will allow Bronx residents to reach the Highbridge Pool and Recreation Center, and Manhattan residents to reach the Harlem River shoreline. Planned improvements will make the bridge more accessible and safe. The rehabilitation will follow historic preservation principles to restore the architectural details of this landmarked structure for public enjoyment.

Both the central steel span and the stone arches will be cleaned and repaired; the steel span will be repainted and the masonry structure will be repointed and strengthened. Architectural lighting will be installed beneath both spans. The brick paver walkway on top of the structure will be removed and reconditioned, new waterproofing and concrete will be installed, then the historic brickwork will be reinstalled. The aqueduct running beneath the structure will be repaired and stabilized. New lampposts and safety fencing will be installed and the original iron railing will be repaired. Barrier-free access ramps will be built on both sides of the bridge to allow access for the disabled. Three viewing platforms with bench seating will be installed along the length of the bridge.

The design of the restoration of the bridge was completed in December 2011. Construction began in August 2012, and is expected to be complete in summer 2014.



## ACCOMPLISHMENTS & PLANNED PROJECTS



Rendering of the Restored High Bridge. View From the Bronx to Manhattan. View From Manhattan to the Bronx.

### HIGHLAND PARK PEDESTRIAN BRIDGE OVER PEDESTRIAN PATH (QUEENS)

The Highland Park Pedestrian Bridge, built in 1935, is a single span arch structure with a clear opening of 60 feet under the bridge. Unlike a conventional steel or concrete bridge structure, the main structure is a brick masonry arch, with wing walls and parapet walls consisting of stacks of random size rocks set in mortar. The height of the parapet walls from the roadway surface varies from two to four feet. The bridge, located inside Highland Park, spans a hiking trail, and carries pedestrian and bicycle traffic. It is 27 feet wide with neither sidewalks nor shoulders.

A recent inspection revealed significant deterioration of the masonry arch. The project, currently in the preliminary design phase, will include the rehabilitation of the existing brick masonry arch structure and the specialized wearing surface. The bridge will be closed to all traffic and will be reconstructed in one stage. Construction is expected to begin in July 2014, and is expected to be complete in eighteen months.



Highland Park Bridge.

### METROPOLITAN AVENUE (FRESH POND) BRIDGE OVER LIRR -NY&ATL (QUEENS)

This bridge is a two span structure built between 1914 and 1915. It spans over the Long Island Railroad (LIRR) Montauk Branch and carries the roadway that is part of the intersection of Metropolitan Avenue with Fresh Pond Road and the adjoining property of the former Mobil gasoline station which was acquired by the City. The superstructure consists of concrete encased steel beams with a concrete deck and varying depths of asphalt wearing surface. The substructure consists of a reinforced concrete pier and gravity type plain concrete abutments and wing walls.

Currently the project is on hold pending resolution of the railroad vertical clearance issue. The existing vertical clearance over LIRR tracks is 15 feet 9 inches. Per New York State Railroad Law Section 51-a (7), a minimum clearance of 22 feet is required over a railroad whenever a structure built prior to 1959 is to be reconstructed unless a waiver is granted by NYSDOT. Since a 22 foot clearance was not achievable due to the existing grades of the bridge being restricted by adjacent buildings and the constraint from an existing sewer line under the tracks, the waiver

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

request was not granted by NYSDOT. However, NYSDOT agreed to a clearance of 20 feet 6 inches.

One alternative to achieve the required 20 feet 6 inches clearance is to lower the railroad tracks. The primary obstruction to lowering the railroad tracks is the existing 60" diameter combined sewer which runs along the centerline of Fresh Pond Road. The sewer crosses beneath the tracks and is approximately 3 feet below the top of rail. To lower the tracks, the combined sewer must be rerouted or reconfigured (or both).

In September 2012, the LIRR and NY Atlantic Railways agreed to have 17 feet 6 inches clearance as an immediate goal and 20 feet 6 inches as a future goal. NYSDOT then recommended that both railroads should proceed to file a clearance waiver request to NYSDOT for the required 17 feet 6 inches. The new waiver request will outline the provisions that would be incorporated into the current design to achieve the future 20 feet 6 inches clearance with minimal impact to the new bridge structure. Construction is expected to begin in July 2014, and is expected to be complete in the summer of 2017.



Metropolitan Avenue Bridge in 2009.  
(Credit: NYSDOT)

### **ROOSEVELT AVENUE BRIDGE OVER VAN WYCK EXPRESSWAY (QUEENS)**

The existing bridge is a two level dual-use steel viaduct consisting of 27 spans. The first level, which carries Roosevelt Avenue, consists of a plate girder floor beam system supported by steel columns, intermediate piers supporting a bascule span spanning over the Van Wyck Expressway, and end abutments. The second level of the viaduct supports and carries the overhead NYC Transit Authority's #7 – Flushing line subway structure. It is an essential regional facility and truck route that links communities east and west over the Grand Central Parkway and provides access to Flushing Meadows Park, the National Tennis Center, and Citifield, home of the New York Mets.

Concrete deck repairs were performed in July, August, and October of 2003, June and July of 2004, April, May, June, and July of 2005, and June and July of 2006. In the summer of 2005, the When and Where contractor repaired red and yellow flag conditions caused by damage by over-sized trucks using the Van Wyck Expressway. Red-flagged steel shoring and yellow-flagged cracked stringer connection angles were repaired in the spring of 2008.

The project, currently in the final design phase, will include the construction of a new concrete-filled steel grid deck, rehabilitation of the existing east and west viaduct sections, bascule span, piers, abutments, and painting of the entire bridge. In addition, a new bicycle/pedestrian path will be constructed on the north and south sides of the bridge.

The lower level carrying Roosevelt Avenue will be reconstructed in three stages. Both vehicular and pedestrian traffic will be maintained throughout the construction of the bridge, with one lane in each direction.

## ACCOMPLISHMENTS & PLANNED PROJECTS

This federally-funded project is currently in the final design phase with construction anticipated to start in February 2014 and to be complete in October 2017.



Roosevelt Avenue Bridge (#2240507) in 2002 and 2004. (Credit: NYSDOT)

### SHORE ROAD CIRCLE BRIDGE OVER AMTRAK (BRONX)

This project will include the removal of the existing two span bridge and the construction of a new single span bridge structure with a reinforced concrete deck over steel girders. The work will also include the construction of new reinforced concrete abutments and wing walls, as well as new parapet walls with protective steel fences. The bridge will be reconstructed in three stages, with one lane of traffic maintained in each direction during construction. A Notice to Proceed for the project was issued to the contractor with a start date of May 18, 2008.



Shore Road Circle Bridge in June 2009 and August 2010. (Credit: NYSDOT)

Construction was expected to begin in May 2008, however, due to Amtrak's inability to provide the electric traction crew services for track outage, the construction activities on this project were on hold from September 21, 2008 until April 15, 2009.

Construction activity during 2010 included the following: High voltage overhead cables were relocated, allowing construction work to proceed at the west abutment; temporary shoring towers were erected to allow the demolition of the super structure; and soldier piles were drilled behind the abutments and excavation supporting systems installed prior to start of the removal of the existing stone abutments. In the fall of 2010, the contractor started excavating behind the abutments to prepare for the removal of the old abutments and wing walls.

Construction activity during 2011 included the following: Removal of existing sidewalk and steel beams for Stage-1B; installation of protective shielding for Stage-2; demolition of Stage-1A/3A and 1B/3B east and west abutments; pouring of concrete for abutments Stage-1A/3A and 1B/3B; installation of prefabricated structural drain behind Stage-1A/3A and 1B/3B abutments; backfilling behind Stage-1A/3A and 1B/3B east and west abutments; application of protective sealant for Stage-1A/3A and 1B/3B substructure; erection of steel beams for Stage-1A and Stage-1B superstructure; installation of protective shielding for Stage-1A and 1B; pouring of concrete for Stage 1A and Stage 1B superstructure slabs; installation of conduits for Street lighting, high voltage, and communications; and placement of temporary asphalt concrete pavement for stage-1A and Stage-1B east and west approaches.



## ACCOMPLISHMENTS & PLANNED PROJECTS

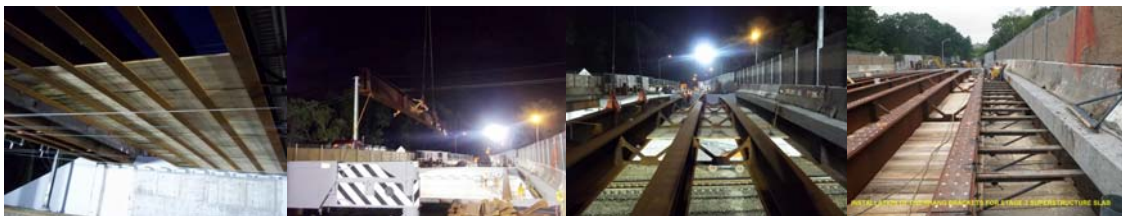


Shore Road Circle Bridge in April 2011 – July 2011. November 2011: Deck Placement.

Stage 1A/1B was completed in January 2012. This included new footings, abutments, wing walls, steel stringers and reinforced concrete decks at the north and south fascias. Vehicular traffic was detoured onto the newly constructed portions of the bridge in February 2012. During the remainder of 2012, the contractor began and completed the demolition of the remaining portion of the existing bridge, construction of the final section of new reinforced concrete substructures, the steel superstructure supporting reinforced concrete deck slab, reinforced concrete approach slabs, installation of conduits for street lighting, high voltage line, and communication lines and placement of temporary asphalt concrete pavement for Stage-1A and Stage-1B. Work in progress includes the installation of the armor joint system and preparatory work for placement of concrete for the two closure pour on the bridge concrete deck slab. Construction is expected to be complete in spring 2013.



Shore Road Circle Bridge in April 2012: Placing Concrete for Stage 2 West Abutment Footing. May 2012: Stage 2 Backfill Behind East Abutment. East Abutment Backwall Rebar Installation. June 2012: Backfill Behind Stage 2 West Abutment. Painting of East Abutment Back Wall and Pedestals. June 2012: Removing Brackets from Stage 1A/1B. Installing Expansion Bearings at East Abutment in Stage 2.



Steel Girder and Shielding Plank Installation on June 14: June 2012: Installing Brackets for Superstructure Slab.



June 2012: Removing Soldier Piles Behind the West Abutment. June 2012: Formwork for Stage 2 Superstructure Slab. July 2012: Formwork for Stage 2 Deck.



## ACCOMPLISHMENTS & PLANNED PROJECTS



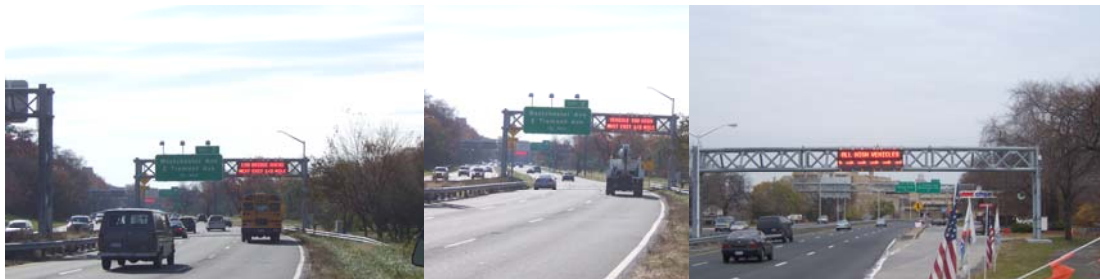
July 2012: Formwork for Stage 2 Deck. December 2012: Removing Shielding and Formwork.

### WESTCHESTER AVENUE BRIDGE OVER THE HUTCHINSON RIVER PARKWAY (BRONX)

This two span continuous multi-stringer bridge is supported by reinforced piers and abutments. The bridge spans over the Hutchinson River Parkway and it supports the NYCT elevated subway structure of the Pelham Bay Line. It was built in 1940 by the Triborough Bridge and Tunnel Authority. No major modifications to the bridge are recorded except for minor repairs at the south approach sidewalk and temporary flag repairs to bridge girders damaged by vehicle impacts in the southbound and northbound roadway. A project to install an ITS solution, which includes an overheight vehicle detection system that flashes signs directing vehicles identified as being over 9' in height to exit the parkway, was substantially completed on December 3, 2004. The contractor completed extra work associated with landscaping in the spring of 2006. The underdeck at both spans is currently covered by approximately 154 square feet of timber planking. In addition, the underdeck at span 1 is covered with approximately 18 square feet of steel wire mesh netting.



Westchester Avenue Bridge in 2001 and 2006. (Credit: NYSDOT) Overheight Sensor Unit on the Hutchinson River Parkway. (Credit: Roly Parroco)



Vehicle Detection System.

The Westchester Avenue Bridge's vertical clearance over the Hutchinson River Parkway is sub-standard. Due to the number of truck and bus vehicles that mistakenly enter the Hutchinson River Parkway, where commercial vehicles are not allowed, the fascia steel girders of the bridge have been severely impacted and damaged numerous times.

## ACCOMPLISHMENTS & PLANNED PROJECTS



Damaged Bridge, Cargo Container, and Contractor Truck After An Over-Height Trailer Struck the Bridge in January 2012.

The rehabilitation of the bridge will include the replacement of the existing reinforced concrete deck slab with a new reinforced concrete deck, steel faced curbs, a new parapet wall and protective screenings, concrete sidewalks, rehabilitation of the damaged steel fascia girders, and replacement of the diaphragms and other bridge elements, including a new steel water main.

In March 2011, a value engineering study was conducted in which it was recommended that further studies of alternative options be performed to raise the bridge clearance through a shallower bridge structure and/or by raising the roadway profile above the bridge. The consultant is currently investigating the feasibility of the study's recommendations to modify the bridge superstructure in order to improve the vertical clearance under the bridge without lowering the highway.

The designer is currently studying ways to increase the vertical clearance of the bridge over the parkway without adversely impacting the NYCT elevated structure and its transit train operations. This may entail temporary support of the transit structure in order to replace the existing roadway bridge structure in stages with a thinner more efficient structure to gain additional clearance over the parkway below.

This rehabilitation project is currently in final design. Construction is expected to begin in September 2015, and is expected to be complete in May 2018.

### WHITESTONE EXPRESSWAY/VAN WYCK EXPRESSWAY (SB) TO CROSS ISLAND PARKWAY (EB) OVER ACCESS ROAD FROM WHITESTONE EXPRESSWAY/VAN WYCK EXPRESSWAY (QUEENS)

The bridge is a multi-girder, single span, simply supported structure with a span length of 77 feet and is 24 feet wide curb to curb. There are two lanes (one way) on the bridge. The substructure consists of two gravity type concrete abutments. The west and east abutments of the existing bridge are a continuation of the abutments of the overhead bridge. Construction is expected to begin in August 2018, and is expected to be completed in 2020.



Bridge (Lower Structure) in 2010. (Credit: NYSDOT)

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

### **EAST 175<sup>TH</sup> STREET BRIDGE OVER METRO NORTH (BRONX)**

The East 175<sup>th</sup> Street Bridge over Metro North was originally built in 1889 and it underwent reconstruction in 1938. The reconstruction work included a new steel superstructure, concrete deck slab and sidewalk in conjunction with repairs to the existing stone masonry substructure and relocation of various utilities. It is a single span multi-girder steel structure with a steel reinforced concrete deck, and it measures 61.68 feet long from abutment to abutment and 60 feet wide from parapet to parapet. Construction is expected to begin in 2019.



East 175<sup>th</sup> Street Bridge in 2002. (Credit: NYSDOT) South Sidewalk.

## **ACCOMPLISHMENTS & PLANNED PROJECTS**

### ***Specialty Engineering and Construction***

#### ***Design-Build***

In 2012 the Department continued to use the Design-Build process to expedite capital bridge rehabilitation. These contracts retain the same company for both design and construction on selected projects. It is evident that there are many advantages to the Design-Build program, including the use of one consolidated procurement rather than two or more, resulting in significant time savings; the ability to commence construction before design completion; the avoidance of project escalation costs as construction commences two or three years earlier than with the conventional design-bid-build method; minimization of design change orders; and better coordination between design and construction, as critical field issues are addressed expeditiously. In addition, the design is custom made and reflects the capabilities and strength of the specific contractor; the Department establishes a single point of contact for communicating its goals and objectives; and overall costs are reduced substantially.

#### **BRUCKNER EXPRESSWAY BRIDGES (NB AND SB) OVER AMTRAK & CSX (BRONX)**

The Bruckner Expressway, named in honor of former Bronx Borough President and Congressman, Henry Bruckner (1871-1942), opened in 1973 and was one of the last roads on the New York City Expressway system to be built. It is a major connecting link between the Robert F. Kennedy (Triborough) Bridge and the New England Thruway. The Bruckner Expressway Bridges are single span bridges on the Bruckner Expressway which run over the Amtrak/CSX railroads. Built over 60 years ago, the Bruckner Expressway Bridges carry over 140,000 motorists and cyclists daily. The existing northbound bridge is a 124-foot single-span multi-girder steel superstructure with a cast-in-place concrete deck.

Amtrak operates their Northeast Corridor commuter rail lines on two tracks underneath the Northbound and Southbound Bridges. The tracks provide service between Penn Station in New York City and South Station in Boston. CSX operates freight trains on two tracks underneath the Northbound and Southbound Bridges. The tracks facilitate transportation of freight throughout the region.

The new bridge consists of precast concrete deck panels supported by new steel girders. The existing southbound bridge is a 115-foot single-span steel superstructure consisting of three thru-type trusses. The floor beams hang from the truss bottom chords and steel stringers span between floor beams. The existing cast-in-place concrete deck was supported by the steel stringers. The new deck is a precast concrete deck which spans the floor beams.

A tanker truck carrying home heating fuel overturned and caught fire on the northbound bridge on the evening of October 4, 2005. The traffic on the bridge, and on the Amtrak and CSX railroad lines below, was adversely affected. The bridge was inspected and core samples of the concrete from the fire-affected deck were tested. Division crews assisted in emergency repairs and clean-up, re-setting all expansion plates on the abutment, and performing deck repair. The crews worked continuously, and the roadway was reopened in time for the morning rush hour on October 6, 2005.



## ACCOMPLISHMENTS & PLANNED PROJECTS



Bruckner Expressway Bridge NB in 2002. Bruckner Expressway Bridge SB in 2008. (Credit: NYSDOT)  
2005: The Tanker Truck. (Credit: Bojidar Yanev)

To protect the trains and railroad facilities below the bridge after the October 4, 2005 tanker truck fire, contractor crews began the nighttime installation of protective timber shielding under the bridge on October 5, 2005. The project was completed on November 8, 2005. The Division's Surveying Unit assisted the Inspections Unit in monitoring the deflection of the bridge.

The fire on the bridge weakened its members. While the immediate results of the fire were addressed by in-house forces, the aftereffects remain unresolved. The inspection conducted on September 14, 2006 revealed that at least four girders have sagged and they are hit by CSX railroad cars below. The concrete deck has separated from the steel girder and there is a one to two inch gap between the top of the flange and the bottom of the haunches. In addition, the diaphragms between the girders have been burned and their capacity has been weakened. Repairs requiring immediate attention were handled by the When and Where contractor. The contractor installed additional timber bracing of the bridge's timber shielding in January and February 2007, performed emergency removal of loose underdeck concrete in July and August 2007, and repaired a red flag condition at the bridge stringers in September 2007. The replacement of the bridge's northbound superstructure and the southbound deck is being done under a Design-Build contract. The scope of work for the northbound bridge includes superstructure replacement, reconstruction of abutment back walls and bridge seats, bearing replacement, highway reconstruction 200 feet from the beginning and end abutments, and the installation of a new 20-inch diameter water main and new electrical ducts. The scope of work for the southbound bridge includes deck replacement, bearing replacement, back wall reconstruction, rehabilitation and painting of the existing steel truss superstructure, highway reconstruction 200 feet from the beginning and end abutments, and the installation of a new 12-inch diameter water main and electrical ducts.

A Notice to Proceed was issued to the contractor with a start date of October 27, 2008. Due to delays in obtaining the railroad force account agreements, the contractor focused on work off-structure, such as the water main and the installation of complex maintenance and protection of traffic. Demolition of the northbound structure commenced in November 2009.

Girder removal for Stage 1 and the lead paint removal were completed in February 2010. Demolition of the northbound back wall at both the beginning and end abutments was completed in March. The precast back wall and bridge seats were installed, and bearing placement on the northbound bridge was completed in April. The southbound bridge floor beam encasement removal was completed in June, as was installation of northbound deck panels.

Stage II on the northbound bridge began in August 2010. Painting of the southbound bridge floor beams and counter weight work was completed in September. South bound bridge shielding and deck panel removal was completed. Installation of the precast back wall of the northbound bridge was completed and northbound girders were installed in November. Stage II deck panels were placed in December.

Excavation of the east approach for the new roadway alignment was completed in January 2011. Steel repairs on the southbound structure and deck panel installation were completed in April. Bridge bearing removals and replacement, lead abatement and the excavation of the west side approach on the southbound bridge were completed in May. Installation of the sidewalk on the south bound bridge was completed in June. Southbound Stage 2 saw-cutting of deck panels, northbound Stage 3 approach work, asbestos removal, water main removal, and Installation of

## ACCOMPLISHMENTS & PLANNED PROJECTS

the temporary deck panels for the southbound bridge were completed in August. Installation of the Stage 3 northbound bridge formwork for the beginning abutment back wall concrete, and demolition of the southbound bridge were completed in December 2011. Other southbound and northbound Stage 3 work was in progress by the end of the year, as well.



Southbound Bridge Existing Deck Demolition and Deck Panel Installation. August 2011: Stage 2 Assembling and Welding Steel Packs for Southbound Bridge.

Girder installation on the northbound bridge was completed in January 2012. Stage 3 deck panel installation on the northbound bridge and installation of sidewalk deck panels on the southbound bridge was completed in April. Stage 3 sidewalk and curb work for the southbound bridge was completed in May. The design-build reconstruction of these bridges was substantially completed on November 20, 2012.



May 2012: Southbound Mainline Roadwork. June 2012: Northbound Service Road Beginning Approach.



Painting of the Southbound Bridge Truss in September 2012. (Credit: Richard Solomon). Associate Project Manager Richard Solomon Inspecting Inside the Containment.

## ACCOMPLISHMENTS & PLANNED PROJECTS



Completed Bruckner Expressway Bridges in November 2012.

### FDR DRIVE AT HOUSTON STREET OVERPASS (MANHATTAN)

The overpass consists of three bridge structures. The main bridge is a two-span reinforced concrete slab structure spanning over the FDR Drive's northbound and southbound roadways. Two approach ramp structures provide access to and from the FDR Drive northbound roadway and the main bridge. Each of these structures is also a reinforced concrete slab structure supported on longitudinal concrete walls that run adjacent to the FDR Drive's northbound roadway. These bridges were constructed circa 1953, and are thus almost 60 years old. On the main bridge, the superstructure slab is supported on bearing wall abutments continuously founded on piles, and on one pier at the center of the FDR Drive that consists of a steel cap beam supported on multi-steel columns continuously founded on piles. The structural slabs have asphalt overlays, and the main bridge has three sections of concrete sidewalks. The project is expected to begin in summer 2015.



The Three Structures of the FDR Drive at Houston Street Overpass. (Credit: NYSDOT)

### HARLEM RIVER DRIVE BRIDGE AT EAST 127<sup>TH</sup> STREET (MANHATTAN)

The Harlem River Drive Bridge over the ramp from East 127<sup>th</sup> Street is an eleven-span structure consisting of seven main spans of multiple steel stringers and concrete deck and four approach spans of reinforced concrete structural slabs supported by reinforced concrete girders and retaining walls. The bridge currently carries three traffic lanes in the southbound direction and two lanes plus a wide striped shoulder in the northbound direction. The parkway is not subject to truck traffic with the exception of emergency vehicles and school buses.

The existing bridge was designed and built by the Department from 1955 to 1958 as part of the Harlem River Drive Improvement Project from East 125<sup>th</sup> Street to East 132<sup>nd</sup> Street. The bridge is an eleven-span structure consisting of seven main spans of multiple steel stringers and concrete deck and four approach spans of reinforced concrete structural slabs supported by



## ACCOMPLISHMENTS & PLANNED PROJECTS

reinforced concrete girders and retaining walls. The bridge is owned and maintained by the Department; the rest of the Drive is owned by the New York State Department of Transportation.

This project involves the replacement of the existing 11 span bridge and the reconstruction of the Harlem River Drive between the Willis Avenue and Third Avenue Bridges, in addition to various highway improvements. It eliminates a major weaving problem between the southbound Harlem River Drive traffic destined for the Second Avenue exit and the Third Avenue Bridge exit ramp. One weave (from the Third Avenue Bridge to the Harlem River Drive mainline) is accomplished by some vehicles with no lane change, and the other weave (from the Harlem River Drive mainline to Second Avenue) requiring at least two lane changes of all weaving vehicles. The project will also allow at-grade access for a future Park/Promenade to be developed by the Department of Parks at 127<sup>th</sup> Street between the Harlem River Drive and the Harlem River. The viaduct currently serves approximately 79,000 vehicles per day. This area currently has 40 times the State average number of accidents. Construction is expected to begin in late spring 2014, and is expected to be complete in spring 2017.



Harlem River Drive Bridge at East 127<sup>th</sup> Street.



Rendering of New Harlem River Drive Bridge.



Looking East at the 127<sup>th</sup> Street Off-Ramp: Current and Proposed View. Looking East at 2<sup>nd</sup> Avenue: Current and Proposed View. Looking South From 3<sup>rd</sup> Avenue Bridge: Current Harlem River Drive and 2<sup>nd</sup> Avenue Exit and Proposed Harlem River Drive With Left Lane Exit to 2<sup>nd</sup> Avenue.



## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

### **EIGHT RAMPS AND ONE PEDESTRIAN BRIDGE AT THE ST. GEORGE STATEN ISLAND FERRY TERMINAL (STATEN ISLAND)**

Ferry service between Staten Island and Manhattan began in 1898, and its operations were taken over by the City's Department of Docks and Ferries in 1905. Today it is run by NYCDOT's Passenger Transport Division and services more than 19 million passengers each year, according to Captain James C. DeSimone, the ferry's Chief Operations Officer. The St. George Ferry Terminal itself recently underwent a major reconstruction project. The old drab, dingy building was converted into a well-lit, modern multi-modal facility. In addition to ferry service, the terminal also includes a very active MTA bus station and a Staten Island Railway Station. The ramps that will be rehabilitated serve 23 NYC Transit bus routes that contribute significantly to ferry ridership. To complete the make-over of the St. George Terminal, the Division's Design-Build Unit is undertaking a major rehabilitation project to upgrade vehicular access to the site.

Currently a series of eight ramps carry bus and passenger car traffic in and out of the facility. The eight vehicular ramp structures consist of 73 spans that provide access to the Staten Island Ferry Terminal for pedestrians, private vehicles, taxis, and New York City Transit buses. The ramps span over the Staten Island Railway, terminal buildings, and terminal parking. Two of the structures serve as a bus station as well as providing a roof over the rail station below. Limited parking is provided on several of the ramps. The North Ramp provides access to the North Municipal Parking Field and the Richmond County Bank Stadium and stadium parking lot, which provides supplemental parking to the Ferry Terminal. The five span pedestrian bridge provides access between the main Ferry Terminal building and the 69<sup>th</sup> Street Terminal building as well as access to the Bus Entrance Ramp (Ramp B) above and the Commuter Pick-Up and Drop-Off Area below.

Seven of the eight ramps were constructed in 1948, with the eighth dating back to the early part of the 20<sup>th</sup> century. The last major structural work on these bridges was a deck replacement project in 1985 that only addressed three of the eight bridge structures. The planned design-build project will upgrade these eight vehicular structures (and one pedestrian bridge), and provide a design life of 75 years. For seven of the ramps, the project will provide new decks and eliminate joints where feasible, retrofit poorly detailed steel connections, and rehabilitate/replace deteriorated steel superstructure and substructure members, as well as install new paint systems. Lead paint removal and the installation of a new drainage system as well as a pigeon deterrent system will also be included. The eighth ramp is the existing load-restricted north ramp adjacent to the Richmond County Bank Stadium. It will be demolished and reconstructed on a more efficient alignment in order to alleviate traffic congestion at the intersection of Richmond Terrace and Wall Street. In addition, this project will replace the superstructure of a pedestrian bridge (the 69<sup>th</sup> Street Terminal Building Overpass) connecting the terminal to an office facility, and will address traffic improvements for the entire stretch of Richmond Terrace outside the terminal.

A Notice to Proceed for the reconstruction of these structures was issued to the contractor with a start date of July 27, 2009. During the demolition of the concrete encasement at the old viaduct, which began in October 2009, lead paint on the underlying structural steel was discovered. Lead paint and underlying rust is being removed from all structures and non-lead paint is being reapplied. This protective coating is an essential preventive maintenance operation used to protect and extend the life of bridge infrastructure. All lead paint removal work is being performed within an entirely sealed Class 1A Containment System which prevents materials from leaving the work zone. Soil and air in the St. George area are being monitored and tested in accordance with safety requirements set forth by the United States Environmental Protection Agency and Occupational Safety and Health Administration, New York City Departments of Health and Environmental Protection and the New York State Departments of Health and Environmental Conservation.

Active construction began in early 2010 when modifications were made to the Kiss and Ride area. These modifications allowed the area to accommodate the closure of Ramp D (Kiss and Ride exit ramp) for demolition (on June 21, 2010) and the resulting two-way operation of Ramp C (Kiss and Ride entrance ramp). Ramp A and D demolition was completed in September. Bus

## ACCOMPLISHMENTS & PLANNED PROJECTS

gates A and B were relocated as of September 12, and the south half of the old viaduct was closed on September 13. The buses were relocated and pedestrians were routed to the opposite sidewalk. By the end of the year, the reconstruction of Ramp A and rehabilitation of Ramp D were underway. The pedestrian breezeway, located above the Kiss and Ride and linking the ferry terminal with the Ferry Administration building, is also being rehabilitated. Demolition was completed in March of 2011 and the structure is currently being rebuilt.



January 2011: Panoramic View. March 2011: Ramp D South Side Fascia Repair. Existing North Ramp (Foreground) and New North Ramp (Background).



August 2011: Bus Ramp A Canopy. North Ramp Center Pier. December 2011: Bus Ramp D.

Shielding installation and red flag repairs were completed in August 2011. Construction of the new north ramp's T-wall and piers was completed in September. Ramps A and D were completed in November. Ramp D opened on November 17, and Bus Ramps A and B opened on November 18. Stage 1 of the Old Viaduct was opened on November 18, as well. The North Ramp (leading into the North Municipal Parking Lot and NYCEDC Parking facilities), closed for construction on December 1, and demolition began. A new ramp is currently being constructed on a new alignment, adjacent to the Richmond County Bank Ball Park. By the end of the year, the reconstruction of Bus Gates A and B and the Old Viaduct were underway.

The new North Ramp, located at Richmond Terrace and Wall Street, providing access to the North Municipal Parking Lot and NYCEDC stadium parking lots re-opened during the early morning hours of June 16, 2012. The ramp was constructed on a new alignment and included a full-width pedestrian walkway.

By the end of 2012, chipping of spalls at the retaining wall of Ramp A was moving ahead. At Ramp B, the longitudinal saw cut grooving operation was complete; installation for anchor bolts for precast concrete barriers and reconstruction of west approach sidewalk were in progress; and blast cleaning and painting operations and expansion joint system installation were also in progress. At Stage 2 on the south half of Ramp C, the longitudinal saw cut grooving operation, installation of precast barriers and concrete placement for sidewalk at south side were complete, and the reconstruction of the west approach sidewalk and chipping of spalls on the retaining wall were in progress. At Ramp D, the removal of the platform shielding was in progress, as well as the chipping of spalls on the retaining wall. At the Bus Station North (BSN) and Bus Station South (BSS), the sidewalk concrete placement (BSN) was complete; blast cleaning and painting operations and expansion joint system installation were in progress; and the installation of the new roofing system and installation of bricks for the canopy were in progress. At Stage 3 on the old viaduct, the concrete placement for the approach slab was complete; structural steel repairs were in progress; and the temporary support system installation and blast cleaning and painting operations were in progress. At the pedestrian breezeway, electrical fixtures installation and drainage downspout installation were in progress, as was the installation of a bird deterrent system. At the TWIC area and the north municipal parking lot, the installation of the drainage



## ACCOMPLISHMENTS & PLANNED PROJECTS

system and restoration of the roadway are in progress. At the Bay Street Landing connector, sidewalk reconstruction was in progress. The North Municipal parking lot was opened for traffic on December 12, 2012. Construction is expected to be complete by spring 2013.



January 2012: Ramp A Looking East. North Ramp Span 1. Bus Station Overview.  
February 2012: Breezeway. Taxi Ramp. Mini Pile Installation. Ramp C. March 2012:  
Bus Ramp D.



April 2012: BSN Overlay, Towards South. North Ramp, East Approach. June 2012: Ramp B, Looking East.  
September 2012: BSS West. Old Viaduct West. BSS, Span 2 East. Ramp B Span 19 Southwest. November  
2012: BSS Ramp C Containment. Bay Landing Drainage Work.



June 2012: New North Ramp.



December 2012: Project Site.



## **ACCOMPLISHMENTS & PLANNED PROJECTS**

### ***Component Rehabilitation***

**UNION STREET BRIDGE OVER BROOKLYN-QUEENS EXPRESSWAY (BROOKLYN), BROOKLYN-QUEENS EXPRESSWAY OVER ADAMS STREET (NB) (BROOKLYN), BROOKLYN-QUEENS EXPRESSWAY OVER ADAMS STREET (SB) (BROOKLYN), 4TH AVENUE BRIDGE OVER BELT PARKWAY (BROOKLYN), BELT PARKWAY BRIDGE OVER BEDFORD AVENUE (BROOKLYN), CARROLL STREET BRIDGE OVER GOWANUS CANAL (BROOKLYN), CROWN STREET BRIDGE OVER FRANKLIN SHUTTLE (BROOKLYN), BEDFORD AVENUE BRIDGE OVER LIRR BAY RIDGE (BROOKLYN), HILL DRIVE BRIDGE (CLEFT RIDGE SPAN) OVER PEDESTRIAN PATH SOUTH OF BOATHOUSE (BROOKLYN), AND 5TH AVENUE BRIDGE OVER GREENWOOD CEMETERY (BROOKLYN)**

A Notice to Proceed for the component rehabilitation of these bridges was issued to the contractor with a start date of July 23, 2012.

The Union Street Bridge is a two span steel continuous stringer structure. The bridge carries eastbound two travel lanes. There is an unmarked parking lane on each side of the bridge. There is a sidewalk, a railing and protective screening on each side of the bridge. The scope of rehabilitation work shall include the following: remove and replace concrete overlay; replace seals at abutments; repair concrete deteriorated areas; replace corroded rivets; paint structural steel; clean abutments and pier walls; and restore bearings.

The Brooklyn-Queens Expressway over Adams Street (NB) is a one-span reinforced concrete arch structure. The bridge carries southbound three travel lanes. There is a safety walk on each side of the bridge. The scope of rehabilitation work shall include the following: Clean and seal cracks in asphalt overlay on top of bridge and approaches; remove unsound concrete and repair the underdeck concrete deteriorated areas; clean and seal cracks in brick finish at both abutments; clean the brick finish at abutments and wingwalls and apply an anti-graffiti protective coating; clean scupper; and restore the bridge expansion joint system between NB and SB structures.

The Brooklyn-Queens Expressway over Adams Street (SB) is a one-span reinforced concrete arch structure. The bridge carries northbound two travel lanes. The third travel lane is closed. There is a safety walk on each side of the bridge. The scope of rehabilitation work shall include the following: clean and seal cracks in asphalt overlay on top of bridge and approaches; remove unsound concrete and repair the underdeck-concrete deteriorated areas; clean and seal cracks in brick finish at both abutments; clean the brick finish at abutments and wingwalls and apply an anti-graffiti protective coating; clean scuppers; and remove deteriorated lamppost and install a new one.

The 4<sup>th</sup> Avenue Bridge over the Belt Parkway is a two span concrete rigid frame. The bridge carries a travel lane in each direction, divided by a concrete median. There are no parking lanes on the bridge and approaches. The west sidewalk is wide and the east sidewalk is narrow. There is a concrete parapet on each side of the bridge. The scope of rehabilitation work shall include the following: remove and the existing asphalt concrete on bridge and approaches; clean pressure relief joints; repair concrete deteriorated areas at sidewalks and median and apply a sealing protective coating; repair concrete deteriorated areas at abutments, pier, and underdeck; and clean masonry surfaces and apply an anti-graffiti protective coating.

The Belt Parkway Bridge over Bedford Avenue is a three span steel stringer structure. The bridge carries three travel lanes in each direction. There is a shoulder and a safety walk on each side of the bridge. The concrete median that divides the eastbound and westbound traffic has guide railing on both sides. The scope of rehabilitation work shall include the following: replace asphalt concrete over expansion joints and seal cracks in asphalt overlay; clean and paint replaced or rehabilitated steel items; replace seals at abutments; replace deteriorated structural steel; repair concrete deteriorated areas; clean masonry; apply an anti-graffiti protective coating on abutments, wingwalls and piers; and clean scuppers.

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

The Carroll Street Bridge is a two span movable–retractile type bridge. The bridge roadway carries a single travel lane in the east direction. There are no parking lanes on the bridge. There is a sidewalk on each side of the bridge. The scope of rehabilitation work shall include the following: replace the deteriorated timber deck; restore the expansion joints; clean masonry walls at the west abutment; replace impacted stiffeners, angles, and plates; clean and paint structural steel; reset roadway paving units at west abutment and repair/replace concrete sidewalks at both approaches; install new timber curbs on both sides of the roadway; and install new rubber dock fenders at both abutments.

The Crown Street Bridge is a 3 span bridge that carries one travel lane and one parking lane in each direction. The bridge has protective screening and a bridge railing on the south side. There is a building adjacent to the bridge north fascia. The scope of rehabilitation work shall include the following: seal cracks in the concrete overlay; replace seals above abutments; repair, clean, and apply an anti-graffiti protection coating to the abutments, piers, and crashwalls; and clean existing gutters.

The Bedford Avenue Bridge is a 6 span structure. The bridge carries one travel lane in each direction. There is a parking lane and a bicycle lane on each side of the bridge. The scope of rehabilitation work shall include the following: seal and repair cracks and spalls at the deck, abutments and piers; replace compression seals; and clean concrete and apply an anti-graffiti protective coating on the abutments and piers.

The Hill Drive Bridge (Cleft Ridge Span) Bridge is a one span semi-circular arch type structure. The bridge carries one travel lane in each direction. There are no parking lanes on the bridge. The scope of rehabilitation work shall include the following: repair the asphalt wearing surface; repair spalled and cracked concrete at the wingwalls; clean the bridge and provide an anti-graffiti protective coating; and restore the under drain system behind the bridge fascias.

The 5<sup>th</sup> Avenue Bridge is a one span masonry arch structure. The brick arch can be classified as a gothic style arch. The bridge carries one travel lane and one parking lane in each direction. The sidewalk consists of grass and dirt on both side of a 5 feet wide concrete walkway. The scope of rehabilitation work shall include the following: remove and replace existing asphalt from the bridge and approach slabs; clean and seal cracks in asphalt at both approach pavements; remove existing 5 foot wide sidewalk on both sides of the bridge and replace with a 13 foot wide sidewalk; replace existing stone curb with cast-in-place concrete curb; clean, repair, tuck point and restore the stone masonry; and rehabilitate the brick arch.

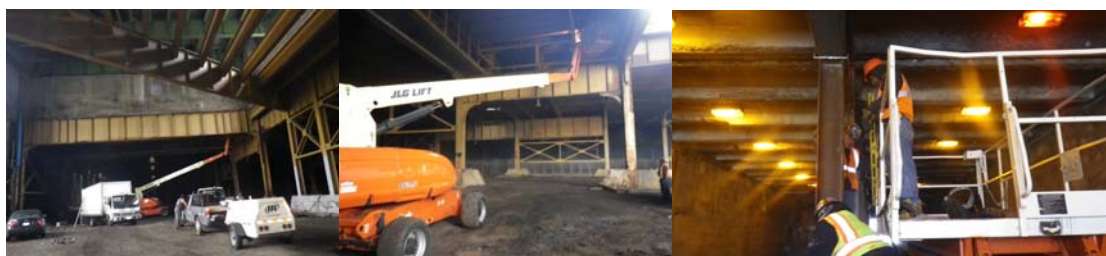
### ***When and Where Unit***

In 2012, the following structures were worked on under the Division's When and Where contracts: Trans-Manhattan Expressway over Harlem River Drive Northbound Ramp, Ed Koch Queensboro Bridge, West 207<sup>th</sup> Street Bridge over Harlem River, Henry Hudson Parkway Northbound over Ramp to 96<sup>th</sup> Street, Broadway Bridge over Harlem River, Henry Hudson Parkway Southbound over Ramp to 96<sup>th</sup> Street, 11<sup>th</sup> Avenue Viaduct over LIRR Westside Yard, City Island Bridge over Eastchester Bay, Riverside Drive Viaduct over Wet 125<sup>th</sup> Street to West 134<sup>th</sup> Street, West 191<sup>st</sup> Street Pedestrian Tunnel over Broadway, East 233<sup>rd</sup> Street Bridge over Metro North, Nereid Avenue Bridge over Bronx River Parkway, Linden Boulevard Bridge over Cross Island Parkway, Hempstead Avenue Bridge over Cross Island Parkway Ramp Northbound, 49<sup>th</sup> Street Bridge over Grand Central Parkway, 150<sup>th</sup> Street Bridge over Cross Island Parkway, Arthur Kill Road Over SIRT SOUTH Shore, Northern Boulevard Bridge Westbound over Flushing River, 35<sup>th</sup> Street Bridge over Brooklyn-Queens Expressway, 44<sup>th</sup> Street Bridge over Brooklyn-Queens Expressway, Morningstar Road Bridge over B&O Railroad, Stillwell Avenue Bridge over Coney Island Creek, Knapp Street Bridge over Belt Parkway, Metropolitan Avenue Bridge over English Kills, 79<sup>th</sup> Street Traffic Circle over 79<sup>th</sup> Street Plaza, 79<sup>th</sup> Street Ramp to Garage over 79<sup>th</sup> Street, Forest Park Drive Bridge over Abandoned LIRR, 86<sup>th</sup> Street Bridge over Brooklyn-Queens

## ACCOMPLISHMENTS & PLANNED PROJECTS

Expressway, Northern Boulevard Bridge Eastbound over Flushing River, East 174<sup>th</sup> Street Bridge over Sheridan Expressway/Amtrak, Depot Place Bridge over Conrail Hudson, Henry Hudson Parkway Viaduct over West 72<sup>nd</sup> Street to West 79<sup>th</sup> Street, Pedestrian Bridge at 73<sup>rd</sup> Street over Conrail, Boston Post Road Bridge over Hutchinson River, Brooklyn-Queens Expressway over Nassau Street, 37<sup>th</sup> Street Bridge over Brooklyn-Queens Expressway, 44<sup>th</sup> Street Bridge over Grand Central Parkway, 28<sup>th</sup> Avenue Pedestrian Bridge over Cross Island Parkway, 149<sup>th</sup> Street Bridge over Cross Island Parkway, 14<sup>th</sup> Avenue Bridge over Belt Parkway, Corlears Park Road Bridge over FDR Drive, Houston Street Bridge over FDR Drive, East 6<sup>th</sup> Street Pedestrian Bridge over FDR Drive, Promenade over FDR over FDR/East 79<sup>th</sup> Street- East 91<sup>st</sup> Street, East 120<sup>th</sup> Street Pedestrian Bridge over FDR Drive, Williamsburg Bridge over East River, Broadway Bridge over Harlem River, Concourse Village Avenue Bridge over Metro North Railroad, East 241<sup>st</sup> Street Bridge over BRP/Metro North, Hill Drive Bridge over Prospect Park Lake, West 34<sup>th</sup> Street Bridge over Amtrak 30<sup>th</sup> Street Branch, West 36<sup>th</sup> Street Bridge over Amtrak 30<sup>th</sup> Street Branch, Fort Tryon Park over Underpass, West 155<sup>th</sup> Street Pedestrian Bridge over Amtrak 30<sup>th</sup> Street Branch, Inwood Hill Park Foot Bridge over Amtrak 30<sup>th</sup> Street Branch, West 40<sup>th</sup> Street Bridge over Amtrak 30<sup>th</sup> Street Branch, East Drive Bridge over Transverse Road #3, Riverside Drive over West 158<sup>th</sup> Street, Motor Parkway Pedestrian Bridge over Francis Lewis Boulevard, Motor Parkway Pedestrian Bridge over Bell Boulevard, Motor Parkway Pedestrian Bridge over 73<sup>rd</sup> Avenue, Huguenot Avenue Bridge over SIRT South Shore, Hempstead Avenue Bridge over Cross Island Parkway, HRD Northbound Ramp over Harlem River Drive, Henry Hudson Parkway over Amtrak 30<sup>th</sup> Street Line, Brooklyn-Queens Expressway Eastbound over Brooklyn-Queens Expressway Westbound, Morris Street Pedestrian Bridge over Brooklyn-Battery Tunnel Plaza, West 8<sup>th</sup> Street Bridge over Surf Avenue, East 156<sup>th</sup> Street/Access to Housing, and Crocheron Park Pedestrian Bridge.

Currently scheduled projects include the 73<sup>rd</sup> Street Pedestrian Bridge over Conrail. In 2012, one red flag and two yellow flags were completed. The work consisted of reinforcing the floor beam web by installing a reinforcing plate and reinforcing angles after removing the diaphragms and installing new diaphragms. Ongoing work for two new red flags involves installing temporary shoring and reinforcing girder and two floor beams.



73<sup>rd</sup> Street Pedestrian Bridge over Conrail – General View of the Red Flag Work Site. Repairs at Hempstead Avenue Bridge over Cross Island Parkway.

## MARINE WHEN AND WHERE

New York State DOT conducts the underwater inspections of our waterway structures. A contract was needed to facilitate the performance of marine repairs and to maintain structures in need. The objective is to perform marine structural repairs and maintenance together with other appurtenant work, which constitutes repairs of defective and deteriorated parts of bridge structures due to, and in a water environment. The Department has neither the staffing nor the equipment to handle this type of special work. These repairs could not be handled under the usual time and materials When and Where contract, because the work is unique, in that it requires a consultant with licensed underwater capability to supervise and inspect the work for compliance and adequacy. Furthermore, detailed note taking is necessary by the inspectors to check and approve payments for the contractor's work.



## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

Marine bridge repairs addressed in 2012 include Broadway Bridge over Harlem River, Crocheron Park Pedestrian Bridge over Cross Island Parkway, Wards Island Pedestrian Bridge over Harlem River, Bruckner Expressway over Westchester Creek (Unionport Bridge), Shore Road Bridge over Hutchinson River, City Island Bridge over Eastchester Bay, and Hamilton Avenue Bridge over Gowanus Canal.

Some of these locations experience repeated damage due to heavy marine traffic and/or a narrow channel, such as the Shore Road (Pelham Parkway) Bridge over the Hutchinson River. The issuance of new flags occasionally necessitates new visits to even recently completed projects. Timber fender systems especially susceptible to recurring hits by barge traffic, and consequently require periodic restoration in relatively short time periods. In addition to damage due to impact, timber elements are also replaced because of deterioration and attack by marine borers, whose activity has vastly increased as the water quality in the New York City area has improved.

Numerous barge hits at the Shore Road Bridge occur repeatedly. As a result, a continuation and completion of previously reported work of replacing timber planking and walers took place at this location, as well as installation of a special plastic material called “UltraPoly” at the top portion of the fender planking and at selected dolphin piles. So far, this material has been shown to protect against rubbing damage. In addition, cleaning off and refurbishing was completed on the safety netting previously installed beneath the bridge decks to protect the waterway from falling deteriorated concrete. Special repairs were also made in areas where significant concrete in the arch spans had delaminated.

At the City Island Road Bridge over Eastchester Bay, resealing of masonry joints was performed at the western abutment in order to help ensure that this bridge will be in good condition until the planned replacement bridge can be put into service.

At the Bruckner Expressway over Westchester Creek (Unionport Bridge), massive deterioration had occurred in the fender system. The entire west side sheathing was replaced, along with many of the supporting walers. Similar to the Shore Road Bridge, “UltraPoly” panels were also installed to further safeguard the fender system against damage. Several significant areas of delaminated concrete wall along both sides were also repaired to prevent further deterioration.



Emergency Inspection on Wards Island Bridge Revealed that the Southwest Fender System Collapsed and Required Repairs.

## ACCOMPLISHMENTS & PLANNED PROJECTS



Unionport Bridge – Rebuilt the West Wall Fender System to Stop Barges From Hitting the Side of the Bridge. Safety Flags on the Concrete East Parapet Wall Were Also Completed. (Credit: Thomas Leung)

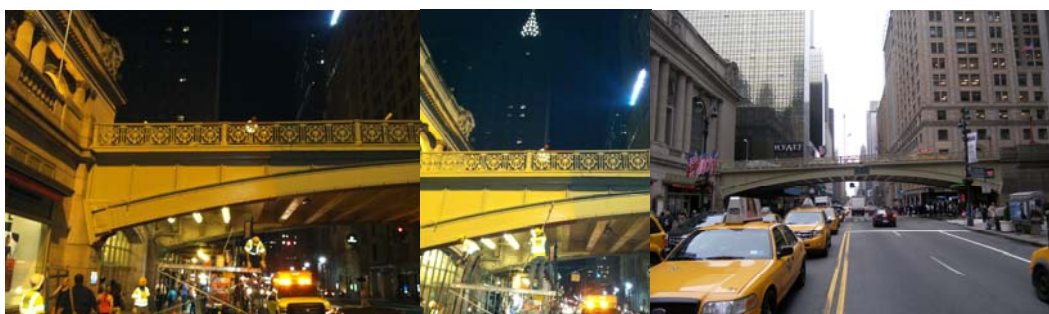
### PAINTING

In 2012 the following bridges were painted: Chelsea Road Bridge over Sawmill Creek, Cohancy Street Bridge over Belt Parkway, Crotona Avenue Bridge over Bronx Pelham Parkway, Farmers Boulevard Bridge over Belt Parkway, Flushing Avenue Service Road over Flushing Avenue, Guy Brewer Boulevard Bridge over Belt Parkway, Henry Hudson Parkway Bridge over Broadway, Highland Boulevard Bridge Eastbound over Jackie Robinson Parkway, Hylan Boulevard Bridge over Lemon Creek, Knapp Street Bridge over Belt Parkway, Linden Boulevard Bridge over Conduit Avenue, Merrick Boulevard Bridge over Laurelton Parkway Eastbound, Merrick Boulevard Bridge over Laurelton Parkway Westbound, North Conduit Avenue Bridge Westbound over Belt Parkway Westbound, North Conduit Avenue Bridge Westbound over Belt Parkway Eastbound, Riverside Drive Bridge over West 96<sup>th</sup> Street, Service Road Turnaround over Flushing Avenue, Slater Boulevard Bridge over New Creek, Southern Boulevard Bridge over East Fordham Road, Travis Avenue Bridge over Main Creek, Whitelaw Pedestrian Bridge over Conduit Avenue, Woodside Avenue Bridge over Brooklyn-Queens Expressway, West 33<sup>rd</sup> Street Bridge over Land Adjacent to Amtrak, 41<sup>st</sup> Avenue Bridge Railing over Brooklyn-Queens Expressway, 65<sup>th</sup> Place Bridge Railing over Brooklyn-Queens Expressway, 69<sup>th</sup> Street Bridge over Brooklyn-Queens Expressway, 70<sup>th</sup> Street Bridge Railing over Brooklyn-Queens Expressway, 130<sup>th</sup> Avenue Bridge over Laurelton Parkway Eastbound, 130<sup>th</sup> Avenue Bridge over Laurelton Parkway Westbound, Belt Parkway Bridge over Nostrand Avenue, Braddock Avenue Bridge over Cross Island Parkway, Brooklyn-Queens Expressway (Eastbound and Westbound) over Cadman Plaza, Eliot Avenue Bridge over Queens Boulevard, Foster Avenue Bridge over BMT Subway, Grand Concourse over East 167<sup>th</sup> Street, Linden Boulevard Bridge over Cross Island Parkway, Newkirk Avenue Bridge over BMT Subway, Park Avenue Viaduct Bridge over East 42<sup>nd</sup> Street, Springfield Boulevard Bridge over Belt Parkway, Superior Road Bridge over Cross Island Parkway, 27<sup>th</sup> Avenue Pedestrian Bridge over Belt Parkway, West 128<sup>th</sup> Street Pedestrian Bridge over Third Avenue Bridge Approach, and East 129<sup>th</sup> Street Pedestrian Bridge over Third Avenue Bridge Ramp.

## ACCOMPLISHMENTS & PLANNED PROJECTS



April 2012: Bridge Painter Juscélino Andrade at Knapp Street Bridge over Belt Parkway. Bridge Painters Andrew Law, Juscélino Andrade, Henry Bollin, Julio Perez, and Samuel Martinez, and Supervisor Bridge Painter David Yanolatos. Woodside Avenue Bridge over Brooklyn-Queens Expressway. Supervisor Bridge Painter Hughie Flood at the 69<sup>th</sup> Street Bridge over Brooklyn-Queens Expressway. (Credit: Earlene Powell)



September 2012: Test Painting a Section of the Park Avenue Bridge over 42<sup>nd</sup> Street with "Grand Central Terminal Green." (Credit: Earlene Powell) Completed Project in October 2012.



Contractor Engineer-in-Charge Scott Earl, Contractor Project Manager Tony Maracic, and Bridges Staff Analyst Antoinette Zeitoun at the Greenpoint Avenue Bridge. (Credit: Sergey Parayev) Construction Project Manager Sergey Parayev and Associate Project Manager Vadim Sokolovsky at the Macombs Dam Bridge in September 2012.

During 2012, the following structures were also painted: Battery Park Underpass of the FDR Drive motor and control rooms, Bruckner Expressway Bridge over Bronx River (a.k.a. Eastern Boulevard Bridge) Bridge Operator House, Department of Transportation Ironworker Shop and Garage at 59<sup>th</sup> Street, Greenpoint Avenue Bridge over Newtown Creek Bridge Operator House, Third Street Bridge over Gowanus Canal Bridge Operator House, FDR Drive Southbound over FDR Drive Northbound Underpass motor and control rooms, Department of Transportation Facility at Wythe Avenue, Department of Transportation Facilities at the Harper Street Yard, Department of Transportation Ironworker and Carpenter Shops at Kent Avenue, Department of Transportation Facilities at South 6<sup>th</sup> Street, Department of Transportation Facilities at the Greenpoint Avenue Yard, and the Department of Transportation Facility at Plymouth Street.



## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

### **GRAFFITI REMOVAL**

In 2012, 3,424,805 square feet of graffiti were eliminated. This program focuses its primary attention on the four East River bridges, as well as the following 21 arterial highways: Clearview Expressway, Gowanus Expressway/Belt Parkway, Major Deegan Expressway, Harlem River Drive, Van Wyck Expressway/Whitestone Expressway, Brooklyn-Queens Expressway, Jackie Robinson Parkway, Sheridan Expressway, Hutchinson River Parkway, Henry Hudson Parkway, West Shore Expressway, Richmond Parkway, Martin Luther King Jr. Expressway, Staten Island Expressway, Bruckner Expressway, Prospect Expressway, Grand Central Parkway, Long Island Expressway, Cross Bronx Expressway, Nassau Expressway, and Bronx River Parkway.



Bridge Painter Herbert Rodriguez and Before and After Graffiti Removal on the Manhattan Bridge in August 2012. (Credit: Robert Avellino)

During 2012, graffiti was also removed from the following structures: Atlantic Avenue at Brooklyn-Queens Expressway, Atlantic Avenue over 57<sup>th</sup> Avenue, Austin Street over Grenfell Street, Cross Bay Boulevard south of the Cross Bay Bridge, Cross Island Parkway, FDR Drive, Furman Street, Grand Concourse over Burnside Avenue, Grand Concourse over East Tremont Avenue, Grand Concourse over East 204<sup>th</sup> Street, Harlem River Drive at Exit 21, Joseph P. Addabbo Memorial Bridge, Kneeland Avenue and Manilla Street, Lincoln Road and Flatbush Avenue, Macombs Dam Bridge, Metropolitan Avenue at Brooklyn-Queens Expressway, Monroe and Cherry Streets under the Manhattan Bridge, Old Fulton Street at Brooklyn-Queens Expressway, Pearl Street, Pennyfield Avenue, Prospect Avenue at Seeley Street, Pulaski Bridge over Newtown Creek, Queens Boulevard at Eliot Avenue, Richmond Parkway at Annadale Road, Victory Boulevard at Bay Street, Whitelaw Pedestrian Bridge over Conduit Avenue, Woodhaven Boulevard at 95<sup>th</sup> Street, Willis Avenue Bridge, West 53<sup>rd</sup> Street between 10<sup>th</sup> and 11<sup>th</sup> Avenues, East 191<sup>st</sup> Street and Broadway, West 191<sup>st</sup> Street Pedestrian Tunnel at Broadway (IRT #1 Subway), West 230<sup>th</sup> Street and Kappock Street, 74<sup>th</sup> Street at Long Island Expressway, Astoria Boulevard at Brooklyn-Queens Expressway, Cross Bay Boulevard at Joseph P. Addabbo Bridge, Ridge Boulevard, Queens Boulevard between Van Dam Street and Jackson Avenue, Lincoln Road, Westbound Long Island Expressway Entrance at Woodhaven Boulevard, Kneeland Avenue and Manilla Street, and the NYC Marathon route.

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***



April 2012: Supervisor Bridge Painter Robert Avellino, and Bridge Painters Louis Masucci and Goncalo Lima at Old Fulton Street over Brooklyn-Queens Expressway Wall. Bridge Painter William Budge.  
(Credit: Earlene Powell)

## ACCOMPLISHMENTS & PLANNED PROJECTS

### Engineering Review and Support

#### IN-HOUSE DESIGN

In-House Design staff prepares plans and specifications for bridge replacement/rehabilitation projects that enable the Division to restore bridges considered “structurally deficient” to a “very good” condition rating. This unit handles urgent Division projects, as well as special projects under construction by the Bureau of Bridge Maintenance, Inspections and Operations.

The unit continued the design of the Bryant Avenue Bridge over Amtrak and CSXT in the Bronx. This is a one span structure constructed in 1908, with a span length of 90 feet. This project includes replacement of the steel superstructure, bearings, approaches, water mains, and rehabilitation of both abutments. The proposed superstructure will consist of a reinforced concrete deck over prestressed concrete adjacent box beams. The two existing water mains will be removed, and replaced with two new pipes. Both water mains will be installed on top of the north sidewalk in a fenced-off area. Six existing Con Edison electrical conduits will be removed from the bridge. The construction of this bridge is scheduled to commence in spring 2014, and is expected to last eighteen months.



Assistant Civil Engineer Evgenia Campbell Conducting Measurements in April 2012 at the Bryant Avenue Bridge. (Credit: Alexander Berens) At the Bridge in September 2012: Civil Engineers Kirolos Dimian and Jagdish Patel, Assistant Civil Engineer Leonid Sagalovskiy, Interim Director of In-House Design Ferdinand B. John, and Civil Engineers Gregory Novofastovsky and Svetlana Kaganovskaya. (Credit: Alexander Berens)

In-House Design prepared the contract documents for the installation of nearly one and a half miles of concrete barriers at Cross Bay Boulevard southbound along the west cut line from the Addabbo Bridge to East 1<sup>st</sup> Road in Queens. A portion of the concrete barrier has already been installed by the Bridge Maintenance, Inspections and Operations Bureau, with the rest expected to be installed in the coming months.



## ACCOMPLISHMENTS & PLANNED PROJECTS



August 2012: Installing the Guiderail Over the Gaps Left for the Drainage Channels in the Segmental Concrete Barrier. Highway Repairer Robert Tuite, Assistant City Highway Repairers Luis Baez, Thomas McKenzie, and Leshawn Elam, Highway Repairer Gaetano Messina, Supervisor Highway Repairer Joseph Salonia, and Highway Repairer Ronald Whytock. (Credit: Thomas Whitehouse) Observing the Newly Installed Concrete Barrier at Cross Bay Boulevard in September 2012: Acting Director of Bridge Preventive Maintenance Paul Schwartz, Civil Engineers Gregory Novofastovsky and Jagdish Patel, and Interim Director of In-House Design Ferdinand B. John. (Credit: Evgenia Campbell)

As the designer of the ongoing contract to replace the Belt Parkway Bridge over Paerdegat Basin, this unit is currently involved in the construction support services.

In-House Design staff supervised the remedial work performed as part of a settlement agreement by the Design-Build contractor at Belt Parkway over Ocean Parkway.



Inspecting the Construction of the Belt Parkway Bridge over Paerdegat Basin in September 2012: Acting Director of Bridge Preventive Maintenance Paul Schwartz, Assistant Civil Engineer Evgenia Campbell, Interim Director of In-House Design Ferdinand B. John, and Civil Engineers Jagdish Patel and Gregory Novofastovsky. (Credit: Serge Rigaud) Observing the Completed Remedial Work at the Belt Parkway Bridge over Ocean Parkway in September 2012: Civil Engineer Gregory Novofastovsky, Interim Director of In-House Design Ferdinand B. John, Acting Director of Bridge Preventive Maintenance Paul Schwartz, and Civil Engineer Jagdish Patel. (Credit: Evgenia Campbell)

This unit also handled the following emergency projects that required expeditious response by the Division: the design of collision protection beams adjacent to the Westchester Avenue Bridge over the Hutchinson River Parkway to protect the bridge's superstructure from strikes by illegal trucks on the parkway, and the design of a pedestrian fence on the Navy Street Pedestrian Bridge.

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

Another project underway is the interim repair of the Henry Hudson Parkway Bridge from West 72<sup>nd</sup> Street to West 82<sup>nd</sup> Street. The Henry Hudson Parkway project was developed to the advanced design plans phase by NYSDOT, and then transferred to our Division. The In-House Design unit continued with the design. The rehabilitation work will include the repair or replacement of various deteriorated structural steel members, concrete deck, abutments, and the retaining walls. The construction work is scheduled to commence in the fall of 2015.

In-House Design's Electrical Group reviews and/or prepares contract documents for all electrical and street lighting work on all projects on the Division's Capital Program. Some of the contracts reviewed during 2012 included the Willis Avenue and Broadway Bridges over the Harlem River, the Wards Island Pedestrian Bridge over the Harlem River; the Union Street Bridge over the Gowanus Canal; the Belt Parkway Bridge over Paerdegat Basin in Brooklyn; the Roosevelt Island Bridge over East River Channel; the Manhattan Bridge, and the Ed Koch Queensboro Bridge.

### **ENGINEERING SUPPORT**

#### **BRIDGE PROJECT SPECIFICATIONS**

In 2012, the Specifications Unit of the Engineering Support Section prepared and/or reviewed contract proposal books and/or specifications for 21 contracts, including 17 bridge rehabilitation and new construction/reconstruction contracts and 4 non-bridge contracts, in addition to replying to specification requests for 2 on-going construction projects. Four of the above contracts totaling approximately \$267 million in construction costs were advertised for bid and were bid in 2012.

Notable among the construction contracts prepared and /or reviewed, advertised and sent for bid were: the component rehabilitation of ten bridges citywide, the reconstruction of the Belt Parkway Bridge over Gerritsen Inlet, and the replacement of the City Island Bridge over Eastchester Bay.

The unit also updated the federal boiler plate to reflect 2012 FHWA-1273 and NYSDOT updates, updated the Guidelines for Preparation of Contract Proposal Book and advised the Department of Design and Construction and Agency Divisions on several contract related issues.

#### **CONVERSION OF DIVISION ENGINEERING ARCHIVES**

The Records Management Unit converted 77,244 TIFF (Tag Image File Format) drawings to PDF (Portable Document Format) format and completed the indexing of 51,932 drawings. Some 200,000 TIFF drawings will be converted to PDF format.

The switch to electronic media and server-based archiving will save money on drawing submissions as well, and will lead to the establishment of a unified electronic database for bridge archives. Digitizing documents and storing them online, where they are easy to access and print, will simplify contract submission process and cut project costs in a long run.

The Records Management unit also reviewed and approved as-built drawings and contract drawings for 22 contracts in 2012, including Hamilton Avenue Bridge over the Gowanus Canal, Annadale Road Bridge in Staten Island, East 78<sup>th</sup> Street Pedestrian Bridge over the FDR Drive, Borden Avenue Bridge over Dutch Kills, Greenpoint Avenue Bridge over Newtown Creek, Grand Concourse over 161<sup>st</sup> Street / Grand Concourse East 161<sup>st</sup> to 166<sup>th</sup> Street, and the Williamsburg Bridge.

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

### **SURVEYING AND LOAD RATING**

Unit staff monitored five bridges and one retaining stone wall in 2012: Depot Place Bridge over Conrail Yard, Third Street Bridge over Gowanus Canal, Pelham Parkway Bridge, Stone Arch Bridge in Central Park, Ninth Street Bridge over Gowanus Canal, and the retaining stone wall on Cannon Place. The unit also conducted the measurements of the bridge clearance, field survey, elevations, and benchmarks set up for the Westchester Avenue Bridge over Hutchinson Parkway.

### **ENGINEERING REVIEW**

#### **MACY'S THANKSGIVING DAY PARADE**

As in past years, the staff of the Engineering Review Section actively participated in the 2012 Macy's Thanksgiving Parade. Months before the parade, the engineers reviewed the balloon specifications and flight analyses, and were involved in walkthroughs along the parade route to ensure the adequacy of the available envelope and the removal of any obstructions. This project was coordinated with Macy's and various City agencies such as City Hall, NYPD, DOB, and OEM.

#### **CRP/EXTELL PARCEL H PROJECT**

The CRP/Extell Parcel H, LP project (Riverside Drive between 59<sup>th</sup> and 72<sup>nd</sup> Streets) includes the construction of seven new bridges, a ramp, two relieving platforms, and connector roads along Riverside Drive as a part of the residential and commercial development over the former Penn Central Rail Yard. The project also includes a half tunnel section in what was formerly known as the Miller Highway Tunnel. When completed, the infrastructure network will be transferred to DOT for maintenance. The Division is providing engineering review of the design drawings, as well as quality assurance inspections, to ensure the developer's compliance with DOT's construction and design standards. The bridges are substantially completed and open to traffic. The first phase of construction for the half tunnel section is complete and phase two is in progress.

### **RETAINING WALLS**

646 City-owned retaining walls (along major streets and highways) have been inspected and inventoried since 2005, 45 of which have been estimated to be in fair to poor condition. Out of the 45 walls, 28 retaining walls have been scoped and forwarded to DDC with capital funding for rehabilitation. These retaining walls are now in various stages of design and construction. DDC has been requested to accelerate the rehabilitation of walls that are being forwarded to them. The retaining walls which are in fair to poor condition will be in a capital program for future rehabilitation.



## ***ACCOMPLISHMENTS & PLANNED PROJECTS***



Riverside Drive Retaining Walls: Riverside Drive Between West 99<sup>th</sup> Street and 104<sup>th</sup> Street, and Riverside Drive Between West 158<sup>th</sup> Street and West 165<sup>th</sup> Street. Riverside Drive Retaining Walls: Left Side of Riverside Drive Northbound, Holds Ramp to George Washington Bridge.

### **OVERWEIGHT TRUCK PERMIT REVIEWS**

The Overweight Truck Permit Unit receives an average of 100 permit applications per week for overweight/over-dimensional trucks, self-propelled cranes, and occasional superload moves from utility companies crossing City-owned bridges, including critical bridges such as the Manhattan and Ed Koch Queensboro Bridges. Most of the permit requests must be reviewed and approved on the same day.

### **PROJECT SCOPING**

The unit prepared the total design scope for the rehabilitation of the Riverside Drive Bridge over West 158<sup>th</sup> Street. This viaduct is located between West 153<sup>rd</sup> Street and West 161<sup>st</sup> Street. It is approximately 1,924 feet long and has 77 spans. It consists of intermittent straight portions, and six curves of different radii. The bridge carries four lanes (two each way). The superstructure is made of two types of framing. The northern part is a steel bent type structure, whereas the southern part is a steel cantilever type structure with half of the deck over Amtrak railroad tracks. The area below the entire bridge is utilized for storage of Agency vehicles and roadway maintenance materials. Construction is expected to begin in 2017.

### **BRIDGE SEISMIC DESIGN AND RETROFITTING**

The seismic retrofitting of bridges in New York City is part of the inspection and rehabilitation program mandated by Congress and administrated by the FHWA through the local authorities. During the period of 1993 to 1996, four major bridge owners in the New York City area (NYCDOT, NYSDOT, MTA, and the Port Authority of New York and New Jersey) retained seismologists to study hard rock seismic ground motions. The rock motions generated by these studies differed from each other and from the AASHTO spectrum as modified by NYSDOT. The differences were such that the resulting retrofit costs varied widely, depending upon which motions were adopted. To resolve this issue, NYCDOT, in association with NYSDOT and the FHWA, retained a consultant to assemble an expert panel to develop recommendations for rock motions that would be adopted uniformly by the New York City region. The panel consisted of a team of six internationally recognized experts in the fields of seismology, geology, earthquake engineering, ground motion, and geotechnical studies. There were several brainstorming

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

workshops held in New York, where the senior officials from NYCDOT, NYSDOT, and the FHWA provided their input to the panel members.

The expert panel formulated recommendations regarding rock motions and corresponding time histories. Subsequently, the consultant derived soil generic response spectra, based on the hard rock motions and NEHRP amplification factors. The consultant also established bridge performance criteria to be used for critical, essential or other bridges undergoing structural analyses. The recommendations are described in the report entitled "New York City, Seismic Hazard Study and its Applications, Final Report, December 1998." This report is now extensively used by NYCDOT, NYSDOT, the FHWA, their consultants, and other agencies in the New York area for bridge projects. Thus, NYCDOT's leading role and efforts to establish ground motion standards have brought uniformity in seismic design to the New York City area.

In 2002, the consultant convened a second panel of seismologists to update the 1998 Hazard Study and associated rock motions. On June 3, 2004, after the USGS national hazard maps were adopted by NEHRP, in a meeting attended by NYCDOT, NYSDOT and FHWA, it was unanimously agreed to adopt the new hard rock ground motions recommended by the panel of seismologists.

Following the adoption of the very hard rock motions, the consultant started the preparation of a new edition of the NYCDOT Seismic Design Guidelines for Bridges. Data from geotechnical bridge studies performed within the five boroughs of NYC were compiled. A series of generalized subsurface soil and bedrock profiles were developed to be representative of the range of soil profiles, overburden thickness, and rock types found within NYC. A fully probabilistic approach, utilizing Random Vibration Theory (RVT) in conjunction with the new hard rock ground motions, (from the 2002 Hazard Study) and the generalized NYC subsurface profiles, was used to develop vertical and horizontal Uniform Hazard Spectra (UHS), which, in turn, served as the starting point to derive design rock and soil response spectra. The method allowed computation of soil UHS, while preserving the hazard level of the very hard rock UHS. It accounted, in a rigorous probabilistic manner, for variations and uncertainties in soil stiffness, stress-strain nonlinearity, and material damping; depth of soil to rock; and, stiffness of the rock under the soil.

Generic horizontal and vertical design spectra were derived using the calculated UHS as the starting point. Generic design V/H ratios to be used in site-specific studies to generate site specific vertical motions, were also produced. All the generic soil curves are presented as a function of three parameters: soil class; depth to rock; and, rock class under the soil.

The development of these parameters for the NYCDOT Guidelines represent a significant improvement to the previous guidelines and other codes, since it will result in better representation of the ground motions at a bridge site, bringing closer the generic ground motions to those that could be obtained from site-specific studies. The fact that the new guidelines better fit the specific characteristics of the NYC region, will permit the engineers to evaluate the need for retrofitting existing bridges or strengthening new ones at the right places.

Recommendations for liquefaction evaluation are also provided in the guidelines, including recommendations for earthquake magnitude and peak ground surface accelerations, which are critical parameters for evaluating liquefaction potential and which have not been included in previous guidelines. The new document also includes recommendations for site-specific studies, providing guidelines and minimum requirements that must be satisfied. These include: procedures to establish soil horizontal and vertical design motions; recommendations to evaluate the effects of the depth to the rock surface; recommendations to account for uncertainties in the soil properties; minimum requirements to establish lower bound horizontal design motions; recommendations for time history analysis of bridges; recommendations for the incorporation of spatial variation effects in the analysis; and different requirements for critical and non-critical bridges site-specific studies.

The final draft of the new NYCDOT Seismic Design Guidelines for Bridges was submitted to NYSDOT for peer review in September 2008. Upon completion of their review, these guidelines

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

will be adopted for the seismic and retrofit design of bridges in New York State. The review is expected to be complete by the end of March 2013.

### **ENVIRONMENTAL ENGINEERING**

In 2012, the Environmental Engineering staff of the Quality Assurance section continued to provide expertise and oversight of the various environmental issues of the reconstruction of the Paerdegat Basin Bridge, Rockaway Parkway Bridge and Fresh Creek Bridge in the Belt Parkway Project. This includes monitoring and oversight of wetland restorations, management of storm water erosion and run off controls, asbestos and lead paint abatement, hazardous waste management, spill control/management, and groundwater/soil management.

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

### ***Bridge Maintenance, Inspections and Operations***

#### **EAST RIVER BRIDGES ANTI-ICING PROGRAM**

Traditional snow and ice control practices rely heavily on the use of salt, a material known to corrode steel and accelerate the deterioration of concrete and asphalt surfaces. A new method of snow and ice control was needed to protect the City's \$2.5 billion investment in the rehabilitated East River Bridges. This method, known as anti-icing, involves the application of a chemical freezing point depressant to the roadway surface to prevent snow and ice from bonding to the roadway. Frequent plowing removes any accumulation of unbonded snow or ice before traffic is affected.

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.

New anti-icing yards storing both chemicals have been established under all four East River bridges. Supervisors monitor the bridge decks during storm events by traversing them and using thermal instrumentation installed in their vehicles to make informed decisions as to when to apply chemicals. GPS capabilities have been installed in key vehicles to assist supervisors with the decision making process.

In the winter of 2011-2012, a total of 12,800 gallons of potassium acetate and 43.5 tons of sodium acetate were applied on the roadways of all four East River Bridges.

#### **INSPECTIONS**

In 2012, Inspections covered 103 bridges and 622 spans. Emphasis was placed on ensuring public safety through the monitoring of potentially hazardous conditions and temporary repairs. The unit performed 479 monitoring inspections, and 105 special winter monitoring inspections of cellular structures, shorings, and potential fire hazards. In addition, 151 emergency inspections were conducted in response to hot line calls, in-house requests, or citizen complaints.



Inspecting the Belt Parkway Bridge over 26<sup>th</sup> Avenue in December 2012. (Credit: Artemio Angeles) Inspecting the Nereid Avenue Bridge over Bronx River Parkway in June 2012, Using a 60 Foot Boom With Outriggers. (Credit: Bojidar Yanev)

Beginning on October 30, 2012, Bridge Inspection staff responded to Hurricane Sandy with emergency inspections of all the potentially affected areas. Starting with the East River bridges, a number of structures were declared safe for travel throughout the day. Flooded areas were identified on the FDR Drive in Manhattan and on the Belt Parkway in Brooklyn and Queens. Post-hurricane emergency and monitoring inspections continued over the following weeks. As



## ***ACCOMPLISHMENTS & PLANNED PROJECTS***

part of the upgrades following the storm, Bridge Inspection staff will relocate their field office in March 2013.

The Bridge Data System (BDS) allows inspection reports to be generated and transmitted electronically. It provides access to data from the latest inspection reports on all bridges to all Division units. In addition, when an emergency arises, our inspectors are able to send photographs and other information to the main office via a wireless connection to the internet. This feature enables bridge repair engineers to assess the condition and dispatch repair crews with the appropriate equipment in a timely manner. The updated version of the system was field tested by the contractor and the Bridge Management Unit in 2012 and is scheduled for full implementation in March 2013.

A future contract is anticipated to expand the BDS capabilities by incorporating data from capital reconstruction projects. Additional features will include in-depth inspection reports by consultants as well as GPS data.

Since 2002, the Division stores all bridge inspection reports in electronic format. Flag reports are now also transmitted electronically. As of September 2003, standard inspection work is funded by a federal grant. Emergency response inspections and administrative support remain city funded.

The Bridge Management Unit developed a map of truck routes and bridges under capital contracts for the purposes of the Truck Permits Unit. This unit also provided Bridge Maintenance with estimates of the life-cycle benefits of various maintenance tasks, obtained by the software package designed for that purpose.

### **NON-DESTRUCTIVE TESTING**

The Bridge Inspection and Management Units have pioneered the use of various nondestructive tests on City bridges, including X-ray diffraction, fiber optics, strain-gauging, ground penetrating radar, and ultrasonic testing. Future applications of such technologies are under consideration. For demonstration purposes, the Manhattan Bridge was surveyed with a radar scanner. The results indicated that the stiffening of the bridge has reduced its torsional motion under subway traffic very significantly. The results matched independent measurements by Global Positioning Systems (GPS).

In November 2010, the cable research project moved to its final phase as sensors were installed on Cable "D" of the Manhattan Bridge with the help of bridge maintenance personnel. The data collection from the instruments in the cable was concluded in October 2011. The final report will recommend appropriate non-invasive technology for monitoring of suspension cables.

As part of the project, a unique magnetic flux field test was conducted on the cable. The method was developed by Japanese researchers specifically for this test. Its purpose is to estimate the amount of healthy steel in the cable without exposing the wires. The findings were presented at the Agency by the researchers in February 2011. This capability will be considered for future inspections of suspension cables.

In March 2012, Bridge Management staff organized a presentation on 3D Laser Scanning, known as LiDAR. LiDAR can take extremely accurate high resolution 3D images of structures in a static mode or, while mounted to a vehicle in a lower resolution, in a dynamic mode. This technology would be helpful in such areas as documenting the damage caused by extreme events, such as vehicular impact, earthquake, and flood. The technology is also considered for mapping the clearances over City bridges.

In 2012, the Bridge Management Unit awarded a contract for the design and installation of a real time on-line system monitoring of the abutments of three bridges in the Bronx identified as vulnerable to scour. As a first step, the consultant inspected the sites in-depth, and the findings

## **ACCOMPLISHMENTS & PLANNED PROJECTS**

resulted in emergency repairs conducted by the Where and When Unit.

Various inaccessible bridge details are inspected by borescope. The bridge carrying the Belt Parkway over Ocean Parkway was inspected with the borescope in order to assist the Engineering Review Section in developing appropriate repair recommendations. Based on the findings of the borescope inspection, the approaches of the bridge were scanned with ground penetrating radar, and the results formed a basis for the overall structural assessment.

### **CLEANING**

In 2012, 9,719 cubic yards of debris were removed from bridges and their surrounding areas, and 1,492 drains were cleaned.



Water Spraying the 9<sup>th</sup> Street Bridge over Gowanus Canal in July 2012.

### **PIGEON DETERRENCE**

Excessive numbers of pigeons cause property deterioration, unsafe working conditions and health hazards. Besides being unsightly, accumulation of pigeon droppings and feathers is corrosive to steel structures and raises concerns about health hazards. Many disease organisms have been associated with pigeons. They harbor ectoparasites which can infest or bite humans. Pigeon droppings also harbor fungi that can trigger serious, even fatal, lung diseases such as Histoplasmosis, Cryptococcosis and Toxoplasmosis, when the spores are transmitted to humans who breathe in the harmful dust.

The Division utilizes a relatively low tech, and passive, approach to deterring pigeons. In 2006, the type of barrier used to cage out pigeons was changed from the drop ceiling method to netting. The netting is supported by steel cables that are clipped to the beams. This method is currently in use under the Brooklyn Queens Expressway (over Prospect Street), at the Pulaski Bridge, under the Brooklyn Bridge at "Ash Alley," and at the anti-icing tank storage area under the Brooklyn Bridge at Dover Street. In addition, a pigeon deterrent system involving low voltage wires is in place at the Belt Parkway Bridge over Ocean Parkway. The wires are installed along the web of the girders and are hardly visible, yet highly effective. The system has been in operation for over six years now and no pigeons have been observed under or by the bridge ever since. The community is pleased that we addressed one of their most serious and longstanding complaints. The system requires minimum maintenance and is extremely easy to operate.

In 2012, we experimented with a new method at the Cross Island Parkway Bridge over Totten Avenue: a gel, whose active ingredient is capsaicin, that is applied to the spots unwanted birds would normally perch. Our trial was given positive reviews by the constituents who use the treated overpass.

In 2012, pigeon dropping removal and/or pigeon proofing were performed at the Bruckner Expressway over Bronx River (a.k.a. Eastern Boulevard Bridge), the Whitestone Expressway and

## ACCOMPLISHMENTS & PLANNED PROJECTS

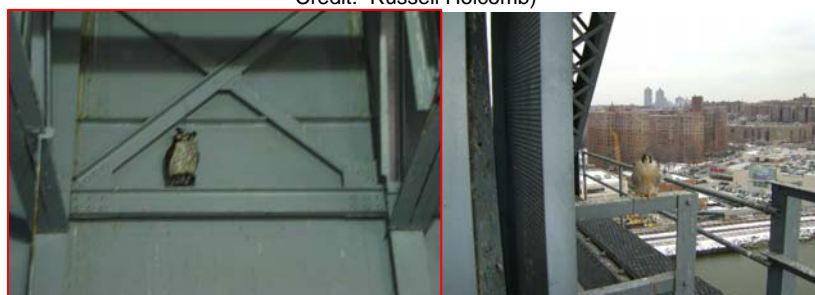
Cross Island Parkway Interchange, the Broadway Bridge, the Hutchinson River Parkway Bridge, the Cross Island Parkway Bridge over Totten Avenue, Queens Boulevard at Eliot Avenue, the FDR Drive at the South Street Viaduct, and Park Avenue over 41<sup>st</sup> Street.



Installing Pigeon Netting at Old Slip (FDR Drive at the South Street Viaduct) in June 2012: Carpenters Stephen Buckley, William Sic, and Joseph Moschella, and Supervisor Carpenter Joseph Vaccaro. (Credit: Thomas Whitehouse)



Nature's Pigeon Deterrent—A Falcon on the Brooklyn Bridge South Side Tower. Falcon at the Brooklyn Bridge Manhattan Tower Top in July 2010. Falcons Have Lived on the Brooklyn Bridge Since 1995. Falcon Family on the Williamsburg Bridge. According to the New York State Department of Environmental Conservation, New York State now has the largest population of peregrines in the eastern United States. There Are Now 17 Falcon Pairs in New York City. (Family Credit: Russell Holcomb)



"Owl" Guarding the Machinery Room of the Broadway Bridge. A Hawk on the Broadway Bridge. (Owl and Hawk Credit: Albert Hong)

## BRIDGE CLASSIFICATION

The Coast Guard regulations, which govern the operation of the City's movable bridges, define the owner's responsibility to the mariner by classifying a bridge as "open on demand" or "open on advance notice." An "on demand" bridge provides an immediate opening to any vessel wishing to pass the bridge. An "advance notice" bridge opens after the mariner requests an opening several hours in advance. "On demand" bridges must be staffed at all times. "Advance notice" bridges are staffed only when necessary. DOT redesigned the work process in order to reduce personnel costs to the City and improve the delivery of services to the maritime community.

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***



Pulaski Bridge Opening in February 2010. (Credit: Bernard Ente) Third Street Bridge Opening in June 2012. (Credit: Nikita Gupta)

In October 2000, the Department implemented the United States Coast Guard-approved changes, establishing a four-hour notice for the Harlem River bridges, and a two-hour notice for the remaining “advance notice” bridges. The “on demand” classification remains for three bridges. The revised advance notice requirements allowed the formation of mobile crews with overlapping responsibilities, meeting the mariners’ needs and, in some instances, improving service by providing two mobile crews to expedite a vessel’s travel along a waterway.

The reduction in planned personnel saves approximately \$1,042,480 annually. In addition, bridge operational capabilities, general maintenance, and debris and snow removal have been enhanced through the more efficient utilization of existing personnel.

Currently in its final design phase, the reconstruction of the Mill Basin Bridge (part of the second Belt Parkway Group) is scheduled to start in summer 2013. The new bridge will be 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.

The Shore Road Bridge over Hutchinson River will be replaced with a new bridge built with a higher clearance, thereby reducing the number of times the bridge must be opened. At that time, we can determine if advance notice is justified.



## **ACCOMPLISHMENTS & PLANNED PROJECTS**

### **Summary of Vessel Openings 1998 - 2012**

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Brdn Ave. (Q)	0	3	0	28	0	0	0	1	0	0	0	0	0	0	0
Brdwy (B/M)	2	0	6	27	83	49	16	2	18	42	58	57	15	11	44
Brecknr Expwy (Estrn Blvd) (B)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brecknr Expwy (Unnpnt Brdg) (B)	257	345	385	420	332	300	309	253	250	281	323	349	308	198	143
Carroll St. (K)	110	174	102	80	124	186	49	22	28	13	38	91	146	29	95
Grand St. (K/Q)	23	24	17	50	19	10	8	5	2	5	0	0	0	3	3
Grnpoint Ave. (K/Q)	669	787	688	641	659	738	1093	1045	905	641	485	428	388	667	733
Hmltn Ave. (K)	996	982	933	832	946	824	757	677	1077	354	0	150	905	1060	965
Hntrs Point Ave. (Q)	0	1	0	36	0	0	0	0	0	1	0	0	0	0	0
Htchnsn River Pkwy (B)	75	46	5	120	30	5	37	10	2	51	61	170	224	169	197
Macombs Dam (B/M)	0	0	0	0	0	0	0	0	0	4	2	0	3	1	22
Mdsn Ave. (B/M)	0	0	0	0	0	0	7	0	9	35	8	0	3	1	6
Metrlptn Ave. (K)	448	513	279	366	339	342	153	0	104	329	245	240	254	413	468
Mill Bsn (K)	591	433	336	317	142	173	164	162	174	182	190	183	197	236	277
Pulaski (K/Q)	332	383	276	208	308	599	694	734	433	489	639	611	467	591	476
Rsvlt Islnd (M/Q)	4	0	58	48	125	63	669	150	54	48	0	62	0	0	55
Shore Rd (Pelham Pky) (B)	2274	2162	2168	2222	1897	1910	2011	1683	1704	1645	1446	806	1197	811	613
Union St. (K)	103	144	85	101	62	24	21	11	9	5	10	28	32	4	36
Ward's Isnd Pdstrn (M)	1	0	0	279	0	0	7	2	8	4	6	3	5	0	0
Willis Ave. (B/M)	0	4	4	40	0	7	25	2	41	67	17	9	1	1	0
3 <sup>rd</sup> Ave. (B/M)	0	2	1	1	0	0	0	0	6	60	7	0	3	3	4
3 <sup>rd</sup> St. (K)	112	157	178	117	212	152	99	43	31	39	49	89	74	27	68
9th St. (K)	0	192	513	808	733	547	457	360	480	333	287	387	475	670	585
145 <sup>th</sup> St. (B/M)	0	0	1	6	0	0	9	0	0	0	0	0	0	1	6
W.207 <sup>th</sup> St. (B/M)	2	0	6	14	4	6	10	1	12	24	2	3	7	5	23
<b>TOTAL</b>	<b>5999</b>	<b>6352</b>	<b>6041</b>	<b>6761</b>	<b>6015</b>	<b>5935</b>	<b>6595</b>	<b>5163</b>	<b>5347</b>	<b>4652</b>	<b>3873</b>	<b>3666</b>	<b>4704</b>	<b>4901</b>	<b>4819</b>

## ACCOMPLISHMENTS & PLANNED PROJECTS

### RESEARCH AND PRESENTATIONS

In 2012, research work and/or case histories of the Division were presented in the following proceedings:

Transportation Research Board 91<sup>st</sup> Annual Meeting, Washington D.C., 22 – 26 January 2012. Yanev, B. and Kroely, B. *The Bridge Data Management System of NYC DOT*.

Iranian-American Society of Architects and Engineers, New York City, 2 February 2012. Hedayati, A. *Replacement of the Willis Avenue Bridge over the Harlem River*.

Metals in Construction, Spring 2012, Pages 36 – 41. *Paerdegat Basin Bridge*.

2012 American Society of Highway Engineers National Conference: Life is a Highway. Seven Springs, Pennsylvania, June 7 - 10 2012. Nyman, W. E., with introduction by Collyer, R. *Replacement of the Willis Avenue Bridge over the Harlem River*.

29<sup>th</sup> Annual International Bridge Conference, Pittsburgh, Pennsylvania, 10 – 13 June 2012. Nyman, W. E. *IBC 12-47: Willis Avenue Bridge*.

SMT 2012 Conference: NDE/NDT for Highways and Bridges - Structural Materials Technology (SMT), New York City, 21 – 24 August 2012. Yanev, B. *The Value of Redundant NDE Evaluations in the Management of Long Span Bridges*.

Heavy Movable Structures 14<sup>th</sup> Biennial Movable Bridge Symposium, Orlando, Florida. 22 – 25 October 2012. Rahul, S. *Willis Avenue Swing Bridge Construction*.

In October 2012, Dr. Yanev was invited to Japan by the Metropolitan Expressway Company, who operate and maintain the Shuto Expressway, a network of toll expressways in the Greater Tokyo Area. He joined them in a discussion and inspection of bridges under consideration for rehabilitation or replacement.

International Jubilee Conference, UACEG2012: Science & Practice, Sofia, Bulgaria. 15 – 17 November 2012. Yanev, B. *Probability and Determinism in Bridge Management*.

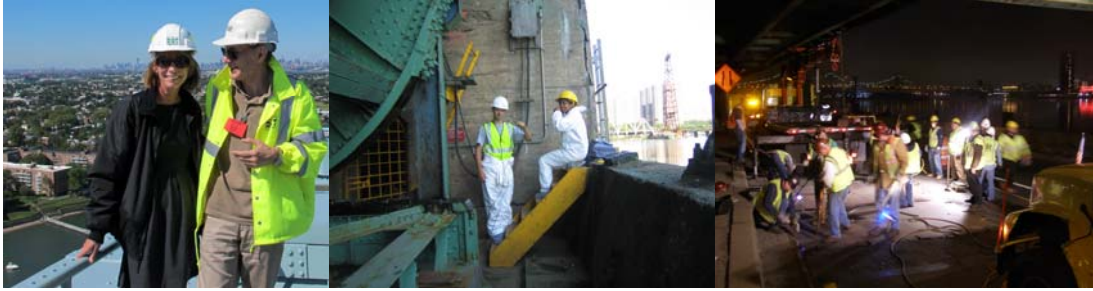
Conference on Cable-Supported Bridges, IFSTTAR, Département Structures et Ouvrages d'Art, Nantes, France. 27 – 28 November 2012. Yanev B. *Suspension Bridge Cables: A Balance of Empiricism, Analysis and Management*.

The FHWA project “Structural Safety Appraisal Guidelines for Suspension Bridge Cables” with principal investigator, Columbia University, in which Dr. Yanev and the Agency participated, was completed in 2012. The final report is due for publication in 2013.

Dr. Yanev is a member of the Transportation Research Board Committees on Bridge Maintenance, Management, and Seismic Design.

In addition, the Division sponsors an in-house lecture series, inviting speakers from industry and academia several times a month. Highlight topics of the presentations in 2012 included: Software solutions for inspections and asset management, bridge deck membranes, mobile and static scanning technology, galvanization, rust and enamel grips, monitoring of bridge dynamic response, asphaltic bridge joints, and SMART load rating technology.

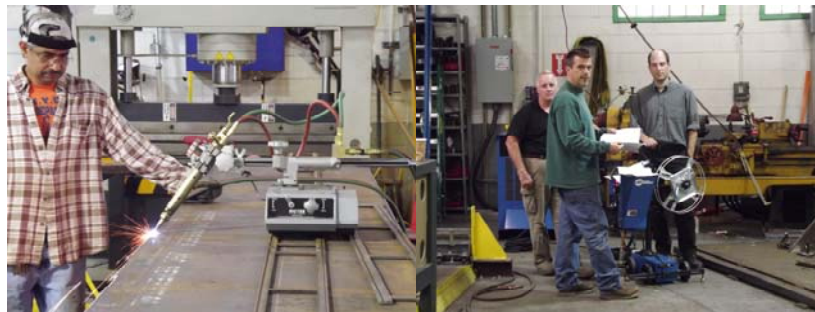
## ACCOMPLISHMENTS & PLANNED PROJECTS



August 2012 – Commissioner Janette Sadik-Khan and Executive Director of Bridge Inspections and Bridge Management Dr. Bojidar Yanev. July 2012 – Shore Road Bridge: Summer College Interns Kevin Hillery and Nikita Gupta Observing the Strain Gauge Wires During a Bridge Leaf Opening. (Credit: Vera Ovetskaya) March 2012 - FDR Drive at 40<sup>th</sup> Street, Northbound. With Con Ed Personnel in Attendance, Crews Removed Roadway Plates Over an Abandoned Con Ed Coal Tunnel. Spalled and Broken Concrete and Localized Settlement Were Observed. After the Inspection, the Plates Were Re-installed and Ramped. (Credit: Bojidar Yanev)



Bridge Maintenance Personnel Building a New Prototype Pedestrian Fence in April 2012. Standing: Director of Bridge Repair Pinakin Patel, Bridge Repairer and Riveter Charlie Zhao, Acting Director of Bridge Preventive Maintenance Paul Schwartz, and Bridge Repairer and Riveters Ignazio Trapani and James Philip. Foreground: Executive Director of Bridge Preventive Maintenance and Repair Thomas Whitehouse. Broadway Bridge Fender System Rehabilitation Work in August 2012: Administrative Engineer Sunil Desai, Assistant Civil Engineer Li Yi, and Civil Engineer Antoine Aubourg.



In September 2012, Bridge Maintenance Personnel Fabricated a Mock-Up Overheight Protection Beam for the Westchester Avenue Bridge over Hutchinson River Parkway. This Enabled the In-House Design Engineers to Prepare the Final Shop Drawings. Bridge Repairer and Riveter James Philip Using a Track-Mounted Torch to Bevel the Edge of the Steel Plate. Electrician Patrick Fitzgerald, Supervisor Bridge Repairer and Riveter John Jones, and Acting Director of Bridge Preventive Maintenance Paul Schwartz Discussing the Next Step in Setting up the Sub-Arc Welder for Fabrication of the Beam.

## ***ACCOMPLISHMENTS & PLANNED PROJECTS***



The Sub-Arc Welder Provides a Purer Weld With Less Contaminants From the Atmosphere. The Beam. (Credit: Thomas Whitehouse)



December 2012: Preparing a Footing for a Concrete Pad That Will Hold Office Trailers and Storage Containers in the Vernon Boulevard Yard Under the Ed Koch - Queensboro Bridge. (Credit: Thomas Whitehouse)



## Appendix A

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### BRIDGE CAPITAL PROGRAM

East River Bridge Rehabilitation Plans	A-1
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Bridges Under Construction	A-2
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Component Rehabilitation	A-3
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Bridges Under Design	A-4
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<b>MANHATTAN BRIDGE</b> REHABILITATION ITEMS TOTAL ESTIMATED COST	
	Est. Cost (\$ in millions)
• Repair floor beams. (1982)	0.70*
• Replace inspection platforms, subway stringers on approach spans. (1985)	6.30*
• Install truss supports on suspended spans. (1985)	0.50*
• Partial rehabilitation of walkway. (1989)	3.00*
• Rehabilitate truss hangers on east side of bridge. (1989)	0.70*
• Install anti-torsional fix (side spans) and rehabilitate upper roadway decks on approach spans on east side; replace drainage system on approach spans, install new lighting on entire upper roadways east side, including purchase of fabricated material for west side of bridge. (1989)	40.30*
• Eyebars rehabilitation - Manhattan anchorage Chamber "C." (1988)	12.20*
• Replacement of maintenance platform in the suspended span. (1982)	4.27*
• Reconstruct maintenance inspection platforms, including new rail and hanger systems and new electrical and mechanical systems; over 2,000 interim repairs to structural steel support system of lower roadway for future functioning of roadway as a detour during later construction contracts. (1992)	23.50*
• Install anti-torsional fix on west side (main and side spans); west upper roadway decks, replace drainage systems on west suspended and approach spans; walkway rehabilitation (install fencing, new lighting on west upper roadways and walkways); rehabilitate cables in both Brooklyn and Manhattan anchorage chambers; dehumidify Brooklyn and Manhattan anchorages. (1997)	141.82*
• Installation of test panels. (1982)	1.55****
• Removal of existing suspender ropes and sockets in the suspended spans; replacement with new suspender ropes and sockets in the suspended spans and re-tensioning of suspender ropes bearing plates; re-tensioning of cable band bolts; removal of existing main cable wrapping; cleaning of main cables; application of new protective paste on main cables; replacement of new main cable wrapping; reinforcement of truss verticals and gusset plates. Replacement of necklace lighting and multirotational bearings at truss "C" and "D," installation of access platforms at towers, rehabilitation of south upper Roadway Lighting. (2010)	149.38**
• Interim Steel Rehabilitation and Painting - cable and saddle repairs lower roadway floorbeams @PP 37/38 on approaches and at anchorages; west side truss rockers and grillages on approaches; cable and suspender repairs. Removal of parking desk. Painting entire west side, all four cables. (2001)	127.98*

**MANHATTAN BRIDGE**  
**REHABILITATION ITEMS**  
**TOTAL ESTIMATED COST**

	Est. Cost (\$ in millions)
<ul style="list-style-type: none"> <li>Stiffening of Main Span; Reconstruction of North Subway framing; reconstruction of North upper roadway deck at suspended spans; rehabilitation of north approach span trusses; replace overlay on north upper roadway approach spans; rehabilitation of north elevated structures and subway tunnels; removal of railing on truss "D" in the north spans; painting of north side of bridge; new inspection platforms and debris protection in approach spans; construction of new north bikeway, replacement of approach span bearings and grillages; installation of Intelligent Vehicle Highway System for North and South Upper Roadways as well as for Lower Roadway. (In Progress)</li> </ul>	184.78*
<ul style="list-style-type: none"> <li>Rehabilitation of Lower Roadway; rehabilitation of anchorage roofs under lower roadway; rehabilitation of substructures and retaining walls in Brooklyn and Manhattan approaches; installation of new signage on bridge and at plaza areas; installation of new lighting on lower roadway and plaza areas; clean and paint lower roadway; installation of grating platform under towers at lower roadway; canopy lighting at towers. (Present)</li> </ul>	143.80*
<ul style="list-style-type: none"> <li>Seismic Retrofit. (2020)</li> </ul>	40.00
	to
	60.00***
<b>TOTAL:</b>	<b>\$ 880.78</b>
	to
	<b>\$ 900.78</b>

- \* Construction Complete
- \*\* In Construction
- \*\*\* In Design
- \*\*\*\* Research and Development (completed)

Revised 10/31/11, No change

## APPENDIX A-1

## ED KOCH QUEENSBORO BRIDGE

REHABILITATION ITEMS  
TOTAL ESTIMATED COST

Est. Cost  
(\$ in millions)

- |   |          |
|---|----------|
| • Repair lower outer roadways / reconstruct two ramps in lower Queens. (1984)                                   | 18.80*   |
| • Reconstruct south upper roadway, replace inspection platforms, lighting. (1986)                               | 31.50*   |
| • Interim rehabilitation, contracts A, B, & C (repairs to lower deck and main bridge approaches). (1985)        | 2.80*    |
| • Interim rehabilitation, contract D (repairs to lower deck, main bridge, and new median barrier). (1988)       | 3.00*    |
| • Reconstruct north upper roadway and Queens approaches A & B, rehabilitate bearings at Queens approach. (1989) | 50.00*   |
| • Reconstruct ramps C & D (Queensboro only, not Thompson Avenue). (1988)  | 10.40*   |
| • Rehabilitate bridge bearings, pier tops, and truss lower chords. (1989)                                       | 18.00*   |
| • Rehabilitate Queens approach trusses, lower inner roadways on the main span and approaches. (1996)            | 172.00*  |
| • Rehabilitate lower outer roadways main span and approaches, (bikeway) cleaning and painting. (2001)           | 227.05*  |
| • Cleaning and painting main bridge upper trusses. (2009)   | 168.24*  |
| • Miscellaneous Items – Component Rehabilitation. (In Progress)   | 43.88*   |
| • Eye bar investigation. (In Progress)  | 0.62**** |
| • Seismic Retrofit. (2020)  | 40.00    |
|   | to       |
|   | 60.00*** |
| • Installation of aviation lighting (2010)  | 1.76*    |

**TOTAL:**    \$   788.05  
                to  
               \$   808.05

- \* Construction Complete
- \*\* In Construction
- \*\*\* In Design
- \*\*\*\* Research and Development

Revised 10/15/12



<b>WILLIAMSBURG BRIDGE</b> REHABILITATION ITEMS TOTAL ESTIMATED COST	
	Est. Cost (\$ in millions)
• Replace main span outer roadway. (1983)	11.20*
• Replace one third of suspenders. (1984)	3.20*
• Repair pier 20E foundation, and replace bulkhead. (1986)	2.30*
• Paint side spans and towers. (1985)	1.10*
• Paint main and approach spans. (1989)	4.24*
• Emergency interim repairs. (1989)	10.00*
• Install temporary hand-rope system on main cables. (1990)	0.63*
• Main cable preservation (field test - oiling). (1991)	0.44*
• Main cable strand splicing at Manhattan anchorage. (1991)	0.29*
• Interim pedestrian walkway. (1994)	1.05*
• Component repairs of flag conditions on the north outer roadway and north inner roadway. (1994)	4.12*
• Rehabilitate main cables and new redundant suspender system. (1996)	88.30*
• Demolish existing building under approaches. (1993)	1.50*
• Testing Program for bored-in piles. (1993)	0.74*
• Demolish DOS and DOH buildings, replace entire south outer roadway approach structures, rehabilitate south outer roadway deck and south inner roadway deck of the main bridge, and replace south inner roadway substructure of the approaches. (1998)	198.00*

## APPENDIX A-1

<b>WILLIAMSBURG BRIDGE</b> <b>REHABILITATION ITEMS</b> <b>TOTAL ESTIMATED COST</b>		Est. Cost (\$ in millions)
<ul style="list-style-type: none"> <li>Portion of Contract #6 BMT track structure work transferred to Contract #5 south approach roadway reconstruction work. (1998)</li> </ul>		65.00*
<ul style="list-style-type: none"> <li>Paint main and intermediate towers. (2001)</li> </ul>		14.90 *(1)
<ul style="list-style-type: none"> <li>Reconstruct BMT Subway structure; install new signals, tracks and communication system. (2000)</li> </ul>		166.65*
<ul style="list-style-type: none"> <li>Miscellaneous rehabilitation work: rehabilitation of towers, replace bearings, travelers, architectural work, painting of north and south trusses, suspender adjustment, tower jacking, construction of colonnades, purchase of barrier transfer machine (BTM) and contra-flow barriers, lane control signal field system. Seismic retrofit – reinforce concrete with granite cladding, bearing replacement at PP10 &amp; 15, rehabilitation of wind tongue casting assembly at main towers, contra-flow of south inner roadway – installation of contra-flow barriers, lightning protection grounding system. Kent Avenue Yard soil erosion and deck pins at PP29 E/W rehabilitation, modular joint repairs and structural flag repairs. (In Progress)</li> </ul>		280.00**
<ul style="list-style-type: none"> <li>Replace north approach structures (Manhattan / Brooklyn), and rehabilitate north half of bridge. (2002)</li> </ul>		233.00*
<b>TOTAL: \$1,086.66</b>		

\* Construction Complete

\*\* In Construction

\*\*\* In Design

(1) Painting suspended in 1996 pending publication of Environmental Impact Statement (EIS) in 1998. Painting resumed under a new schedule in 1999 and was completed in 2001.

Revised 11/12/10, No change

**BROOKLYN BRIDGE**  
**REHABILITATION ITEMS**  
**TOTAL ESTIMATED COST**

	Est. Cost (\$ in millions)
• Brooklyn Tower protection and new sign gantries. (1981)	2.72*
• Rehabilitate promenade between towers. (1983)	0.94*
• Rehabilitate cables in anchorage and replace short rod suspenders; rehabilitate balance of promenade and construct bikeway and new pedestrian ramp. (1988)	22.68*
• Rehabilitate and paint York, Main, William and Prospect Street structures and main bridge roadway deck overlay. (1988)	6.21*
• Replace suspenders, cable posts, stay cables, hand-rope necklace lights, main cable wrapping; paint suspended spans. (1991)	53.57*
• Rehabilitate ramp E. concrete piers of ramp C and abutment at ramps C & I, and rehabilitate Sands and Washington Street structures in Brooklyn. (1991)	4.73*
• Rehabilitate ramp D and H in Manhattan; permanent improvement of promenade at Manhattan approach. (1993)	17.92*
• Rehabilitate floor systems, stiffening trusses, roadways of suspended spans and Franklin Square trusses. (1994)	66.30*
• Rehabilitate Manhattan traveler (electrical work). (1997)	1.83*
• Rehabilitate ramp D and widening along the FDR Drive. (1996)	11.50*
• Arch supports for Franklin Square truss structure.	9.50*
• Replacement of Suspended Span Deck. (2000)	36.2*
• Resurfacing of the main spans. (1998)	6.67*

**BROOKLYN BRIDGE**  
**REHABILITATION ITEMS**  
**TOTAL ESTIMATED COST**

	Est. Cost (\$ in millions)
• Improvement of Manhattan end of promenade. (2001)	4.50*
• Rehabilitate Brooklyn approach & ramps (B, S, F), Rehabilitate Manhattan approaches and remaining ramps (A,B,C,F,G,I,J), and Paint entire bridge. (2010)	508.61***
• Seismic Retrofit. (2020)	160.00
	to
	180.00**
• Replacement of Travelers.	22.34*
	<b>TOTAL: \$ 936.22</b>
	to
	<b>\$ 956.22</b>

\* Construction Complete

\*\* In Design

\*\*\* In Construction

Revised 12/26/12



**BRIDGES UNDER CONSTRUCTION***CALENDAR YEAR 2012***CONTRACT # BRIDGE**

HBX1123	Bruckner Expressway SB & NB over Amtrak & CSX
HBX1160	Claremont Parkway over Metro North RR
HBX1195	Shore Road Circle Bridge over Amtrak
HBX1199A (aka HBX199B)	Stand Alone Building Demolition (670 & 676 Grand Concourse)
HBM1117	Roosevelt Island Bridge over East River/East Channel
HBM1124	Willis Avenue Bridge over Harlem River
HBM1159	Wards Island Pedestrian Bridge over Harlem River
HBMC029	East 78th Street Pedestrian Bridge over FDR Drive (NB & SB)
HBK668	East 8 <sup>th</sup> Street Access Ramp (Guider Avenue Ramp to Belt Parkway) over Belt Parkway
HBK1024	Belt Parkway Bridge over Paerdegat Basin
HBK1072	Belt Parkway Bridge over Fresh Creek
HBK1091	Belt Parkway Bridge over Rockaway Parkway
HBK1072WM	Tidal Wetland Mitigation (4 Belt Parkway bridges)
HBR1217	Staten Island Ferry Terminal - Parking Exit Ramp over SIRT
HBR1217	Staten Island Ferry Terminal - Bus Station North over SIRT
HBR1217	Staten Island Ferry Terminal - Bus Station South over SIRT
HBR1217	Staten Island Ferry Terminal - North Ramp over SIRT
HBR1217	Staten Island Ferry Terminal - Bus Station Entrance Ramp over SIRT
HBR1217	Staten Island Ferry Terminal - Parking Entrance Ramp over SIRT
HBR1217	Staten Island Ferry Terminal - Bus Station Exit Ramp over SIRT
HBR1217	Staten Island Ferry Terminal - Pedestrian Overpass at Breezeway
HBR1217	Staten Island Ferry Terminal - Ramp A
BRC156R	Manhattan Bridge - Contract #14
BRC253CC	Williamsburg Bridge – Contract #8
BRC270C (#6)	Brooklyn Bridge (Ramps and painting)
HBCBORERS-R	FDR Drive relieving platforms-- downtown, FDR Drive relieving platforms-- midtown, FDR Drive relieving platform uptown + Carroll Street Bridge over Gowanus Canal + Ocean Avenue Pedestrian Bridge over Sheepshead Bay

**BRIDGE CONSTRUCTION***PROJECTS COMPLETED IN CALENDAR YEAR 2012***CONTRACT # BRIDGE**

HBX1123	Bruckner Expressway SB & NB over Amtrak & CSX
HBX1199A (aka HBX199B)	Stand Alone Building Demolition (670 & 676 Grand Concourse)
HBM1117	Roosevelt Island Bridge over East River/East Channel
HBMC029	East 78th Street Pedestrian Bridge over FDR Drive (NB & SB)
HBK668	East 8 <sup>th</sup> Street Access Ramp (Guider Avenue Ramp to Belt Parkway) over Belt Parkway

### Component Rehabilitation

The following table illustrates the program's performance over the last eight years:

	FY 05	*FY 06	#FY 07	FY 08	##FY 09	FY 10	*FY 11	###FY 12
Number of Bridges	9	0	0	10	0	13	0	10
Construction Cost	\$5.63	\$0	\$0	\$14.93	\$0	\$12.74	\$0	\$6.35

\*No contracts were bid during the 2006 and 2011 calendar years.

# One contract was bid during the 2007 calendar year, but was not registered until April 2008.

## Two contracts were bid during the 2009 calendar year, but were not registered until March and May 2010.

### One contract was bid during the 2012 calendar year and was registered in June 2012.

In 2012, work was completed at the following bridges, in the indicated boroughs, at the final cost shown, in millions:

Superior Road over Cross Island Parkway (Q)	0.684
37 <sup>th</sup> Street over Brooklyn-Queens Expressway (Q)	0.579
15 <sup>th</sup> Avenue over LIRR Bay Ridge (K)	0.391
East Drive over East Wood Arch (K)	0.204
United Nations Plaza over 1 <sup>st</sup> Avenue Tunnel (M)	1.555
<b>TOTAL</b>	<b><u>\$3.413 M</u></b>

During calendar year 2012, work commenced at the following bridges:

Brooklyn-Queens Expressway over Adams St. NB (K)  
 Brooklyn-Queens Expressway over Adams St. SB (K)  
 13<sup>th</sup> Avenue over LIRR & Sea Beach (K)  
 Bedford Avenue over LIRR Bay Ridge (K)  
 15<sup>th</sup> Avenue over LIRR Bay Ridge (K)  
 East Drive over East Wood Arch (K)

### Component Rehabilitation

There are two projects “still under construction” since the 2011 *Annual Report* was issued.

149<sup>th</sup> Street over LIRR (Q)  
 Jackie Robinson Parkway & Union Turnpike over Austin Street (Q)

17 component rehabilitation projects are slated to continue, commence or be completed in the 2013 calendar year. They are:

149<sup>th</sup> Street over LIRR (Q)  
 Ocean Avenue over LIRR (K)

13<sup>th</sup> Avenue over LIRR & Sea Beach (K)  
 West 148<sup>th</sup> Street Pedestrian Bridge over Amtrak 30<sup>th</sup> Street Branch (M)  
 Inwood Hill Park Footbridge over Amtrak 30<sup>th</sup> Street Branch (M)  
 Jackie Robinson Parkway & Union Turnpike over Austin Street (Q)  
 Albee Avenue over SIRT South Shore (R)

Union Street over Brooklyn-Queens Expressway (K)  
 Brooklyn-Queens Expressway over Adams St. NB (K)  
 Brooklyn-Queens Expressway over Adams St. SB (K)  
 4<sup>th</sup> Avenue over Belt Parkway (K)  
 Belt Parkway over Bedford Avenue (K)  
 Carroll Street over Gowanus Canal (K)  
 Crown Street over Franklin Shuttle (K)  
 Bedford Avenue over LIRR Bay Ridge (K)  
 (Hill Drive) Cleft Ridge Span over Pedestrian Path South of Boathouse (K)  
 5th Avenue over Greenwood Cemetery

## BRIDGES UNDER DESIGN BY NEW YORK CITY

BIN NO.	CAPIS NO.	FEATURE CARRIED	FEATURE CROSSED	FY CNST	PHASE	BORO
2230300	HBCR01B	MOSHOLU PARKWAY	CONRAIL (ABANDONED)	2014	FD	B
2241139	HBCR01B	LEGGETT AVENUE	AMTRAK - CSX	2014	FD	B
2241620	HBCR01B	EAST 162 <sup>ND</sup> ST	METRO NORTH RR HAR	2014	FD	B
2241630	HBCR01B	EAST 165 <sup>TH</sup> ST	METRO NORTH RR HAR	2014	FD	B
2241820	HBCR01B	EAST 187 <sup>TH</sup> ST	METRO NORTH RR HAR	2014	FD	B
2242029	HBCR01B	SOUTHERN BOULEVARD	EAST FORDHAM ROAD	2014	FD	B
2242280	HBCR01B	GRAND CONCOURSE	EAST 167 <sup>TH</sup> ST	2014	FD	B
2242400	HBCR01B	EAST 180 <sup>TH</sup> ST	BRONX RIVER	2014	FD	B
2230290	HBCR02A	MOSHOLU PARKWAY	EQUESTRIAN PATH	2015	PD	B
2242350	HBCR02A	EAST FORDHAM ROAD	GRAND CONCOURSE	2015	PD	B
2269030	HBCR02A	MATTHEWSON ROAD	MAC CRACKEN AVENUE	2015	PD	B
2241080	HBCR02B	SOUTHERN BLVD	CSX PORT MORRIS	2015	PD	B
2241129	HBCR02B	EAST 149 <sup>TH</sup> STREET	AMTRAK & CSX	2015	PD	B
2241330	HBCR02B	UNIONPORT ROAD	AMTRAK & CSX	2015	PD	B
2242071	HBCR02B	BRONX BLVD S.B.	BRONX RIVER	2015	PD	B
2242072	HBCR02B	BRONX BLVD N.B.	BRONX RIVER	2015	PD	B
2241790	HBX190	EAST 180 <sup>TH</sup> STREET	METRO NORTH RR	2020	PD	B
2242319	HBCR03A	GRAND CONCOURSE	EAST 174 <sup>TH</sup> STREET	2015	PD	B
2241570	HBX199	EAST 153 <sup>RD</sup> ST	METRO NORTH RR	2022	FD	B
2075837	HBX1086	WESTCHESTER AVENUE	HRP	2016	FD	B
2241590	HBX1103	CONCOURSE VILL AVE	METRO NORTH RR HAR	2020	FD	B
2066510	HBX1131	BRUCKNER EXPRESSWAY	WESTCHESTER CREEK	2015	PD	B
2241800	HBX1139	EAST 183 <sup>RD</sup> ST	METRO NORTH RR HAR	2022	FD	B
NEW 2240200	HBX1148B	SHORE ROAD (NEW)	HUTCHINSON RIVER	2021	PD	B
2241210	HBX1152	BRYANT AVE	AMTRAK	2014	FD	B
2240210	HBX1164	CITY ISLAND ROAD	EASTCHESTER BAY	2013	FD	B
2241810	HBX1172	EAST 188 <sup>TH</sup> ST	METRO NORTH RR HAR	2021	FD	B
2241409	HBX1190	GRAND CONCOURSE	METRO NORTH RR HUD	2018	FD	B
2242319	HBX1191	GRAND CONCOURSE	EAST 174 <sup>TH</sup> ST	2018	PD	B
2242220	HBX1214	SNUFF MILL ROAD (SOUTHERN BLVD)	BRONX RIVER	2022	PD	B
2241740	HBX1215	EAST 175 <sup>TH</sup> ST	METRO NORTH RR	2019	PD	B
2230250	HBX1216	MOSHOLU PARKWAY	BRONX RIVER	2022	PD	B
2240137	HBM1147	BROADWAY	HARLEM RIVER	2017	FD	BM
2240079	HBX644S	MADISON AVE	HARLEM RIVER	2017	PD	BM
1240090	BRX287S	MACOMBS DAM BRIDGE	HARLEM RIVER	2015	FD	BM
2240027	BRC156S2	MANHATTAN BRIDGE (LL)	EAST RIVER	2020	PD	KM
2240028	BRC156S2	MANHATTAN BRIDGE (UL)	EAST RIVER	2020	PD	KM
2240019	BRC270S	BROOKLYN BRIDGE	2781 (B.Q.E.)	2020	FD	KM
2230420	HBCR02A	B.Q.E. (S.B.)	WASHINGTON STREET	2015	PD	K
2244030	HBCR02A	EAST DRIVE	BRIDLE PATH	2015	PD	K
2230370	HBCR02B	SACKETT STREET	B.Q.E.	2015	PD	K
2231449	HBCR03A	KNAPP STREET	BELT PARKWAY	2015	PD	K
2244440	HBCR03A	SOUTH OF TILLARY STREET	NAVY STREET	2015	PD	K
2230410	HBCR03A	EB BQE	WASHINGTON STREET	2015	PD	K
2243710	HBKC062	19TH AVE	BMT SEA BEACH	2022	FD	K
2243100	HBKC064	BEVERLY ROAD	BMT SUBWAY, BRIGHTON	2016	FD	K
2243020	HBK530	PARKSIDE AVE	BMT SUBWAY, BRIGHTON	2020	FD	K

PD=Preliminary Design; FD=Final Design; DB=Design Build



## BRIDGES UNDER DESIGN BY NEW YORK CITY

BIN NO.	CAPIS NO.	FEATURE CARRIED	FEATURE CROSSED	FY CNST	PHASE	BORO
2243820	HBK548	21 <sup>ST</sup> AVE	BMT SEA BEACH	2020	FD	K
2243050	HBK531	CATON AVENUE	BMT SUBWAY, BRIGHTON	2022	FD	K
2231450	HBK643	BSHP	GERRITSEN INLET	2013	FD	K
2231479	HBK1023	BSHP	MILL BASIN	2014	FD	K
2243080	HBK1032	CHURCH AVENUE	BMT SUBWAY, BRIGHTON	2022	FD	K
2243510	HBK1046	FLATBUSH AVE	LIRR BAY RIDGE	2022	PD	K
2231249	HBK1089	BSHP	BAY RIDGE AVE	2014	FD	K
2231439	HBK1090	BSHP	NOSTRAND AVE	2021	FD	K
2230887	HBK1151	278I W.B. (B.Q.E.)	CADMAN PLAZA	2022	FD	K
2230888	HBK1151	278I E.B. (B.Q.E.)	CADMAN PLAZA	2022	FD	K
2243140	HBK1153	NEWKIRK AVE	BMT SUBWAY, BRIGHTON	2022	FD	K
2243040	HBK1154	CROOKE AVE	BMT SUBWAY, BRIGHTON	2022	FD	K
2243569	HBK1201	ATLANTIC AVE	LIRR ATLANTIC AVE	2016	FD	K
2240270	HBK1213	UNION STREET BRIDGE	GOWANUS CANAL	2019	PD	K
2231319	HBK1202	BELT PARKWAY	BAY PARKWAY	2022	PD	K
2243400	HBK1204	50 <sup>TH</sup> STREET	LIRR BAY RIDGE	2022	FD	K
2243580	HBK1205	5 <sup>TH</sup> AVENUE	LIRR & SEA BEACH	2019	PD	K
2243150	HBK1208	FOSTER AVENUE	BMT SUBWAY BRIGHTON	2022	FD	K
2240047	BRC231S	ED KOCH QUEENSBORO BRIDGE (LL)	EAST RIVER	2020	PD	MQ
2240048	BRC231S	ED KOCH QUEENSBORO BRIDGE (UL)	EAST RIVER	2020	PD	MQ
2246980	HBCR01B	RIVERSIDE DRIVE	WEST 138 <sup>TH</sup> ST	2014	FD	M
2267130	HBCR01B	RIVERSIDE DRIVE	WEST 145 <sup>TH</sup> ST	2014	FD	M
224004D	HBCR01C	RAMP TO ED KOCH QUEENSBORO BRIDGE	E 59 <sup>TH</sup> ST	2014	FD	M
2245220	HBCR02A	WEST 57 <sup>TH</sup> STREET	AMTRAK 30 <sup>TH</sup> ST BRANCH	2015	PD	M
2245319	HBCR02A	EAST 97 <sup>TH</sup> STREET	METRO NORTH	2015	PD	M
2229312	HBCR03A	HHP NB	RAMP TO 96 <sup>TH</sup> STREET	2015	PD	M
2233059	HBM1027	HARLEM RIVER DRIVE	RAMP TO HRD N.B.	2014	DB	M
2245010	HBM1120	11 <sup>TH</sup> AVE VIADUCT [NORTH]	LIRR WEST SIDE YARD	2020	FD	M
2232040	HBM1056	HOUSTON STREET	FDR DRIVE	2015	DB	M
223204A	HBM1056	FDR DRIVE NB RAMP TO HOUSTON STREET	RELIEF	2015	DB	M
223204B	HBM1056	HOUSTON STREET RAMP TO FDR DRIVE NB	RELIEF	2015	DB	M
226672A	HBM1171	W 31 <sup>ST</sup> ST	AMTRAK LAYUP TRACKS	2020	FD	M
224501B	HBM1184	W 33 <sup>RD</sup> ST	AMTRAK 30 <sup>TH</sup> ST BRANCH	2022	FD	M
224501D	HBM1185	W 34 <sup>TH</sup> ST	AMTRAK 30 <sup>TH</sup> ST BRANCH	2022	FD	M
224501E	HBM1186	W 35 <sup>TH</sup> ST	AMTRAK 30 <sup>TH</sup> ST BRANCH	2022	FD	M
224501F	HBM1187	W 36 <sup>TH</sup> ST	AMTRAK 30 <sup>TH</sup> ST BRANCH	2022	FD	M
2245209	HBM1188	11 <sup>TH</sup> AVE	AMTRAK 30 <sup>TH</sup> ST BRANCH	2022	PD	M
2229290	HBM1189	W 79 <sup>TH</sup> ST	AMTRAK	2017	PD	M
2232070	HBM1221	E 25 <sup>TH</sup> STREET	FDR DRIVE	2024	PD	M
224004H	HBCR01C	PEDESTRIAN BRIDGE RAMP FROM ED KOCH QUEENSBORO BRIDGE	BRIDGE PLAZA SOUTH	2014	FD	Q
2247220	HBCR01C	80 <sup>TH</sup> ROAD	LIRR	2014	FD	Q
2248300	HBCR01C	71 <sup>ST</sup> AVE	COOPER AVENUE	2014	FD	Q

PD=Preliminary Design; FD=Final Design; DB=Design Build

## BRIDGES UNDER DESIGN BY NEW YORK CITY

BIN NO.	CAPIS NO.	FEATURE CARRIED	FEATURE CROSSED	FY CNST	PHASE	BORO
2266129	HBCR01C	DOUGLASTON PARKWAY SB	BCIP	2014	FD	Q
2266139	HBCR01C	DOUGLASTON PARKWAY NB	BCIP	2014	FD	Q
2267160	HBCR01C	ROOSEVELT AVE	PARK ROAD	2014	FD	Q
2231880	HBCR02A	CROCHERON PARK PEDESTRIAN	CROSS ISLAND PARKWAY	2015	PD	Q
2266160	HBCR02A	WHITESTONE EXPRESSWAY S.B. TO CROSS ISLAND PARKWAY E.B.	ACCESS ROAD FROM WHITESTONE EXPRESSWAY	2015	PD	Q
2230890	HBCR02B	49 <sup>TH</sup> STREET	GRAND CENTRAL PARKWAY	2015	PD	Q
2231950	HBCR03A	150 <sup>TH</sup> STREET	CROSS ISLAND PARKWAY	2015	PD	Q
2231980	HBCR03A	147 <sup>TH</sup> STREET	CROSS ISLAND PARKWAY	2015	PD	Q
2055801	HBCR03A	NORTHERN BOULEVARD WB	FLUSHING RIVER	2015	PD	Q
2055802	HBCR03A	NORTHERN BOULEVARD EB	FLUSHING RIVER	2015	PD	Q
1247560	HBQ1112	METRO AVE (FRESH POND)	LIRR MONTAUK DIV	2014	FD	Q
2231780	HBQ1114	HEMPSTEAD AVE	BCIP	2021	PD	Q
2266149	HBQ1114	HEMPSTEAD AVE	RAMP TO BCIP NB	2021	PD	Q
2231850	HBQ1115	UNION TPKE	BCIP	2021	PD	Q
2247120	HBQ1130	WOODSIDE AVE	LIRR MAIN LINE	2022	FD	Q
2248159	HBQ1134	WOODHAVEN BLVD	QUEENS BLVD	2022	FD	Q
2248160	HBQ1137	ELLIOT AVE	QUEENS BLVD	2022	PD	Q
2240410	HBQ1162	BORDEN AVENUE	DUTCH KILLS	2019	PD	Q
2231760	HBQ1173	BCIP	DUTCH BRDWAY-115 AVE	2022	PD	Q
2231630	HBQ1200	SPRINGFIELD BOULEVARD	BELT PARKWAY	2017	PD	Q
2240507	HBQ1203	ROOSEVELT AVE	VAN WYCK EXPY	2014	FD	Q
2248280	HBQ1206	HIGHLAND PK PED BRDG	PEDESTRIAN PATH	2014	FD	Q
2231840	HBQ1207	HILLISIDE AVE	BCIP	2020	PD	Q
2266160	HBQC064	WHITESTONE EXPY/VAN WYCK EXPY SB TO BCIP EB	ACCESS ROAD FROM WHITESTONE EXPY/VAN WYCK EXPY	2019	PD	Q
2249520	HBCR01C	HANNAH STREET	SIRT SOUTH SHORE	2014	FD	R
2249800	HBCR01C	FOREST AVE	CLOVE LAKES PARK STREAM	2014	FD	R
2249240	HBCR02B	ARTHUR KILL ROAD	SIRT SOUTH SHORE	2015	PD	R
2249450	HBCR03A	FREMONT AVENUE PEDESTRIAN	SIRT SOUTH SHORE	2015	PD	R
R00010	HBRC036	GALLOWAY AVE	MARIANNE ST	2015	FD	R
R00011	HBRC037	FOREST AVE	CRYSTAL AVE	2015	FD	R
R00013	HBRC038	NAUGHTON AVE	PATTERSON AVE	2015	FD	R
R00023	HBRC039	MIDLAND AVE	HYLAN BLVD	2015	FD	R
R00034	HBRC040	ROCKLAND AVE	BRIELLE AVE	2015	FD	R
R00068	HBRC041	FOREST AVE	RANDALL AVE	2015	FD	R
R00069	HBRC042	GREGG PLACE	RANDALL AVE	2015	FD	R
R00084	HBRC043	ARTHUR KILL RD	MULDOON AVE	2015	FD	R
R00097	HBRC044	RICHMOND HILL RD	RICHMOND RD	2015	FD	R
R00122	HBRC045	ARTHUR KILL RD	RIDGEWOOD AVE	2015	FD	R

PD=Preliminary Design; FD=Final Design; DB=Design Build

## BRIDGES UNDER DESIGN BY NEW YORK CITY

BIN NO.	CAPIS NO.	FEATURE CARRIED	FEATURE CROSSED	FY CNST	PHASE	BORO
2249820	HBRC1149	ARTHUR KILL ROAD	ARTHUR KILL STREAM	2022	FD	R

Revised 12/31/12

PD=Preliminary Design; FD=Final Design; DB=Design Build

## Appendix B

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### FLAG CONDITIONS

Definitions and Procedures

B-1

2008-2012 Red, Yellow and Safety Flags

B-2

Flag Reporting and Tracking Process

B-3



## FLAG DEFINITIONS AND PROCEDURES

(Source: NYSDOT Engineering Instruction 94-002)

New York State Department of Transportation (NYSDOT) bridge inspection procedures require that "Flags" be issued to report the existence of conditions that pose a clear and present danger, or conditions which, if left unattended for an extended period, would likely become a clear and present danger.

A "Flag" is classified as either a Red Flag, Yellow Flag or Safety Flag.

*Red Flag* is used to report the failure or potentially imminent failure of a critical primary structural component. Potentially imminent means that a failure is likely before the next scheduled inspection. The maximum time between bridge inspections is two years. Red Flags must be addressed within six weeks.



September 2008: Advanced Corrosion of Steel Stringer and Girder.



February 2011: Red Flag Stringer Repair at Riverside Drive Viaduct over West 158<sup>th</sup> Street.

*Yellow Flag* is used to report a potentially hazardous condition which, if left unattended beyond the next scheduled inspection, would likely become a clear and present danger. A Yellow Flag is also used to report the actual or imminent failure of a non-critical primary structural component, where its failure may diminish the reserve capacity or redundancy of the bridge but would not result in structural collapse or a clear and present danger.



February 2008: Yellow Structural Flag Due to the Deteriorated Cap Beam. October 2008: Corrosion of Steel Secondary Member. November 2008: Crack in Steel Girder.

## FLAG DEFINITIONS AND PROCEDURES

(Source: NYSDOT Engineering Instruction 94-002)

*Safety Flag* is used to report a condition that presents a clear and present vehicular or pedestrian traffic hazard, but there is no danger of structural failure or collapse.



August, October, and November 2008: Examples of Tripping Hazards.



February 2008: Loose Bolts at the Lighting Base. October 2008: Electrical Hazard, and Loose Joint.

Certain Red or Safety Flags may be further classified as Prompt Interim Action (PIA) flags. PIA flags must be addressed within 24 hours of discovery.



Example of PIA Safety Flag: Broken Grating. Executive Director of Bridge Preventive Maintenance and Repair Tom Whitehouse (White Hardhat) Ensuring the Proper Setup of Containment Procedures at the St. George Ferry Terminal Landing Slips Before the Masons Address A PIA Flag (Falling Concrete). Inspecting the Flagged Condition.



PIA Flag (Truck Wedged Under the FDR Drive at Span 41): Removing the Debris. (Credit: Victor Sandoval) PIA Flag Repair (Through Hole) on Harlem River Drive Ramp. (Credit: Bojidar Yanev)

FLAG CONDITIONS BY CALENDAR YEAR						
	2008	2009	2010	2011	2012	% increase (2008 – 2012)
<i>Citywide</i>						
FLAGS ROUTED	1,764	1,286	1,591	1,342	1,187	-33%
RED	84	72	53	56	34	-60%
YELLOW	247	155	387	252	208	-16%
SAFETY	1,433	1,059	1,151	1,034	945	-34%
 TOTAL FLAGS ELIMINATED	 1,137	 973	 1,297	 966	 1,164	 2%
RED	60	67	47	53	43	-28%
YELLOW	195	188	214	126	243	25%
SAFETY	882	718	1,036	787	878	0%
 TOTAL FLAGS OUTSTANDING	 2,983	 3,296	 3,612	 3,989	 4,012	 34%
RED	39	44	50	53	44	13%
YELLOW	620	587	760	887	852	37%
SAFETY	2,324	2,665	2,802	3,049	3,116	34%
<i>Division of Bridges Workload</i>						
FLAGS ROUTED*	1,127	973	1,390	1,160	1,001	-11%
RED	66	66	52	47	32	-52%
YELLOW	240	147	383	250	204	-15%
SAFETY	821	760	955	863	765	-7%
 FLAGS ELIMINATED	 969	 897	 1,198	 877	 1,057	 9%
RED	41	67	40	46	41	0%
YELLOW	188	185	207	126	241	28%
SAFETY	740	645	951	705	775	5%
 FLAGS OUTSTANDING**	 1,823	 1,903	 2,076	 2,355	 2,309	 27%
RED	39	38	50	51	42	8%
YELLOW	594	556	731	845	808	36%
SAFETY	1,190	1,309	1,295	1,459	1,459	23%

\*Does not include re-routed flags.

\*\*Includes re-routed flags.

Revised 1/11/13

## FLAG REPORTING AND TRACKING PROCESS

There are three primary sources from which flags originate:

- NYSDOT inspectors
- NYCDOT inspectors
- NYCDOT Communications Center

### State DOT Inspectors

1. State inspectors identify flag conditions.
2. Written notification of flag conditions are sent to the Bridge's Flags unit. (Immediate verbal notification is given for Red Flags and PIA flags.)
3. Flag condition reports are entered into the Division's "City Flag" and "State Flag" database.
4. Flag conditions are reviewed by City engineers who have four routing options:
  - ♦ assign flags to outside agencies for repair, or
  - ♦ have City inspectors monitor flags until further action is desired, or
  - ♦ assign flags to in-house or contractor forces for repair, or
  - ♦ assign flags to the Construction Section for Capital contractor repair.
5. Each flag condition is assigned a City Flag number, and routed to the appropriate group.
6. When flag conditions are eliminated, the respective databases are updated.

### City DOT Division of Bridges Inspectors

1. City inspectors identify flag conditions and prepare a scope of work. (Immediate verbal notification is given for Red Flags and PIA flags.)
2. Flag condition reports are received and reviewed by the Flags unit.
3. Flag condition reports are entered into the "City Flag" database.
4. Flag conditions are reviewed by City engineers who have four routing options:
  - ♦ assign flags to outside agencies for repair, or
  - ♦ have City inspectors monitor flags until further action is desired, or
  - ♦ assign flags to in-house or contractor forces for repair, or
  - ♦ assign flags to the Construction Section for Capital contractor repair.
5. When flag conditions are eliminated, the database is updated.

### City DOT Communications Center

1. Flag condition is phoned in.
2. City inspectors visit the site to review the reported condition.
3. If the deficiency warrants, a flag condition report is filed.
4. Flag condition reports are entered into the "City Flag" database.
5. Flag conditions are reviewed by City engineers who have four routing options:
  - ♦ assign flags to outside agencies for repair, or
  - ♦ have City inspectors monitor flags until further action is desired, or
  - ♦ assign flags to in-house or contractor forces for repair, or
  - ♦ assign flags to the Construction Section for Capital contractor repair.
6. When flag conditions are eliminated, the database is updated.



## Appendix C

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### 2012 INVENTORY

<b>Inventory Summary</b>	<b>C-1</b>
<b>Posted, Partially Closed &amp; Closed Bridges</b>	<b>C-2</b>
<b>Bridge Identification Numbers</b>	<b>C-3</b>
<b>New York State Inspection System</b>	<b>C-4</b>
<b>Standard Abbreviations</b>	<b>C-5</b>
<b>Information on Inventory Lists</b>	<b>C-6</b>
<b>Adjustments to the Inventory</b>	<b>C-7</b>
<b>Listing of Bridge Inventory and Conditions</b>	<b>C-8</b>

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### Inventory Summary

In Calendar Year 2012, the total number of bridge and tunnel structures under the jurisdiction of the New York City Department of Transportation (NYCDOT) increased to 788. NYCDOT owns, operates, and/or maintains 758 non-movable bridges, 25 movable bridges, and five tunnels. In 1999, a Memorandum of Understanding between NYCDOT and the New York City Department of Environmental Protection (NYCDEP) added 67 culverts (since reduced to 53) in Staten Island to the Division's Inventory. While the Division is responsible for the capital rehabilitation of these structures, maintenance and inspection responsibilities remain with NYCDEP.

The condition of New York City's 788 elevated bridge structures (including five tunnels), as measured by the City's general condition rating, are as follows: 1 structure was rated *Poor*, 460 structures were rated *Fair*, 212 structures were rated *Good*, 114 structures were classified *Very Good*, and one structure is not rated (closed).

The bridges in the Division's inventory connect a vast and diverse highway and street network throughout the City. The impressive East River crossings – the Brooklyn, Manhattan, Williamsburg, and Ed Koch Queensboro Bridges – are the most visible and famous structures, but are by no means representative of all the bridges in the City's inventory. Three hundred twenty-two (40.86%) of the Division's structures consist of one span (the portion of a bridge between two supports). One hundred four (13%) bridges carry pedestrian traffic. Of the 788 structures in the City's inventory, 102 (12.94%) cross waterways; of these, 20 connect the boroughs of the Bronx, Brooklyn, Manhattan and Queens. Three hundred twenty-seven (41.5%) structures cross the City's labyrinthine system of railroad and subway tracks. Two hundred forty-eight (31.47%) structures cross or connect arterial highways, such as the Henry Hudson Parkway, the Brooklyn-Queens Expressway, and the Belt Parkway, which facilitate traffic flow through and around the five boroughs of the City of New York.

### Rating System

The Division of Bridges bases its general condition ratings directly on the numerical ratings assigned during bridge inspections. Federal law mandates that bridge structures be inspected at least once every two years. The New York State Department of Transportation hires engineering consultants to perform biennial inspections for all bridge structures except pedestrian bridge structures, and bridge structures less than 20 feet in length. Bridge structures not inspected by the State are inspected by the NYC Department of Transportation's Division of Bridges, with the exception of the East 64<sup>th</sup> Street Pedestrian Bridge over the FDR Drive, which was inspected by Rockefeller University.

The State inspected 674 (85.53%) bridge structures. The balance of 113 (14.34%) were inspected by the City, with the exception of the High Bridge over the Harlem River, which was inspected in 2002 by the Department of Parks and Recreation. Each structure in a biennial inspection is given an overall numerical condition rating from 1 (structural failure) to 7 (new condition), reflecting a weighting of key features of the structure (see Appendix C-4). In certain cases, where a bridge structure is closed to traffic, only a city condition rating is given.

City condition ratings coincide with the following ranges of State ratings:

<u>State Numerical Rating</u>		<u>City Condition Rating</u>
1.000 – 3.000	=	POOR
3.001 – 4.999	=	FAIR
5.000 – 6.000	=	GOOD
6.001 – 7.000	=	VERY GOOD

This method is used as a guide in assessing what operational action is needed. The overall bridge rating, in and of itself, is not always indicative of whether a bridge needs major rehabilitation. Further inspection and analysis must be done to determine specific rehabilitation or corrective repair needs.

### Summary of 2012 Structure Conditions

Rating	Number of Structures	Percent	Number of Spans	Percent	Deck Area Sq Ft	Percent
Poor	1	0.13%	75	1.71%	503,788	3.47%
Fair	460	58.45%	3,352	76.22%	10,214,063	70.28%
Good	212	26.94%	625	14.21%	2,330,855	16.04%
Very Good	114	14.49%	346	7.87%	1,484,823	10.22%
Not Rated	1	—	—	—	—	—
Total	788	100%	4,398	100%	14,533,529	100.78%

As of December 31, 2012, the condition of the City's bridges and tunnels indicated that 0.13% were rated as *Poor*; 58.45% were classified as *Fair*; 26.94% were awarded ratings of *Good*; and 14.49% as *Very Good*. Those structures given ratings of *Poor* and *Fair* encompassed 77.93% of bridge spans.

Rating	2009		2010		2011		2012	
Poor	4	0.51%	4	0.51%	3	0.38%	1	0.13%
Fair	456	58.09%	462	58.78%	459	58.40%	460	58.45%
Good	209	26.62%	207	26.34%	215	27.35%	212	26.94%
Very Good	116	14.78%	113	14.38%	109	13.87%	114	14.49%
Not Rated	1		1		1		1	
Total	786	100%	787	100%	787	100%	788	100%

During 2012, Manhattan had the highest percentage of bridge structures rated *fair* – 74.86% - as well as the lowest percentage of bridge structures rated *good* – 20.00%. Staten Island had the highest percentage of bridge structures classified as *good* – 35.82%, and the second highest percentage of bridge structures rated *very good* – 19.40%, for a total of 55.22%. In 2012, Brooklyn had the highest percentage of bridge structures rated as *very good* – 21.71%. The Bronx had the second highest percentage of bridge structures classified as *fair* – 62.50%. Queens had the third highest percentage of bridge structures classified as *very good* – 18.69%, and the second highest percentage of bridge structures rated as *good* – 29.29%.

Borough*	Poor	% of Boro	Fair	% of Boro	Good	% of Boro	Very Good	% of Boro	Total
Bronx	0	0.00%	95	62.50%	42	27.63%	15	9.87%	152
Brooklyn	0	0.00%	88	50.29%	49	28.00%	38	21.71%	175
Manhattan	0	0.00%	131	74.86%	35	20.00%	9	5.14%	175
Queens	0	0.00%	103	52.02%	58	29.29%	37	18.69%	198
Staten Island	0	0.00%	30	44.78%	24	35.82%	13	19.40%	67
Total	0	0.00%	447	58.28%	208	27.12%	112	14.60%	767

\* Does not include borough-crossing bridges (see next table).

### Summary of 2011 Structure Conditions

Seventy percent of the 20 bridge structures that service the five boroughs were rated in either *poor* or *fair* condition in 2012, and 30% were rated *good* or *very good*.

Boro-Crossing	Poor	% of Boro Crossing	Fair	% of Boro Crossing	Good	% of Boro Crossing	Very Good	% of Boro Crossing	Total
Bronx-Manhattan	0	0.00%	6	60.00%	2	20.00%	2	20.00%	10
Brooklyn-Manhattan	1	25.00%	3	75.00%	0	0.00%	0	0.00%	4
Queens-Manhattan	0	0.00%	2	66.67%	1	33.33%	0	0.00%	3
Brooklyn-Queens	0	0.00%	2	66.67%	1	33.33%	0	0.00%	3
Total	1	5.00%	13	65.00%	4	20.00%	2	10.00%	20

These figures evidence that the Division is continuing to make progress in improving the conditions of the City's bridges. The number of bridges rated *Poor* and *Fair* has decreased over the past few years while the number of bridges rated *Good* and *Very Good* has increased. However, it continues to remain essential that the overall bridge program include an expansion of the Preventive Maintenance and Corrective Repair programs which have traditionally slowed the deterioration of *good* and *very good* bridges.

During 2012, the total number of closed or partially closed bridge structures was four, with one closed and three partially-closed structures (see Appendix C-2).



**Bridges with Posted Weight Restrictions**  
**NEW YORK CITY DEPARTMENT OF TRANSPORTATION**

BIN	BOROUGH	LOCATION FEATURE-1	LOCATION FEATURE-2	LOCATION FEATURE-3	FISCAL YEAR*	POSTED TONS	REMARKS
2231450	BROOKLYN	BELT SHORE PARKWAY	GERRITSEN INLET		2012	5	CONDITION OF MILL BASIN BRIDGE
2231479	BROOKLYN	BELT SHORE PARKWAY	MILL BASIN CREEK		2012	5	
2231489	BROOKLYN	BELT SHORE PARKWAY	PAERDEGAT BASIN		2010	5	CONDITION OF MILL BASIN BRIDGE
2231499	BROOKLYN	BELT SHORE PARKWAY	ROCKAWAY PKWY.		2010	5	PASSENGER CARS ONLY
2231509	BROOKLYN	BELT SHORE PARKWAY	FRESH CREEK		2010	5	PASSENGER CARS ONLY
	MANHATTAN	FDR DRIVE (NB & SB)	23 <sup>RD</sup> TO 63 <sup>RD</sup> STREET			4	PASSENGER CARS ONLY
2240019	BROOKLYN & MANHATTAN	BROOKLYN BRIDGE	EAST RIVER	INCLUDING RAMPS	2009	3	NO COMMERCIAL TRAFFIC NO TRUCKS, NO BUSES; 11'0" CLEARANCE
2240027	MANHATTAN & BROOKLYN	MANHATTAN BRIDGE	EAST RIVER				DESIGN LOAD FOR HS 20 TRUCK LOAD [36 TONS]; FROM 6 TO 10 AM, M-F, THE LEFT LANE OF THE NORTH UPPER ROADWAY IS HOV2+ BUSES ONLY; MANHATTAN-BOUND TRUCKS MUST USE THE LOWER ROADWAY 5 AM TO 3 PM, M-F; BICYCLES ONLY ON NORTH BIKEWAY (BUT DURING CONSTRUCTION, BICYCLES MAY BE DETOURED TO THE SOUTH PATH AND PEDESTRIANS TO THE NORTH PATH). DURING CONSTRUCTION, ONLY TWO LANES OPEN AT LOWER ROADWAY.
2240039	BROOKLYN & MANHATTAN	WILLIAMSBURG BRIDGE	EAST RIVER				INNER ROADWAYS, <u>NO</u> <u>TRUCKS</u> ; OUTER ROADWAYS DESIGN FOR HS20 [36 TONS] AND TRUCKS ARE PERMITTED ON OUTER ROADWAY
2240047	MANHATTAN & QUEENS	ED KOCH QUEENSBORO BRIDGE	EAST RIVER			7.5	LOWER OUTER ROADWAYS POSTED AS H-7.5 [7.5 TONS] (PASSENGER CARS ONLY FOR SOUTHBOUND; PEDESTRIANS AND BICYCLES ONLY FOR NORTHBOUND); LOWER INNER ROADWAYS ARE DESIGNED FOR HS20 TRUCK LOAD [36 TONS]; UPPER ROADWAYS DESIGNED FOR H-15 [15 TONS], <u>NO TRUCKS</u> , <u>ONLY BUSES</u>
2240260	BROOKLYN	CARROLL STREET BRIDGE	GOWANUS CANAL	CARROLL STREET	2013	10	
2240640	MANHATTAN & QUEENS	ROOSEVELT ISLAND	EAST CHANNEL OF THE EAST RIVER		2007	36	
2240660	QUEENS	RIKERS ISLAND BRIDGE	RIKERS ISLAND CHANNEL			36	
2246550	MANHATTAN	PARK AVENUE VIADUCT	42 <sup>ND</sup> STREET			15	NO COMMERCIAL TRAFFIC
2247590	QUEENS	FOREST PARK DRIVE	LIRR			8	
2247660	QUEENS	FOREST PARK DRIVE	ABANDONED LIRR			8	
2245460	MANHATTAN	PARK AVENUE SB	EAST 45 <sup>TH</sup> STREET			15	NO COMMERCIAL TRAFFIC

**Bridges with Posted Weight Restrictions**  
**NEW YORK CITY DEPARTMENT OF TRANSPORTATION**

BIN	BOROUGH	LOCATION FEATURE-1	LOCATION FEATURE-2	LOCATION FEATURE-3	FISCAL YEAR*	POSTED TONS	REMARKS
2245470	MANHATTAN	PARK AVENUE NB	EAST 45 <sup>TH</sup> STREET			15	NO COMMERCIAL TRAFFIC
2269760	STATEN ISLAND	NORTH RAMP	SIRT SOUTH SHORE		2011	5	
2244120	BROOKLYN	HILL DRIVE	PROSPECT PARK LAKE				NO VEHICLES
226771A**	MANHATTAN	79 <sup>TH</sup> STREET RAMP to HHP	79 <sup>TH</sup> STREET BOAT BASIN GARAGE		2017	15	
226771B**	MANHATTAN	79 <sup>TH</sup> STREET RAMP TO GARAGE	79 <sup>TH</sup> STREET BOAT BASIN GARAGE		2017	15	
226771C**	MANHATTAN	GARAGE RAMP TO 79 <sup>TH</sup> STREET	79 <sup>TH</sup> STREET BOAT BASIN GARAGE		2017	15	
226771D**	MANHATTAN	SB HHP RAMP TO 79 <sup>TH</sup> STREET	79 <sup>TH</sup> STREET BOAT BASIN GARAGE		2017	15	
2240507**	QUEENS	ROOSEVELT AVENUE BRIDGE	VAN WYCK EXPRESSWAY		2014	25	
2247120**	QUEENS	WOODSIDE AVENUE BRIDGE	LIRR MAIN LINE			8	

**26 COUNT** \* - CONSTRUCTION CONTRACT LETTING

**\*\* - THESE BRIDGES ARE RECOMMENDED FOR LOAD POSTING – POSTING SIGNS HAVE NOT YET BEEN INSTALLED.**

## Partially Closed Bridges

### NEW YORK CITY DEPARTMENT OF TRANSPORTATION

BIN	BOROUGH	LOCATION FEATURE-1	LOCATION FEATURE-2	LOCATION FEATURE-3	FISCAL YEAR*	REMARKS
2076640	BRONX	DEPOT PLACE	CONRAIL HUDSON DIVISION			ONE LANE CLOSED TO TRAFFIC (BUT OPEN TO PEDESTRIANS AND BICYCLES), AND ONE LANE OPEN
2244120	BROOKLYN	HILL DRIVE	PROSPECT PARK LAKE		CONSTR UCTION MOVED DUE TO LACK OF FUNDING	CLOSED TO VEHICULAR TRAFFIC, OPEN TO PEDESTRIAN TRAFFIC, ALONG THE CENTER OF THE ROADWAY.
2247080	QUEENS	149 <sup>TH</sup> STREET	LIRR			CLOSED TO VEHICULAR TRAFFIC, BUT OPEN TO PEDESTRIANS AND BICYCLES.

3 COUNT

\* - CONSTRUCTION CONTRACT LETTING



Paerdegat Basin, Fresh Creek, Carroll Street Bridges, and Staten Island North Ramp Posted Weight Restriction Signs. (Credit: NYSDOT)

**Closed Bridges***NEW YORK CITY DEPARTMENT OF TRANSPORTATION*

There is one closed bridge.

BIN	BOROUGH	LOCATION FEATURE-1	LOCATION FEATURE-2	LOCATION FEATURE-3	REMARKS
2248130	QUEENS	FLUSHING MEADOW PARK PEDESTRIAN	WILLOW LAKE	76 <sup>th</sup> ROAD	BRIDGE IS IN FLUSHING CORONA PARK, WHICH IS IN A REMOTE LOCATION AND WAS DAMAGED BY FIRE.

10/20/09, no change 2012



### Bridge Identification Numbers

In 1972, the State of New York developed a computerized system to store inventory and inspection data on bridges that are greater than 20 feet in length. In New York City, structures that are 20 feet in length or less, “mini-bridges,” are tracked independently by the City. Each structure is distinguished by a separate Bridge Identification Number (B.I.N.).

A six-digit B.I.N. identifies a single structure or group of connected or associated structures, while the seven-digit B.I.N. identifies each of those connected or associated bridge structures individually. Each level of a bi-level bridge, each separate bridge structure in a parallel configuration, and each ramp attached to a main bridge is considered an individual structure and assigned its own unique B.I.N. for example, the Brooklyn Bridge has one six-digit B.I.N., 2-24002, which incorporates the entire bridge. All ramps and secondary structures, as well as the main structure, are identified by their own seven-digit numbers, such as 2-24001-A, 2-24001-B, etc.

#### If the prefix (first number) of the B.I.N. is:

**1**, the bridge is considered part of the **State** bridge system. This number might include City bridges if maintenance is shared between City and State.

**2**, the bridge is considered part of the **City** bridge system. This number might include State bridges if maintenance is shared between City and State.

**M, Q, or R**, the bridge is a “mini-bridge,” and is considered part of the **City** bridge system. They are located in Manhattan, Queens, or Staten Island, respectively.

#### If the suffix (last character) of the B.I.N. is:

**1 through 6**, the bridge is in parallel configuration. The left-most bridge in the Direction of Orientation has a last character of 1. The next left-most bridge has a last character of 2, and so on.

**7 or 8**, the bridge is in a bi-level configuration. Seven indicates the lower level and eight indicates the upper level.

**0 or 9**, the bridge is not in parallel or bi-level configuration.

**A letter of the alphabet**, the structure is a ramp physically attached to the main bridge. If more than one ramp is attached to the same span of the main bridge, the characters are assigned alphabetically starting with the left-most ramp in the Direction of Orientation. Other ramps attached to the bridge are assigned alphabetical characters in a clockwise direction.

### New York State Biennial Bridge Inspection and Condition Rating System

During the regularly scheduled State biennial bridge inspections, each bridge element is investigated and its structural condition is numerically rated according to the system indicated below:

<u>Numerical Rating</u>	<u>Description</u>
1	Potentially Hazardous
2	Used to shade between a rating of 1 and 3
3	Serious deterioration, or not functioning as originally designed
4	Used to shade between a rating of 3 and 5
5	Minor deterioration, and is functioning as originally designed
6	Used to shade between a rating of 5 and 7
7	New condition
8	Not Applicable
9	Unknown (due to inaccessibility, e.g. footings or piles)

Based on these individual ratings for each element, a weighted average rating is computed for the entire structure.

These ratings (both individual and weighted average) are recorded on New York State Department of Transportation Inspection report Forms. Together with photographs and explanatory descriptions, the ratings provide the Division with information on the existing condition of each bridge.

A description of the condition ratings 1 through 7, with programmed responses to certain critical ratings, demonstrates the importance of these inspections:

A rating of 1 describes an extremely serious condition which is deemed potentially hazardous. This rating, which is phoned in by the inspection leader, necessitates that the Division respond immediately by 1) closing the structure either completely or partially until emergency repairs are made, or 2) limiting the vehicle weight permitted on the structure and then performing repairs on a timely basis.

A rating of 3 describes a bridge element that is not functioning as designed. Although not considered hazardous, such members require extensive rehabilitation. A determination is then made to repair such rated members either by the Division's in-house repair personnel, the critical maintenance contractor (When and Where contracts), or a major capital contract. Until such repairs are made, this condition is periodically monitored.

A rating of 5 indicates the member is functioning as designed but exhibits minor deterioration. These members are prioritized and scheduled for repair by the Bridge Maintenance, Inspection and Operations Bureau.

A rating of 7 indicates a new condition requiring no remediation.

The ratings of 2, 4, and 6 are utilized to shade between each of the above ratings.

## Standard Abbreviations

### General Abbreviations :

APP:	Approach	NB:	Northbound
AVE:	Avenue	PED BR:	Pedestrian Bridge
BLVD:	Boulevard	PKWY:	Parkway
BR:	Bridge	PL:	Place
CPK:	Central Park	RD:	Road
DR:	Drive	SB:	Southbound
EB:	Eastbound	ST:	Street
EXPWY:	Expressway	TPKE:	Turnpike
I:	Interstate	WB:	Westbound
LN:	Lane		
X:	No State accepted mileage markers exist on this route		



Assistant Civil Engineer Andrew Hoang  
Inspecting the Brooklyn Bridge. (Credit:  
Clara Medina)

### Routes :

<u>No.</u>	<u>Borough</u>	<u>Name</u>
25	Queens	Union Turnpike
25A	Queens	Northern Boulevard
27	Brooklyn	Southern Parkway
I-87	Manhattan, Bronx	Major Deegan Expressway
I-95	Manhattan, Bronx	Cross Bronx Expressway
I-278	Brooklyn, Queens	Brooklyn-Queens Expressway
I-278	Bronx	Bruckner Expressway
I-278	Staten Island	Staten Island Expressway
I-295	Queens	Clearview Expressway
I-295	Bronx	Throgs Neck Expressway
I-440	Staten Island	Richmond Parkway
I-478	Brooklyn	Brooklyn Battery Tunnel
I-495	Queens	Long Island Expressway
I-678	Queens	Whitestone Expressway, Van Wyck
I-878	Queens	Nassau Expressway
I-895	Bronx	Sheridan Expressway

### Standard Abbreviations

**Highways :**

BCIP:	Belt System - Cross Island
BE:	Bruckner Expressway
BLP:	Belt System - Laurelton Parkway
BPP:	Bronx Pelham Parkway
BQE:	Brooklyn-Queens Expressway
BRPC:	Bronx River Parkway (in NYC)
BSHP:	Belt System - Shore Parkway
BSOP:	Belt System - Southern Parkway
CBE:	Cross Bronx Expressway
FDRD:	Franklin D. Roosevelt Drive
GCP:	Grand Central Parkway
GW:	George Washington Bridge
HHP:	Henry Hudson Parkway
HRD:	Harlem River Drive
HRPC:	Hutchinson River Parkway (in NYC)
IP:	Jackie Robinson (Interborough) Parkway
LIE:	Long Island Expressway
MAP:	Marine Parkway
MDE:	Major Deegan Expressway
MP:	Mosholu Parkway
OCP:	Ocean Parkway
PR:	Prospect Expressway
RP:	Richmond Parkway
VWE:	Van Wyck Expressway
WLMBRG:	Williamsburg Bridge
WSE:	West Shore Expressway



### Information Available On Division Of Bridges Inventory Of Structures

- **Bridge Identification Number (B.I.N.)**
- **Borough :**

B - The Bronx	Q - Queens	R - Staten Island
K - Brooklyn	M - Manhattan	
- **Feature Carried :** Name of passageway carrying vehicle or pedestrian traffic.
- **Feature Crossed :** Description of area crossed.
  - **Railroad Crossed** (if applicable):
 

A - Amtrak	N - New York & Atlantic
C - CSX	O - B & O Railroad
L - Long Island Railroad	S - Staten Island Rapid Transit Operating Authority
M - Metro-North (MTA)	T - NYC Transit Authority
- **Other Owner :**

ED	Department of Education
F	Ferries (Department of Transportation)
P	Department of Parks and Recreation
- **Bridge Type :**

A	Arterial	PED	Pedestrian
E	East River	R	Ramp
M	Movable	T	Tunnel
O	Off-System	W	Waterway
- **Rating Source:**

(C)	City Inspection	(P)	Parks Inspection
(S)	State Inspection	(U)	Rockefeller University Inspection
- **Rating :** Numerical and/or verbal rating
 

1.000 - 3.000:	(P)	POOR
3.001 - 4.999:	(F)	FAIR
5.000 - 6.000:	(G)	GOOD
6.001 - 7.000:	(V)	VERY GOOD
- **Deck Area:** Square feet
- **CD:**

Community Board District

<b>2012 Bridge Inventory Adjustments</b>
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B.I.N.	BORO	FEATURE CARRIED	FEATURE CROSSED	EXPLANATION
<b>- Bridge added to the City's Inventory:</b>				
2269200	M	RIVERSIDE DRIVE SOUTH	AMTRAK	BUILT BY PRIVATE DEVELOPER

REV. DATE 2/28/13

# INVENTORY SORTED BY B.I.N.

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
1065210	Q	WHITESTONE EXP NB	BCIP (2065210)		A		1	S	7/24/2012	4.603	F	2,500	\$10,000,000	407		
1066510	B	BRUCKNER EXPWY SVC RD	WESTCHESTER CREEK		WMA		17	S	10/8/2012	3.516	F	39,400	\$157,600,000	209		
1067150	B	NEREID AVE (E. 240TH ST)	BRONX RIVER PKWY	M	O		10	S	10/6/2011	4.474	F	57,750	\$231,000,000	212		
1240090	BM	MACOMBS DAM BRIDGE	HARLEM RIVER	M	WMO		52	S	11/30/2011	3.930	F	220,000	\$880,000,000	110	204	
1247010	Q	91 PLACE (2247010)	LIRR PT WASH BR	L	O		1	S	11/3/2011	6.567	VG	2,760	\$11,040,000	404		
1247200	Q	67 AVE PED BR (2247200)	LIRR MAIN LINE	L	O-PED		3	C	4/3/2012	4.219	F	1,300	\$5,200,000	406		
1247280	Q	51 AVE PED BR (2247280)	LIRR MAIN LINE	L	O-PED		5	C	3/8/2012	3.018	F	700	\$2,800,000	402		
1247560	Q	METROPOLITAN AVE	LIRR -NY&ATL	LN	O		2	S	10/3/2012	3.603	F	20,900	\$83,600,000	405		
2055801	Q	NORTHERN BLVD WB	FLUSHING RIVER		WO		40	S	11/21/2012	4.338	F	71,900	\$287,600,000	407		
2055802	Q	NORTHERN BLVD EB	FLUSHING RIVER		WO		40	S	11/21/2012	4.324	F	78,894	\$315,576,000	407		
205580A	Q	N.BLVD WB TO 678I SB	VACANT LAND		AR		16	S	6/19/2012	5.619	G	8,600	\$34,400,000	407		
2065629	B	BRONX RIVER PKWY	BOSTON RD BX ZOO		A		1	S	8/22/2011	5.276	G	6,300	\$25,200,000	227		
2065930	Q	HAMILTON PLACE	495I (L.I.E.)		A		2	S	3/5/2012	5.611	G	11,111	\$44,444,000	405		
2065940	Q	GRAND AVE	495I (L.I.E.)		A		2	S	12/6/2012	4.861	F	12,850	\$51,400,000	405		
2065950	Q	69TH STREET	495I (L.I.E.)		A		2	S	7/27/2011	5.250	G	10,336	\$41,344,000	405		
2066002	Q	495I (2066000)	WOODHAVEN BLVD		A		2	S	6/14/2011	5.592	G	25,200	\$100,800,000	406	404	
2066100	K	5TH AVE	27 X PROSPECT EXPWY		A		1	S	5/18/2012	5.063	G	8,800	\$35,200,000	307		
2066671	B	BRUCKNER EXPWY SB	BRONX RIVER		WMA		3	S	10/22/2011	5.278	G	12,400	\$49,600,000	202	209	
2066672	B	BRUCKNER EXPWY NB	BRONX RIVER		WMA		8	S	10/22/2011	4.269	F	22,300	\$89,200,000	202	209	
2066720	B	E 174TH ST	SHERIDAN EXPWY/AMTRAK	A	A		13	S	8/20/2012	4.153	F	35,573	\$142,292,000	209	203	
206672A	B	174TH ST-NTH PED BRDG	895I - SHERIDAN EXPWY		A-PED		4	C	6/6/2012	4.667	F	1,800	\$7,200,000	209		
206672B	B	174TH ST-STH PED BRDG	895I - SHERIDAN EXPWY		A-PED		4	C	6/6/2012	4.750	F	1,900	\$7,600,000	209		
2066919	BM	WASHINGTON BRIDGE	HARLEM RIVER	M	WO		9	S	11/29/2012	4.642	F	128,339	\$513,356,000	112	205	204
2075351	B	BRUCKNER EXPWY SB	AMTRAK - CSX	AC	A		1	S	11/19/2012	6.032	VG	11,600	\$46,400,000	202		
2075352	B	BRUCKNER EXPWY NB	AMTRAK - CSX	AC	A		1	S	11/19/2012	6.444	VG	10,900	\$43,600,000	202		
2075820	B	E TREMONT AVE	HUTCHINSON RVR PKWY		A		2	S	11/21/2011	4.444	F	10,200	\$40,800,000	210		
2075837	B	WESTCHESTER AVE	HUTCHINSON RVR PKWY		A		2	S	2/1/2012	4.083	F	15,858	\$63,432,000	210	211	
2075849	B	BRONX PELHAM PKWY	HUTCHINSON RVR PKWY		A		2	S	6/6/2012	3.763	F	17,600	\$70,400,000	210	211	
2075859	B	HUTCHINSON RVR PKWY	HUTCHINSON RIVER		WMA		7	S	10/16/2012	4.703	F	60,500	\$242,000,000	210	228	
2076109	B	BE NB SERVICE RD	HUTCHINSON RVR PKWY		A		2	S	9/1/2011	4.632	F	7,800	\$31,200,000	210		
2076129	B	BE SB SERVICE RD	HUTCHINSON RVR PKWY		A		2	S	1/19/2012	5.079	G	7,100	\$28,400,000	210		
2076640	B	DEPOT PLACE	METRO NORTH RR HUD	CM	O		11	S	6/8/2012	4.944	F	26,566	\$106,264,000	204		
2076929	B	BRUCKNER EXPWY	CSX - HUNTS POINT	C	A		1	S	9/15/2011	4.700	F	3,800	\$15,200,000	202		
2229289	M	HHP VIADUCT	AMTRAK - W72 ST - W79 ST	A	A		145	S	10/22/2012	3.597	F	236,100	\$944,400,000	107		
222928C	M	PED BR AT 73RD ST	HHP - AMTRAK	A	A-PED	P	5	C	2/14/2012	3.359	F	3,480	\$13,920,000	107		
2229290	M	W 79 ST	AMTRAK	A	A		1	S	6/7/2012	4.492	F	4,500	\$18,000,000	107		
2229309	M	HHP	RIVERSIDE PARK		A		1	S	1/5/2012	5.133	G	2,172	\$8,688,000	107		
2229311	M	HHP SB	RAMP TO 96 ST		A		1	S	2/1/2012	4.455	F	2,000	\$8,000,000	107		
2229312	M	HHP NB	RAMP TO 96 ST		A		1	S	2/1/2012	4.182	F	2,000	\$8,000,000	107		
2229321	M	HHP SB	RAMP FROM 96 ST		A		1	S	2/6/2012	5.133	G	2,000	\$8,000,000	107		

# INVENTORY SORTED BY B.I.N.

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2229322	M	HHP NB	RAMP FROM 96 ST		A		1	S	2/6/2012	5.300	G	2,000	\$8,000,000	107		
2229349	M	HHP	W 158 ST	A	A		44	S	12/17/2012	4.155	F	140,000	\$560,000,000	109	112	
222934A	M	RAMP TO N.B. HHP	AMTRAK WEST SIDE	A	AR		26	S	8/13/2012	3.875	F	10,800	\$43,200,000	112		
2229400	M	W 181ST ST PED BRDG	HHP N.B.		A-PED	P	7	C	2/15/2012	4.477	F	1,500	\$6,000,000	112		
2229440	B	HHP	KAPPOCK ST		A		1	S	7/18/2011	4.931	F	3,900	\$15,600,000	208		
2229450	B	232ND ST	HHP		A		2	S	7/19/2011	5.026	G	4,900	\$19,600,000	208		
2229460	B	236TH ST PED BRDG	HHP		A-PED		3	C	6/12/2012	4.672	F	2,500	\$10,000,000	208		
2229470	B	239TH ST	HHP		A		2	S	4/29/2011	5.053	G	6,100	\$24,400,000	208		
2229480	B	MANHATTAN COLL PKWY	HHP		A		3	S	4/29/2011	5.053	G	6,200	\$24,800,000	208		
2229490	B	246TH ST	HHP		A		2	S	4/29/2011	4.868	F	5,600	\$22,400,000	208		
2229500	B	252ND ST	HHP		A		2	S	1/20/2012	5.372	G	4,500	\$18,000,000	208		
2229510	B	RIVERDALE AVE	HHP		A		2	S	7/20/2011	5.079	G	5,200	\$20,800,000	208		
2229520	B	FIELDSTON ROAD	HHP		A		1	S	7/21/2011	5.033	G	6,600	\$26,400,000	208		
2229530	B	HHP	BROADWAY		A		1	S	7/22/2011	4.574	F	7,500	\$30,000,000	208		
2229540	B	VAN CRTLDT PARK	HHP		A-PED	P	2	C	8/8/2012	4.759	F	3,900	\$15,600,000	226		
2229550	B	VAN CRTLDT EQUES	HHP		A-PED	P	2	C	8/8/2012	4.556	F	2,100	\$8,400,000	226		
2229560	B	BRONX PELHAM PKWY	AMTRAK - CSX	AC	A		3	S	5/25/2012	4.542	F	24,591	\$98,364,000	211		
2229579	B	BOSTON POST ROAD	HUTCHINSON RIVER		WO		14	S	5/23/2012	4.194	F	95,700	\$382,800,000	212		
2230000	K	HIGHLAND BLVD E.B.	JACKIE ROBINSON PKWY		A		1	S	3/14/2012	4.724	F	4,900	\$19,600,000	305		
2230010	K	HIGHLAND BLVD W.B.	JACKIE ROBINSON PKWY		A		1	S	3/14/2012	4.767	F	3,500	\$14,000,000	305		
2230020	K	HIGHLAND BLVD W.B.	JACKIE ROBINSON PKWY		A		2	S	3/14/2012	4.974	F	4,700	\$18,800,000	305		
2230040	Q	CYPRESS HILLS ST	JACKIE ROBINSON PKWY		A		1	S	4/5/2012	4.722	F	5,000	\$20,000,000	405		
2230099	Q	JACKIE ROBINSON PKWY	CYPRESS HILLS CEMETRY		A		1	S	1/5/2012	5.444	G	4,200	\$16,800,000	405		
2230120	Q	MYRTLE AVE	JACKIE ROBINSON PKWY		A		1	S	4/26/2012	5.250	G	6,400	\$25,600,000	405	482	
2230179	Q	JACKIE ROBINSON PKWY	METROPOLITAN AVE		A		2	S	5/4/2012	5.286	G	8,673	\$34,692,000	482		
2230180	Q	UNION TPKE	JACKIE ROBINSON PKWY		A		1	S	2/1/2012	5.672	G	5,359	\$21,436,000	482		
2230190	Q	MARKWOOD ROAD	JACKIE ROBINSON PKWY		A		1	S	2/1/2012	5.167	G	4,400	\$17,600,000	482	406	
2230209	Q	QUEENS BLVD	JACKIE ROBINSON PKWY	T	A		5	S	7/9/2012	4.968	F	37,700	\$150,800,000	409		
2230220	K	HIGHLAND BLVD NB	VERMONT AVE		A		1	S	5/18/2011	5.857	G	3,995	\$15,980,000	305		
2230250	B	MOSHOLU PARKWAY	BRONX RIVER		WA		5	S	1/12/2012	4.211	F	16,300	\$65,200,000	227		
2230260	B	MOSHOLU PARKWAY	METRO NORTH	M	A		1	S	4/21/2012	5.516	G	8,880	\$35,520,000	227	207	
2230270	B	MOSHOLU PARKWAY	WEBSTER AVE		A		1	S	5/13/2011	5.328	G	8,480	\$33,920,000	207		
2230287	B	JEROME AVE	MOSHOLU PARKWAY	T	A		3	S	4/22/2011	4.816	F	11,800	\$47,200,000	207		
2230290	B	MOSHOLU PARKWAY	EQUESTRIAN PATH		A		1	S	1/20/2012	4.310	F	4,300	\$17,200,000	226		
2230300	B	MOSHOLU PARKWAY	CONRAIL (ABANDONED)	C	A		1	S	8/31/2012	4.271	F	4,600	\$18,400,000	226		
2230310	B	MOSHOLU PARKWAY	SB RAMP TO HHP		A		2	S	9/26/2011	4.919	F	7,400	\$29,600,000	226		
2230350	K	SUMMIT ST PED BRDG	278I (B.Q.E.)		A-PED		2	S	3/19/2012	4.614	F	1,400	\$5,600,000	306		
2230360	K	UNION ST	278I (B.Q.E.)		A		2	S	3/19/2012	4.375	F	5,000	\$20,000,000	306		
2230370	K	SACKETT ST	278I (B.Q.E.)		A		2	S	3/14/2012	4.500	F	5,000	\$20,000,000	306		
2230380	K	KANE ST	278I (B.Q.E.)		A		2	S	3/26/2012	4.208	F	5,000	\$20,000,000	306		



# INVENTORY SORTED BY B.I.N.

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2230390	K	CONGRESS ST	278I (B.Q.E.)		A		2	S	3/26/2012	6.029	VG	5,000	\$20,000,000	306		
2230410	K	278I EB (B.Q.E.)	WASHINGTON ST		A		1	S	6/25/2012	4.500	F	2,500	\$10,000,000	302		
2230420	K	278I WB (B.Q.E.)	WASHINGTON ST		A		1	S	6/25/2012	5.047	G	2,500	\$10,000,000	302		
2230430	K	278I (B.Q.E.) RAMP TO BKLN BRDG	PROSPECT ST		A		1	S	1/5/2012	5.000	G	1,100	\$4,400,000	302		
2230440	K	278I WB (B.Q.E.)	ADAMS ST		A		1	S	1/10/2012	5.167	G	2,700	\$10,800,000	302		
2230450	K	278I EB (B.Q.E.)	ADAMS ST		A		1	S	1/10/2012	4.933	F	2,500	\$10,000,000	302		
2230460	K	278I (B.Q.E.)	PEARL ST		A		1	S	2/2/2012	5.467	G	4,500	\$18,000,000	302		
2230470	K	278I (B.Q.E.)	JAY ST		A		1	S	2/3/2012	4.833	F	5,100	\$20,400,000	302		
2230480	K	278I (B.Q.E.)	PROSPECT ST		A		1	S	2/13/2012	5.056	G	8,400	\$33,600,000	302		
2230490	K	278I (B.Q.E.)	SANDS ST		A		1	S	2/22/2012	5.093	G	12,600	\$50,400,000	302		
2230500	K	278I (B.Q.E.)	RAMP TO BQE EB		A		1	S	2/21/2012	4.967	F	1,300	\$5,200,000	302		
2230510	K	278I (B.Q.E.)	NASSAU ST		A		6	S	6/11/2012	5.169	G	51,200	\$204,800,000	302		
2230520	Q	65TH PLACE	278I (B.Q.E.)		A		2	S	2/7/2012	5.972	G	11,668	\$46,672,000	402		
2230530	Q	QUEENS BLVD	278I (B.Q.E.)		A		2	S	11/20/2012	6.417	VG	25,543	\$102,172,000	402		
2230540	Q	WOODSIDE AVE	278I (B.Q.E.)		A		1	S	2/3/2012	5.672	G	7,529	\$30,116,000	402		
2230550	Q	69TH ST	278I (B.Q.E.)		A		2	S	1/19/2012	5.263	G	12,600	\$50,400,000	402		
2230560	Q	70TH ST	278I (B.Q.E.)		A		2	S	11/20/2012	6.722	VG	8,580	\$34,320,000	402		
2230570	Q	41ST AVE	278I (B.Q.E.)		A		2	S	11/20/2012	6.735	VG	8,580	\$34,320,000	402		
2230587	Q	ROOSEVELT AVE	278I (B.Q.E.)		A		2	S	10/28/2011	5.889	G	11,022	\$44,088,000	402		
2230590	Q	BROADWAY	278I (B.Q.E.)		O		2	S	12/6/2012	5.789	G	16,000	\$64,000,000	402		
2230600	Q	STEINWAY ST	278I WB (BQE)		A		1	S	9/12/2012	6.349	VG	5,229	\$20,916,000	401		
2230610	Q	STEINWAY ST	278I EB (BQE)		A		1	S	9/13/2012	6.349	VG	5,146	\$20,584,000	401		
2230620	Q	37TH ST	278I (B.Q.E.)		A		2	S	3/22/2012	4.681	F	5,300	\$21,200,000	401		
2230630	Q	35TH ST	278I (B.Q.E.)		A		4	S	3/22/2012	4.667	F	9,000	\$36,000,000	401		
2230640	Q	32ND ST	278I (B.Q.E.)		A		2	S	6/24/2011	4.875	F	8,100	\$32,400,000	401		
2230657	Q	31ST ST	278I (B.Q.E.)		A		2	S	12/5/2012	4.569	F	9,500	\$38,000,000	401		
2230669	Q	278I (B.Q.E.)	35TH AVE		A		1	S	8/3/2011	6.390	VG	13,135	\$52,540,000	402		
2230679	Q	278I (B.Q.E.)	34TH AVE		A		1	S	6/7/2011	6.203	VG	7,793	\$31,172,000	402		
2230680	Q	278I (B.Q.E.)	NORTHERN BLVD		A		1	S	12/4/2012	6.016	VG	27,011	\$108,044,000	402	401	
2230690	Q	278I NB (BQE WEST LEG)	32ND AVE		A		1	S	6/22/2012	6.407	VG	4,080	\$16,320,000	401		
2230700	Q	278I NB (BQE EAST LEG)	32ND AVE (TO BQE WEST LEG)		A		8	S	12/4/2012	6.465	VG	31,600	\$126,400,000	401	403	
2230710	Q	278I SB (BQE WEST LEG)	32ND AVE		A		1	S	8/2/2011	6.559	VG	5,240	\$20,960,000	401		
2230720	Q	278I SB (BQE EAST LEG)	278I NB (BQE WEST LEG)		A		3	S	7/22/2011	6.182	VG	20,896	\$83,584,000	401		
2230730	Q	31ST AVE	278I NB (BQE WEST LEG)		A		1	S	7/15/2011	6.217	VG	5,875	\$23,500,000	401		
2230740	Q	278I SB (BQE WEST LEG)	31ST AVE		A		1	S	8/1/2011	6.217	VG	5,246	\$20,984,000	401		
2230750	Q	278I SB (BQE EAST LEG)	31ST AVE		A		1	S	8/1/2011	6.508	VG	4,221	\$16,884,000	401	403	
2230760	Q	278I NB (BQE EAST LEG)	31ST AVE		A		1	S	8/30/2012	6.610	VG	4,161	\$16,644,000	401		
2230770	Q	278I (BQE WEST LEG)	30TH AVE		A		1	S	6/15/2011	6.322	VG	6,199	\$24,796,000	401		
2230780	Q	278I (BQE EAST LEG)	30TH AVE		A		1	S	6/14/2011	6.206	VG	7,071	\$28,284,000	403	401	
2230790	Q	BULOVA AVE	278I (BQE WEST LEG)		A		2	S	4/16/2012	5.278	G	3,300	\$13,200,000	401		

# INVENTORY SORTED BY B.I.N.

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2230800	Q	49TH ST	278I (BQE WEST LEG)		A		2	S	4/16/2012	5.278	G	4,900	\$19,600,000	401		
2230810	Q	ASTORIA BLVD EB	278I (BQE WEST LEG)		A		4	S	3/28/2012	4.044	F	8,200	\$32,800,000	401		
2230820	Q	47TH ST	GCP		A		2	S	5/17/2012	4.889	F	5,700	\$22,800,000	401		
2230830	Q	278I NB (BQE WEST LEG)	GCP		A		2	S	5/17/2012	4.583	F	7,600	\$30,400,000	401		
2230840	Q	44TH ST	GCP		A		2	S	5/17/2012	4.764	F	5,000	\$20,000,000	401		
2230857	K	278I WB (B.Q.E.)	JORALEMON ST		A		1	S	3/5/2012	5.000	G	2,100	\$8,400,000	302		
2230858	K	278I EB (B.Q.E.)	JORALEMON ST / BQE WB		A		1	S	10/9/2011	4.619	F	5,900	\$23,600,000	302		
2230869	Q	QUEENS BLVD	ACCESS RD BQE S.B.		A		1	S	10/17/2012	5.909	G	7,900	\$31,600,000	402		
2230870	K	COLUMBIA HEIGHTS	278I (B.Q.E.)		A		1	S	7/9/2012	4.383	F	16,500	\$66,000,000	302		
2230887	K	278I W.B. (B.Q.E.)	CADMAN PLAZA		A		2	S	6/29/2012	4.569	F	4,500	\$18,000,000	302		
2230888	K	278I E.B. (B.Q.E.)	CADMAN PLAZA / 278I WB		A		2	S	6/29/2012	5.263	G	4,500	\$18,000,000	302		
2230890	Q	49TH ST	GCP		A		2	S	5/17/2012	4.444	F	6,350	\$25,400,000	401		
2231249	K	BSHP	BAY RIDGE AVE		A		1	S	3/26/2012	3.625	F	4,900	\$19,600,000	310		
2231250	K	81ST ST PED BRDG	BSHP		A-PED	P	5	C	3/23/2012	4.761	F	3,100	\$12,400,000	310		
2231260	K	92ND ST PED BRDG	BSHP		A-PED	P	6	C	9/18/2012	3.475	F	3,000	\$12,000,000	310		
2231270	K	4TH AVE	BSHP		A		2	S	3/16/2012	4.579	F	6,100	\$24,400,000	310		
2231290	K	BAY 8TH ST	BSHP		A		1	S	5/14/2011	5.952	G	4,950	\$19,800,000	311		
2231300	K	17TH AVE PED BRDG	BSHP		A-PED	P	1	C	8/22/2012	3.614	F	2,100	\$8,400,000	311		
2231319	K	BSHP	BAY PKWY		A		1	S	6/2/2012	4.267	F	7,200	\$28,800,000	311		
2231329	K	BSHP	26TH AVE		A		1	S	4/20/2012	4.600	F	6,700	\$26,800,000	313		
2231330	K	27TH AVE PED BRDG	BSHP		A-PED	P	1	C	1/20/2012	4.106	F	2,100	\$8,400,000	313		
2231340	K	CROPSEY AVE	BSHP		A		2	S	6/13/2012	4.722	F	13,100	\$52,400,000	313		
2231360	K	BSHP	OCEAN PKWY		A		3	S	6/25/2012	6.299	VG	29,637	\$118,548,000	313		
2231370	K	GUIDER AV RAMP TO BSHP	BSHP		A		4	S	9/14/2012	6.944	VG	10,548	\$42,192,000	313		
2231380	K	CONEY ISLAND AVE	BSHP		A		4	S	9/20/2011	5.986	G	19,866	\$79,464,000	313		
2231390	K	E 12TH ST	BSHP		A		4	S	6/13/2012	4.542	F	17,200	\$68,800,000	315		
2231409	K	BSHP	SHEEPSHEAD BAY ROAD		A		1	S	4/12/2012	4.672	F	6,500	\$26,000,000	315		
2231419	K	BSHP	OCEAN AVE		A		3	S	4/12/2012	4.500	F	14,000	\$56,000,000	315		
2231429	K	BSHP	BEDFORD AVE		A		3	S	4/20/2012	4.042	F	12,000	\$48,000,000	315		
2231439	K	BSHP	NOSTRAND AVE		A		3	S	4/20/2012	3.986	F	13,000	\$52,000,000	315		
2231449	K	KNAPP ST	BSHP		A		1	S	4/20/2012	4.406	F	9,500	\$38,000,000	315		
2231450	K	BSHP	GERRITSEN INLET		WA		11	S	7/24/2012	3.463	F	52,000	\$208,000,000	356		
2231460	K	FLATBUSH AVE	BSHP		A		2	S	9/22/2011	6.250	VG	14,058	\$56,232,000	356		
2231479	K	BSHP	MILL BASIN		WMA		14	S	10/10/2012	3.179	F	73,500	\$294,000,000	318		
2231489	K	BSHP	PAERDEGAT BASIN		WA		15	S	11/28/2012	3.340	F	58,300	\$233,200,000	318		
2231499	K	BSHP	ROCKAWAY PKWY		A		4	S	10/27/2012	6.644	VG	11,500	\$46,000,000	356		
2231509	K	BSHP	FRESH CREEK		WA		5	S	10/21/2012	6.915	VG	23,000	\$92,000,000	356		
2231519	K	PENNSYLVANIA AVE	BSHP		A		2	S	5/20/2011	5.694	G	6,640	\$26,560,000	356		
2231559	Q	CROSS BAY BLVD	BSHP		A		4	S	6/1/2012	5.139	G	23,205	\$92,820,000	410		
2231560	Q	S CONDUIT BLVD	BSOP		A		2	S	7/12/2012	5.296	G	15,776	\$63,104,000	410		

# INVENTORY SORTED BY B.I.N.

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2231570	Q	COHANCY ST	BSOP		A		2	S	4/24/2012	4.395	F	6,400	\$25,600,000	410		
2231590	Q	130TH ST	BSOP		A		2	S	1/30/2012	4.659	F	6,800	\$27,200,000	410		
2231610	Q	GUY R. BREWER BLVD	BSOP		A		4	S	6/2/2011	6.222	VG	12,342	\$49,368,000	413		
2231620	Q	FARMERS BLVD	BSOP		A		2	S	5/10/2012	4.477	F	6,400	\$25,600,000	413		
2231630	Q	SPRINGFIELD BLVD	BSOP		A		2	S	5/10/2012	4.591	F	8,500	\$34,000,000	413		
2231640	Q	225TH ST	BSOP		A		2	S	5/10/2012	4.614	F	7,000	\$28,000,000	413		
2231650	Q	SUNRISE HWY W.B.	BLP E.B.		A		1	S	4/2/2012	4.393	F	4,100	\$16,400,000	413		
2231660	Q	SUNRISE HWY W.B.	BLP W.B.		A		2	S	3/6/2012	4.565	F	5,350	\$21,400,000	413		
2231670	Q	N CONDUIT AVE WB	BLP E.B.		A		1	S	1/25/2012	4.917	F	4,000	\$16,000,000	413		
2231680	Q	N CONDUIT AVE WB	BLP W.B.		A		2	S	1/25/2012	4.932	F	6,500	\$26,000,000	413		
2231690	Q	FRANCIS LEWIS BLVD	BLP E.B.		A		1	S	3/29/2012	5.167	G	6,000	\$24,000,000	413		
2231700	Q	FRANCIS LEWIS BLVD	BLP W.B.		A		1	S	3/29/2012	4.700	F	6,000	\$24,000,000	413		
2231710	Q	MERRICK BLVD	BLP N.B.		A		1	S	2/22/2012	4.467	F	6,000	\$24,000,000	413		
2231720	Q	MERRICK BLVD	BLP S.B.		A		1	S	2/15/2012	4.200	F	6,000	\$24,000,000	413		
2231730	Q	130TH AVE	BLP N.B.		A		1	S	1/20/2012	5.267	G	4,400	\$17,600,000	413		
2231740	Q	130TH AVE	BLP S.B.		A		1	S	1/20/2012	4.833	F	4,400	\$17,600,000	413		
2231750	Q	LINDEN BLVD	BCIP		A		2	S	3/2/2012	4.250	F	6,700	\$26,800,000	413		
2231760	Q	BCIP	DUTCH BROADWAY-115 AVE		A		1	S	3/6/2012	4.047	F	7,300	\$29,200,000	413		
2231770	Q	BELMONT PARK RAMP	BCIP		A	P	1	S	2/3/2012	4.688	F	3,200	\$12,800,000	413		
2231780	Q	HEMPSTEAD AVE	BCIP		A		2	S	2/3/2012	4.065	F	14,200	\$56,800,000	413		
2231790	Q	BELMONT PARK RAMP	BCIP		A	P	1	S	1/13/2012	4.563	F	3,400	\$13,600,000	413		
2231800	Q	SUPERIOR ROAD	BCIP		A		2	S	4/12/2012	4.659	F	7,000	\$28,000,000	413		
2231819	Q	JAMAICA AVE	BCIP		A		2	S	3/23/2012	4.773	F	11,500	\$46,000,000	413		
2231829	Q	BRADDOCK AVE	BCIP		A		2	S	3/23/2012	4.955	F	10,600	\$42,400,000	413		
2231840	Q	HILLSIDE AVE	BCIP		A		2	S	3/30/2012	4.026	F	9,672	\$38,688,000	413		
2231850	Q	UNION TPKE	BCIP		A		2	S	3/28/2012	4.409	F	13,600	\$54,400,000	413		
2231860	Q	W ALLEY ROAD	BCIP		A		2	S	7/20/2011	5.474	G	7,200	\$28,800,000	411		
2231870	Q	NORTHERN BLVD	BCIP		A		2	S	8/28/2012	5.875	G	9,400	\$37,600,000	411		
2231880	Q	CROCHERON PK PED	BCIP		A-PED	P	9	C	6/23/2011	4.188	F	2,300	\$9,200,000	411		
2231890	Q	28TH AVE PED BRDG	BCIP		A-PED	P	24	C	6/11/2012	4.517	F	7,600	\$30,400,000	411		
2231900	Q	BCIP	TOTTEN AVE		A		1	S	6/1/2012	4.609	F	4,900	\$19,600,000	407		
2231910	Q	UTOPIA PKWY	BCIP		A		2	S	3/15/2012	5.114	G	7,200	\$28,800,000	407		
2231920	Q	160TH ST	BCIP		A		2	S	6/27/2011	5.750	G	5,550	\$22,200,000	407		
2231930	Q	FRANCIS LEWIS BLVD	BCIP		A		3	S	2/3/2012	4.682	F	9,100	\$36,400,000	407		
2231940	Q	CLINTONVILLE ST	BCIP		A		2	S	2/3/2012	4.705	F	7,400	\$29,600,000	407		
2231950	Q	150TH ST	BCIP		A		2	S	2/8/2012	4.682	F	5,900	\$23,600,000	407		
2231960	Q	149TH ST	BCIP		A		2	S	2/8/2012	4.795	F	6,210	\$24,840,000	407		
2231970	Q	14TH AVE	BCIP		A		2	S	2/8/2012	4.614	F	8,100	\$32,400,000	407		
2231980	Q	147TH ST	BCIP		A		2	S	3/8/2012	4.705	F	6,300	\$25,200,000	407		
2232000	M	BATTERY PLACE	FDR DRIVE		AT		2	S	12/21/2011	5.318	G	142,000	\$568,000,000	101		

# INVENTORY SORTED BY B.I.N.

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
223201A	M	FDR DR N.B. OFF RMP	FDR DR & SOUTH ST		AR		17	S	4/24/2012	3.925	F	23,373	\$93,492,000	101		
223201B	M	STH ST RMP TO FDR S.B.	SOUTH ST		AR		10	S	2/17/2012	3.791	F	13,388	\$53,552,000	101		
223201C	M	FDR DR S.B. OFF RMP	SOUTH ST		AR		8	S	2/9/2012	4.821	F	36,700	\$146,800,000	103		
223201D	M	RAMP TO N.B. FDR DRIVE	FDR & SOUTH ST.		AR		22	S	2/10/2012	4.967	F	15,825	\$63,300,000	101	103	
2232029	M	CORLEARS PARK ROAD	FDR DRIVE		A	P	4	S	3/28/2012	3.938	F	4,100	\$16,400,000	103		
2232030	M	DELANCEY ST PED BRDG	FDR DRIVE		A-PED	P	12	C	5/2/2012	4.443	F	2,900	\$11,600,000	103		
2232040	M	HOUSTON ST	FDR DRIVE		A		2	S	4/30/2012	3.773	F	11,010	\$44,040,000	103		
223204A	M	FDR NB RAMP TO HOUSTON ST	RELIEF		AR		4	S	1/20/2012	4.706	F	6,150	\$24,600,000	103		
223204B	M	HOUSTON ST RAMP TO FDR NB	RELIEF		AR		4	S	1/23/2012	4.792	F	7,125	\$28,500,000	103		
2232050	M	E 6TH ST PED BRDG	FDR DRIVE		A-PED	P	19	C	3/22/2012	4.233	F	2,200	\$8,800,000	103		
2232070	M	E 25TH ST PED BRDG	FDR DRIVE		A-PED		3	C	3/16/2012	4.627	F	1,700	\$6,800,000	106		
2232100	M	E 51ST ST PED BRDG	FDR DRIVE		A-PED	P	6	C	3/23/2012	4.567	F	2,800	\$11,200,000	106		
2232110	M	E 64TH ST PED BRDG	FDR DRIVE		A-PED	P	11	U	11/23/2011	4.912	F	2,100	\$8,400,000	108		
2232120	M	E 71ST ST PED BRDG	FDR DRIVE		A-PED	P	19	C	9/7/2012	5.000	G	340	\$1,360,000	108		
2232140	M	E 78TH ST PED BRDG	FDR DRIVE		A-PED	P	9	C	4/17/2012	6.944	VG	3,120	\$12,480,000	108		
2232167	M	PROMENADE OVER FDR	FDR - E81ST ST - E90TH ST		A-PED	P	53	S	7/6/2011	3.143	F	93,000	\$372,000,000	108		
2232180	M	E 103RD ST PED BRDG	FDR DRIVE		A-PED		18	C	9/8/2012	4.395	F	4,800	\$19,200,000	111		
2232190	M	E 111TH ST PED BRDG	FDR DRIVE		A-PED	P	9	C	9/20/2012	4.128	F	4,200	\$16,800,000	111		
2232200	M	E 120TH ST PED BRDG	FDR DRIVE		A-PED	P	18	C	9/18/2012	3.914	F	3,978	\$15,912,000	111		
2233020	M	E 10TH ST PED BRDG	FDR DRIVE		A-PED	P	21	C	3/20/2012	4.193	F	2,754	\$11,016,000	103		
2233038	M	FDR DRIVE SB	FDR NB / E 62ND ST		AT		34	S	12/5/2012	6.563	VG	58,700	\$234,800,000	106	108	
2233040	M	E 60TH ST	FDR DRIVE		A		17	S	7/3/2012	5.000	G	24,480	\$97,920,000	108		
2233059	M	HARLEM RIVER DRIVE	RAMP TO & FROM HRD N.B.		A		11	S	7/12/2012	3.507	F	51,000	\$204,000,000	111		
2233080	K	E 14 ST PED BRDG	BSHP		A-PED		14	C	7/16/2012	3.836	F	4,700	\$18,800,000	315		
2240019	KM	BROOKLYN BRIDGE	EAST RIVER		WEO		75	S	11/12/2012	2.944	P	503,788	\$2,015,152,000	103	302	101
224001A	M	PARK ROW TO BKLN	WILLIAM ST N.B.		OE		4	S	4/24/2012	4.500	F	10,167	\$40,668,000	101		
224001B	M	TO BKLN FRM FDR	FRANKFORT & PEARL ST		OE		31	S	8/20/2012	4.333	F	51,400	\$205,600,000	101	103	
224001C	M	PEARL ST TO BKLN	LAND ADJ TO BRDG		OE		9	S	3/14/2012	3.814	F	6,365	\$25,460,000	101		
224001D	M	TO FDR DR N.B.	PEARL STREET		OE		30	S	7/15/2011	4.868	F	49,600	\$198,400,000	101	103	
224001E	M	TO PEARL ST	LAND ADJ TO BRDG		OE		3	S	6/28/2011	5.141	G	5,300	\$21,200,000	101		
224001F	M	PEARL ST TO FDR DR	LAND ADJ TO BRDG		OE		3	S	4/2/2012	5.282	G	5,200	\$20,800,000	103		
224001G	M	TO PARK ROW	ROSE ST		OE		11	S	3/27/2012	4.408	F	16,551	\$66,204,000	101		
2240027	KM	MANHATTAN BRIDGE(LL)	EAST RIVER	T	WEO		23	S	11/19/2012	4.653	F	616,390	\$2,465,560,000	103	302	
2240028	KM	MANHATTAN BRIDGE(UL)	NYCTA TRACKS-BMT	T	WEO		43	S	11/19/2012	3.757	F	587,424	\$2,349,696,000	103	302	
2240039	KM	WILLIAMSBURG BRIDGE	EAST RIVER	T	WEO		53	S	10/27/2012	4.431	F	824,000	\$3,296,000,000	103	301	
2240047	MQ	QUEENSBORO BRIDGE (LL)	EAST RIVER	AL	WEO		53	S	12/5/2012	4.264	F	626,900	\$2,507,600,000	108	402	401
2240048	MQ	QUEENSBORO BRIDGE (UL)	EAST RIVER - LL		WEO		37	S	10/26/2012	4.189	F	322,300	\$1,289,200,000	108	402	401
224004A	M	TO E 60TH ST FROM QNS	FIRST AVE		OE		13	S	4/20/2012	5.338	G	14,800	\$59,200,000	108		
224004B	M	TO QNS FRM E 59TH ST	FIRST AVE		OE		13	S	4/20/2012	5.653	G	14,800	\$59,200,000	108		
224004C	M	TO E 62ND ST FROM QNS	E 60TH - E 61ST ST		OE		10	S	8/30/2012	4.985	F	16,720	\$66,880,000	108		



# INVENTORY SORTED BY B.I.N.

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
224004D	M	TO QNS FROM E 58TH ST	E 59TH ST		OE		12	S	6/28/2012	4.245	F	10,858	\$43,432,000	106	108	
224004E	Q	TO NY FR THOMSON AVE	JACKSON AVE	L	OE		94	S	12/12/2012	4.604	F	104,600	\$418,400,000	402		
224004F	Q	TO NY FROM 21ST ST	21ST ST		OE		63	S	12/19/2012	4.712	F	63,310	\$253,240,000	402	401	
224004G	Q	TO NY FROM 11TH ST	TERRAIN (CHAMBER)		OE		36	S	8/14/2012	5.268	G	8,360	\$33,440,000	401	402	
224004H	Q	TO 21ST ST FROM NY	22ND ST		OE		43	S	12/18/2012	4.437	F	48,100	\$192,400,000	402		
224004I	Q	TO THOMSON AVE FROM NY	JACKSON AVE	L	OE		39	S	12/18/2012	4.951	F	59,100	\$236,400,000	402		
224004J	M	25X	NYC GARAGE		OE		14	S	4/23/2012	4.829	F	22,058	\$88,232,000	108		
2240059	BM	WILLIS AVENUE	HARLEM RIVER		WMO		15	S	12/17/2012	6.833	VG	171,105	\$684,420,000	111	201	
224005A	M	FROM FDR DRIVE	HARLEM RIVER DR		OR		11	S	11/29/2012	7.000	VG	28,233	\$112,932,000	111		
224005B	B	TO BRUCKNER BLVD	RELIEF		OR		5	S	10/24/2011	6.746	VG	12,100	\$48,400,000	201		
2240069	BM	THIRD AVE BRIDGE	HARLEM RIVER		WMO		14	S	9/20/2012	5.845	G	100,232	\$400,928,000	111	201	
224006A	B	FROM BRUCKNER BLVD	RELIEF		OR		5	S	9/28/2011	6.761	VG	14,037	\$56,148,000	201		
2240079	BM	MADISON AVE BRIDGE	HARLEM RIVER		WMO		21	S	9/20/2012	4.944	F	80,000	\$320,000,000	111	201	
224007A	M	TO MADISON AVENUE	E 138TH ST		OR		7	S	2/9/2012	5.028	G	19,880	\$79,520,000	111		
2240089	BM	145TH ST BRIDGE	HARLEM RIVER		WMO		8	S	9/23/2011	6.250	VG	56,700	\$226,800,000	110	204	201
2240120	BM	W 207TH/W FORDHAM RD	HARLEM RIVER		WMO		5	S	9/5/2012	5.056	G	31,784	\$127,136,000	112	207	
2240137	BM	BROADWAY BRIDGE	HARLEM RIVER	TM	WMO		3	S	12/7/2012	3.806	F	46,848	\$187,392,000	112	207	208
2240138	BM	NYCTA IRT	HARLEM RVR/BROADWAY	TM	WMO		3	S	11/21/2011	4.720	F	19,520	\$78,080,000	112	207	208
2240180	B	WESTCHESTER AVE	BRONX RIVER		WO		1	S	9/16/2011	4.608	F	5,476	\$21,904,000	202	209	
2240200	B	SHORE ROAD	HUTCHINSON RIVER		WMO		7	S	6/15/2012	4.537	F	43,576	\$174,304,000	228		
2240210	B	CITY ISLAND ROAD	EASTCHESTER BAY		WO		7	S	10/19/2012	3.389	F	19,915	\$79,660,000	228		
2240231	K	HAMILTON AVE BRIDGE	GOWANUS CANAL		WMO		3	S	9/13/2012	5.472	G	7,300	\$29,200,000	307	306	
2240232	K	HAMILTON AVE BRIDGE	GOWANUS CANAL		WMO		3	S	9/7/2011	5.306	G	7,300	\$29,200,000	306		
2240240	K	NINTH ST BRIDGE	GOWANUS CANAL		WMO		3	S	5/27/2011	6.581	VG	5,772	\$23,088,000	306		
2240250	K	THIRD ST	GOWANUS CANAL		WMO		5	S	5/19/2011	4.903	F	4,900	\$19,600,000	306		
2240260	K	CARROLL ST	GOWANUS CANAL		WMO		2	S	7/6/2012	4.634	F	3,000	\$12,000,000	306		
2240270	K	UNION ST	GOWANUS CANAL		WMO		5	S	8/10/2012	4.000	F	4,900	\$19,600,000	306		
2240290	K	METROPOLITAN AVE	ENGLISH KILLS		WMO		5	S	6/28/2011	6.000	G	10,550	\$42,200,000	301		
2240301	K	CROPSY AVE	CONEY ISLAND CREEK		WO		3	S	6/10/2011	5.225	G	9,400	\$37,600,000	313		
2240302	K	CROPSY AVE	CONEY ISLAND CREEK		WO		3	S	10/2/2012	4.718	F	9,400	\$37,600,000	313		
2240310	K	THIRD AVE	GOWANUS CANAL		WO		1	S	5/18/2011	6.900	VG	3,200	\$12,800,000	306		
2240320	K	OCEAN AVE PED BRDG	SHEEPSHEAD BAY		WO-PED		30	C	9/15/2011	4.571	F	4,450	\$17,800,000	315		
2240350	R	RICHMOND AVE	RICHMOND CREEK		WO		3	S	6/8/2011	5.472	G	32,589	\$130,356,000	502		
2240370	KQ	GREENPOINT AVE BRIDGE	NEWTOWN CREEK	L	WMO		12	S	7/8/2011	5.222	G	76,106	\$304,424,000	301	402	
2240390	KQ	GRAND ST BRIDGE	NEWTOWN CREEK		WMO		2	S	10/7/2012	4.042	F	5,100	\$20,400,000	301	405	
2240410	Q	BORDEN AVE	DUTCH KILLS		WMO		2	S	7/26/2011	4.792	F	8,400	\$33,600,000	402		
2240440	Q	NORTHERN BLVD	ALLEY CREEK		WO		2	S	8/9/2012	4.681	F	8,300	\$33,200,000	411		
2240450	Q	HUNTERS PT AVE	DUTCH KILLS		WMO		4	S	7/3/2012	5.083	G	12,168	\$48,672,000	402		
2240507	Q	ROOSEVELT AVE	6781 - FLUSHING RIVER		WA		27	S	11/30/2012	3.465	F	84,424	\$337,696,000	407	481	
2240540	K	STILLWELL AVE	CONEY ISLAND CRK		WO		2	S	5/27/2011	6.292	VG	17,000	\$68,000,000	313		

# INVENTORY SORTED BY B.I.N.

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RT NG SRC	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2240620	M	WARDS ISLAND PED BRDG	HARLEM RIVER		WMO-PED		10	C	4/15/2011	4.097	F	12,600	\$50,400,000	111		
2240639	KQ	PULASKI BRIDGE	NEWTOWN CREEK		WMO		44	S	5/11/2012	4.662	F	205,770	\$823,080,000	301	402	
2240640	MQ	ROOSEVELT ISLAND BRDG	E. RIVER E. CHANNEL		WMO		8	S	11/19/2012	5.611	G	36,500	\$146,000,000	108	401	
2240650	Q	163RD AVE PED BRDG	HAWTREE BASIN		WO-PED		13	C	9/19/2011	4.174	F	5,000	\$20,000,000	410		
2240660	Q	RIKERS ISLAND BRIDGE	RIKERS ISL CHANNEL		WO		56	S	12/18/2012	4.380	F	183,100	\$732,400,000	401	480	
2241000	B	WESTCHESTER AVE	CSX TRANS - PT MORRIS	C	O		1	S	6/11/2012	4.660	F	1,740	\$6,960,000	201		
2241010	B	E 156TH STREET	CSX TRANS - PT MORRIS	C	O		1	S	6/18/2012	4.612	F	2,400	\$9,600,000	201		
2241020	B	E 161ST STREET	CSX TRANS - PT MORRIS	C	O		1	S	3/21/2012	6.700	VG	12,800	\$51,200,000	203		
2241030	B	E 163RD STREET	CSX TRANS - PT MORRIS	C	O		1	S	3/1/2012	4.611	F	3,200	\$12,800,000	203		
2241040	B	THIRD AVE	CSX TRANS - PT MORRIS	C	O		1	S	7/25/2012	4.563	F	2,700	\$10,800,000	201	203	
2241050	B	E 149TH ST/JACKSON AVE	CSX TRANS - PT MORRIS	C	O		1	S	6/7/2012	4.850	F	65,000	\$260,000,000	201		
2241060	B	ST. MARYS & CONCORD	CSX TRANS - PT MORRIS	C	O		1	S	8/15/2012	5.370	G	4,500	\$18,000,000	201		
2241070	B	WALES AVE	CSX TRANS - PT MORRIS	C	O		1	S	8/8/2012	6.467	VG	2,535	\$10,140,000	201		
2241080	B	SOUTHERN BLVD	CSX TRANS - PT MORRIS	C	O		1	S	8/8/2012	4.093	F	3,900	\$15,600,000	201		
2241099	B	BRUCKNER BLVD	CSX TRANS - PT MORRIS	C	O		1	S	8/7/2012	6.450	VG	6,700	\$26,800,000	201		
2241110	B	MELROSE AVE	CSX TRANS - PT MORRIS	C	O		8	S	8/3/2011	5.611	G	37,854	\$151,416,000	203		
2241129	B	E 149TH ST	AMTRAK - CSX	AC	O		2	S	10/8/2012	4.620	F	18,258	\$73,032,000	201	202	
2241139	B	LEGGETT AVE	AMTRAK - CSX	AC	O		3	S	10/8/2012	4.620	F	41,551	\$166,204,000	202		
2241159	B	LONGWOOD AVE	AMTRAK - CSX	AC	O		2	S	10/10/2012	5.236	G	10,625	\$42,500,000	202		
2241169	B	LAFAYETTE AVE	AMTRAK - CSX	AC	O		1	S	10/5/2012	5.651	G	12,000	\$48,000,000	202		
2241170	B	TIFFANY ST	AMTRAK - CSX	AC	O		1	S	11/1/2011	5.627	G	7,267	\$29,068,000	202		
2241180	B	BARRETTO ST	AMTRAK - CSX	AC	O		1	S	10/8/2012	6.000	G	5,313	\$21,252,000	202		
2241190	B	HUNTS POINT AVE	AMTRAK - CSX	AC	O		1	S	10/12/2012	4.828	F	10,049	\$40,196,000	202		
2241200	B	FAILE ST	AMTRAK - CSX	AC	O		1	S	10/12/2012	5.578	G	6,208	\$24,832,000	202		
2241210	B	BRYANT AVE	AMTRAK - CSX	AC	O		1	S	10/11/2012	3.051	F	5,300	\$21,200,000	202		
2241230	B	WESTCHESTER AVE	AMTRAK - CSX	AC	O		3	S	11/26/2012	5.944	G	15,600	\$62,400,000	202	209	
2241259	B	204TH ST PED BRDG	METRO NORTH RR HAR	M	O-PED	P	1	C	2/2/2012	3.948	F	4,700	\$18,800,000	227	207	
2241269	B	E 177TH ST	AMTRAK - CSX	AC	O		3	S	8/27/2012	5.403	G	16,606	\$66,424,000	206		
2241270	B	E TREMONT AVE	AMTRAK - CSX	AC	O		2	S	8/27/2012	5.153	G	22,300	\$89,200,000	209	211	
2241329	B	WHITE PLAINS ROAD	AMTRAK - CSX	AC	O		1	S	10/9/2012	4.781	F	6,900	\$27,600,000	211		
2241330	B	UNIONPORT ROAD	AMTRAK - CSX	AC	O		1	S	10/9/2012	4.781	F	7,631	\$30,524,000	211		
2241369	B	WILLIAMSBRIDGE RD	AMTRAK - CSX	AC	O		2	S	8/27/2012	4.836	F	6,510	\$26,040,000	211		
2241380	B	PELHAM BAY PK EQUES	AMTRAK - CSX	AC	O-PED	P	1	C	1/7/2012	3.775	F	4,223	\$16,892,000	228		
2241390	B	SHORE RD CIRCLE	AMTRAK - CSX	AC	O		1	S	7/3/2012	7.000	VG	8,067	\$32,268,000	228		
2241409	B	GRAND CONCOURSE	METRO NORTH RR HUD	MT	O		1	S	5/16/2012	3.797	F	14,300	\$57,200,000	204		
2241410	B	WALTON AVE	METRO NORTH RR HUD	M	O		1	S	5/16/2012	4.953	F	3,600	\$14,400,000	204		
2241420	B	GERARD AVE	METRO NORTH RR HUD	M	O		1	S	5/16/2012	5.797	G	5,063	\$20,252,000	204		
2241430	B	RIVER AVE	METRO NORTH RR HUD	M	O		1	S	7/13/2011	6.156	VG	5,040	\$20,160,000	204		
2241460	B	W TREMONT AVE	METRO NORTH RR HUD	M	O		8	S	6/7/2012	3.955	F	12,900	\$51,600,000	205		
2241470	B	W FORDHAM RD	METRO NORTH RR HUD	M	O		4	S	7/14/2011	5.694	G	16,052	\$64,208,000	207		

# INVENTORY SORTED BY B.I.N.

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RT NG SRC	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2241489	B	W 225TH ST	CSX TRASP - PUTNAM	C	O		2	S	6/9/2012	5.328	G	10,900	\$43,600,000	207	208	
2241490	B	W 230TH ST	CONRAIL (ABANDONED) PUTNAM		O		1	S	4/8/2011	5.563	G	5,600	\$22,400,000	208		
2241509	B	W 231ST ST	CONRAIL (ABANDONED) PUTNAM		O		1	S	7/26/2012	4.745	F	4,723	\$18,892,000	208		
2241510	B	W 233RD ST	CONRAIL (ABANDONED) PUTNAM		O		1	S	4/7/2011	5.275	G	3,760	\$15,040,000	208		
2241520	B	W 234TH ST	CONRAIL (ABANDONED) PUTNAM		O		1	S	4/7/2011	5.176	G	3,770	\$15,080,000	208		
2241550	B	E 144TH ST	METRO NORTH RR HAR	M	O		2	S	7/11/2011	6.264	VG	8,290	\$33,160,000	201		
2241560	B	E 149TH ST	METRO NORTH RR HAR	M	O		8	S	5/8/2012	4.819	F	27,900	\$111,600,000	201	204	
2241590	B	CONCOURSE VILL AVE	METRO NORTH RR HAR	M	O		1	S	4/20/2012	3.969	F	12,077	\$48,308,000	204		
2241600	B	E 158TH ST	METRO NORTH RR HAR	M	O		1	S	7/12/2011	5.200	G	3,400	\$13,600,000	204		
2241610	B	E 161ST ST	METRO NORTH RR HAR	M	O		1	S	10/12/2011	5.017	G	6,600	\$26,400,000	204	203	
2241620	B	E 162ND ST	METRO NORTH RR HAR	M	O		1	S	4/20/2012	4.859	F	4,700	\$18,800,000	203		
2241630	B	E 165TH ST	METRO NORTH RR HAR	M	O		1	S	4/20/2012	4.300	F	16,400	\$65,600,000	203		
2241650	B	E 167TH ST	METRO NORTH RR HAR	M	O		1	S	4/17/2012	5.510	G	3,363	\$13,452,000	203		
2241660	B	E 168TH ST	METRO NORTH RR HAR	M	O		1	S	4/18/2012	4.641	F	4,800	\$19,200,000	203		
2241670	B	E 169TH ST	METRO NORTH RR HAR	M	O		1	S	4/18/2012	4.250	F	3,300	\$13,200,000	203		
2241680	B	E 170TH ST	METRO NORTH RR HAR	M	O		1	S	4/16/2012	6.333	VG	3,150	\$12,600,000	203		
2241700	B	ST PAULS PL PED BRDG	METRO NORTH RR HAR	M	O-PED		2	C	2/7/2012	4.884	F	600	\$2,400,000	203		
2241710	B	CLAREMONT PKWY	METRO NORTH RR HAR	M	O		1	S	4/16/2012	4.426	F	6,300	\$25,200,000	203		
2241720	B	E 173RD ST	METRO NORTH RR HAR	M	O		1	S	4/16/2012	4.875	F	3,000	\$12,000,000	203		
2241740	B	E 175TH ST	METRO NORTH RR HAR	M	O		1	S	4/16/2012	3.938	F	3,600	\$14,400,000	206		
2241760	B	E TREMONT AVE	METRO NORTH RR HAR	M	O		1	S	7/6/2011	6.450	VG	8,424	\$33,696,000	206		
2241770	B	E 178TH ST PED BRDG	METRO NORTH RR HAR	M	O-PED		1	C	2/6/2012	4.918	F	700	\$2,800,000	206		
2241780	B	E 179TH ST PED BRDG	METRO NORTH RR HAR	M	O-PED		6	C	2/3/2012	5.763	G	700	\$2,800,000	206		
2241790	B	E 180TH ST	METRO NORTH RR HAR	M	O		1	S	4/11/2012	3.906	F	5,000	\$20,000,000	206		
2241800	B	E 183TH ST	METRO NORTH RR HAR	M	O		1	S	4/11/2012	4.109	F	4,080	\$16,320,000	206		
2241810	B	E 188TH ST	METRO NORTH RR HAR	M	O		1	S	4/11/2012	4.063	F	5,300	\$21,200,000	206		
2241820	B	E 187TH ST	METRO NORTH RR HAR	M	O		1	S	4/11/2012	4.344	F	3,800	\$15,200,000	206		
2241839	B	E 189TH ST	METRO NORTH RR HAR	M	O		1	S	7/6/2011	6.333	VG	43,157	\$172,628,000	206	207	
2241840	B	BEDFORD PARK BLVD	METRO NORTH RR HAR	M	O		1	S	4/20/2012	4.844	F	6,400	\$25,600,000	227	207	
2241860	B	GUN HILL RD	METRO NORTH RR HAR	M	O		1	S	5/1/2012	6.531	VG	9,128	\$36,512,000	212		
2241870	B	E 233RD ST	METRO NORTH RR HAR	M	O		1	S	4/30/2012	4.902	F	7,664	\$30,656,000	212	207	
2241890	B	E 241ST ST	BRP, METRO NORTH HAR	M	WO		28	S	10/5/2011	4.306	F	49,500	\$198,000,000	212		
2241900	B	EASTCHESTER ROAD	NYCTA-DYRE AVE LN	T	O		3	S	11/19/2012	4.486	F	13,500	\$54,000,000	212		
2241910	B	GUN HILL ROAD	NYCTA-DYRE AVE LN	T	O		1	S	11/19/2012	5.750	G	7,500	\$30,000,000	211	212	
2241930	B	BEDFORD PARK BLVD	NYCTA IND YARDS	T	O		4	S	11/20/2012	5.403	G	46,300	\$185,200,000	207		
2241940	B	W 205TH ST	NYCTA IND YARDS	T	O		4	S	11/20/2012	5.514	G	32,508	\$130,032,000	207		
2241959	B	HUTCHINSON RVR PKWY	AMTRAK - CSX	AC	O		1	S	5/25/2012	5.780	G	15,444	\$61,776,000	210	211	
2242010	B	EAST FORDHAM RD	BRONX RIVER		WA		1	S	3/5/2012	5.207	G	9,200	\$36,800,000	227		
2242029	B	SOUTHERN BLVD	EAST FORDHAM ROAD		O		2	S	1/18/2012	4.605	F	12,900	\$51,600,000	227		
2242030	B	CROTONA AVE	BRONX PELHAM PKWY		O		2	S	1/18/2012	5.447	G	7,600	\$30,400,000	206		

# INVENTORY SORTED BY B.I.N.

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2242071	B	BRONX BLVD S.B.	BRONX RIVER		WO		1	S	3/19/2012	4.633	F	1,800	\$7,200,000	212		
2242072	B	BRONX BLVD N.B.	BRONX RIVER		WO		1	S	3/19/2012	4.967	F	1,800	\$7,200,000	212		
2242081	B	BRONX BLVD S.B.	BRONX RIVER		WO		1	S	3/21/2012	4.467	F	2,800	\$11,200,000	212		
2242082	B	BRONX BLVD N.B.	BRONX RIVER		WO		1	S	3/22/2012	4.467	F	2,800	\$11,200,000	212		
2242099	B	PARK ROAD (204TH ST)	BRONX RIVER		WO		1	S	6/4/2012	4.655	F	4,700	\$18,800,000	212		
2242100	B	BOTANICAL GARDEN ROAD	TWIN LAKES		WO	P	1	S	3/1/2012	4.833	F	2,200	\$8,800,000	227		
2242110	B	BOSTON ROAD	BRONX RIVER		WO		1	S	3/2/2012	4.227	F	6,200	\$24,800,000	227		
2242120	B	FTBG N OF RTE 1	BRONX RIVER		WO-PED	P	1	C	7/13/2012	3.583	F	1,900	\$7,600,000	227		
2242149	B	E TREMONT AVE	BRONX RIVER		WO		2	S	5/30/2012	4.500	F	12,900	\$51,600,000	206		
2242210	B	MAGNOLIA WAY	BRONX RIVER		WO		3	S	5/31/2012	4.763	F	6,200	\$24,800,000	227		
2242220	B	SNUFF MILL ROAD	BRONX RIVER		WO		2	S	1/13/2012	4.395	F	4,800	\$19,200,000	227		
2242259	B	GRAND CONCOURSE	E 161ST ST		O		1	S	7/31/2012	6.333	VG	27,017	\$108,068,000	204		
2242260	B	EAGLE AVE	E 161ST ST		O		1	S	2/10/2012	5.017	G	2,800	\$11,200,000	201	203	
2242280	B	GRAND CONCOURSE	E 167TH ST		O		2	S	7/20/2012	4.754	F	42,900	\$171,600,000	204		
2242299	B	GRAND CONCOURSE	E 138TH ST		O		1	S	5/25/2011	4.467	F	9,500	\$38,000,000	201		
2242300	B	GRAND CONCOURSE	E 170TH ST		O		2	S	2/23/2012	4.789	F	39,300	\$157,200,000	204		
2242319	B	GRAND CONCOURSE	E 174TH ST	T	O		1	S	2/24/2012	4.067	F	14,900	\$59,600,000	204		
2242329	B	GRAND CONCOURSE	E 175TH ST	T	O		1	S	7/17/2012	4.833	F	11,900	\$47,600,000	205		
2242330	B	GRAND CONCOURSE	E TREMONT AVE		O		1	S	9/28/2011	5.983	G	11,700	\$46,800,000	205		
2242340	B	GRAND CONCOURSE	EAST KINGSBRIDGE		O		2	S	7/24/2012	4.714	F	18,285	\$73,140,000	207		
2242350	B	EAST FORDHAM RD	GRAND CONCOURSE		O		1	S	2/17/2012	4.567	F	10,300	\$41,200,000	205	207	
2242360	B	GRAND CONCOURSE	BURNSIDE AVE		O		2	S	8/2/2012	4.441	F	8,400	\$33,600,000	205		
2242370	B	GRAND CONCOURSE	BEDFORD PARK BLVD		O		1	S	2/16/2012	4.137	F	8,418	\$33,672,000	207		
2242380	B	GRAND CONCOURSE	E 204TH ST		O		1	S	9/26/2011	5.484	G	9,272	\$37,088,000	207		
2242400	B	E 180TH ST	BRONX RIVER		WO		1	S	8/28/2012	4.810	F	4,500	\$18,000,000	206	227	
2242430	B	GUN HILL ROAD	BRONX BLVD		O		4	S	2/15/2012	5.018	G	9,400	\$37,600,000	212		
2242440	B	GUN HILL ROAD	BRONX RIVER		WO		1	S	2/13/2012	5.300	G	8,700	\$34,800,000	212		
2242459	B	E 233RD ST	BRONX RIVER		WO		1	S	2/22/2012	4.233	F	7,000	\$28,000,000	212		
2242460	B	E 233RD ST	ENTR RD BNX RVR PKWY		O		1	S	1/10/2012	4.867	F	5,300	\$21,200,000	212		
2243010	K	LINCOLN ROAD	BMT SUBWAY, BRIGHTON	T	O		1	S	7/24/2012	6.685	VG	6,016	\$24,064,000	355		
2243020	K	PARKSIDE AVE	BMT SUBWAY, BRIGHTON	T	O		6	S	9/14/2012	3.826	F	48,700	\$194,800,000	314		
2243040	K	CROOKE AVE	BMT SUBWAY, BRIGHTON	T	O		4	S	10/8/2012	4.211	F	6,000	\$24,000,000	314		
2243050	K	CATON AVE	BMT SUBWAY, BRIGHTON	T	O		4	S	8/10/2011	4.500	F	20,800	\$83,200,000	314		
2243080	K	CHURCH AVE	BMT SUBWAY, BRIGHTON	T	O		4	S	8/10/2011	4.545	F	18,200	\$72,800,000	314		
2243100	K	BEVERLY ROAD	BMT SUBWAY, BRIGHTON	T	O		3	S	7/27/2012	3.982	F	4,200	\$16,800,000	314		
2243110	K	CORTEYOU ROAD	BMT SUBWAY, BRIGHTON	T	O		3	S	8/25/2011	6.139	VG	4,810	\$19,240,000	314		
2243120	K	DORCHESTER ROAD	BMT SUBWAY, BRIGHTON	T	O		1	S	12/3/2012	5.863	G	4,825	\$19,300,000	314		
2243130	K	DITMAS AVE	BMT SUBWAY, BRIGHTON	T	O		1	S	10/4/2011	5.723	G	5,150	\$20,600,000	314		
2243140	K	NEWKIRK AVE	BMT SUBWAY, BRIGHTON	T	O		3	S	9/14/2012	4.662	F	4,100	\$16,400,000	314		
2243150	K	FOSTER AVE	BMT SUBWAY, BRIGHTON	T	O		1	S	7/25/2012	4.383	F	3,000	\$12,000,000	314		



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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2243170	K	STERLING PLACE	FRANKLIN SHUTTLE	T	O		1	S	8/24/2011	6.500	VG	2,300	\$9,200,000	308		
2243180	K	ST JOHNS PLACE	FRANKLIN SHUTTLE	T	O		1	S	8/24/2011	6.781	VG	2,300	\$9,200,000	308		
2243190	K	LINCOLN PLACE	FRANKLIN SHUTTLE	T	O		1	S	9/6/2012	6.797	VG	2,460	\$9,840,000	308		
2243200	K	UNION ST	FRANKLIN SHUTTLE	T	O		2	S	9/5/2012	5.000	G	4,100	\$16,400,000	309		
2243210	K	PRESIDENT ST	FRANKLIN SHUTTLE	T	O		2	S	9/5/2012	5.157	G	2,500	\$10,000,000	309		
2243220	K	CARROLL ST PED BRDG	FRANKLIN SHUTTLE	T	O-PED		3	C	12/17/2012	5.099	G	600	\$2,400,000	309		
2243230	K	CROWN ST	FRANKLIN SHUTTLE	T	O		3	S	10/11/2011	5.097	G	4,060	\$16,240,000	309		
2243240	K	MONTGOMERY ST	FRANKLIN SHUTTLE	T	O		1	S	8/11/2011	5.961	G	2,240	\$8,960,000	309		
2243250	K	WASHINGTON AVE	FRANKLIN SHUTTLE	T	O		1	S	9/4/2012	6.000	G	3,657	\$14,628,000	309	355	
2243260	K	FLATBUSH AVE	FRANKLIN SHUTTLE	T	O		2	S	7/23/2012	4.922	F	11,300	\$45,200,000	309		
2243279	K	EASTERN PKWY	FRANKLIN SHUTTLE	T	O		1	S	9/6/2012	4.861	F	7,700	\$30,800,000	309	308	
2243280	K	6TH AVE	LIRR ATLANTIC AVE	L	O		9	S	9/13/2012	5.431	G	12,276	\$49,104,000	302		
2243290	K	CARLTON AVE	LIRR ATLANTIC AVE	L	O		7	S	3/7/2012	5.069	G	10,823	\$43,292,000	302		
2243310	K	2ND AVE	LIRR BAY RIDGE	N	O		2	S	10/2/2012	6.236	VG	17,751	\$71,004,000	310		
2243320	K	3RD AVE	LIRR BAY RIDGE	N	O		4	S	9/14/2011	5.083	G	17,230	\$68,920,000	310		
2243330	K	4TH AVE	LIRR BAY RIDGE	NT	O		4	S	8/30/2011	5.653	G	13,668	\$54,672,000	310		
2243340	K	15TH AVE	LIRR BAY RIDGE	N	O		1	S	11/14/2012	4.872	F	3,614	\$14,456,000	311		
2243350	K	60TH ST	LIRR BAY RIDGE	N	O		1	S	8/31/2011	6.133	VG	3,900	\$15,600,000	311		
2243360	K	16TH AVE	LIRR BAY RIDGE	N	O		1	S	10/4/2012	5.350	G	4,345	\$17,380,000	311		
2243370	K	17TH AVE	LIRR BAY RIDGE	N	O		1	S	10/5/2012	4.745	F	3,406	\$13,624,000	312		
2243380	K	18TH AVE	LIRR BAY RIDGE	N	O		1	S	9/28/2012	4.688	F	6,006	\$24,024,000	312		
2243390	K	52ND ST	LIRR BAY RIDGE	N	O		1	S	9/28/2012	6.250	VG	3,293	\$13,172,000	312		
2243400	K	50TH ST	LIRR BAY RIDGE	N	O		2	S	9/1/2011	4.731	F	7,100	\$28,400,000	312		
2243410	K	MCDONALD AVE	LIRR BAY RIDGE	N	O		1	S	9/27/2012	5.047	G	2,760	\$11,040,000	312		
2243420	K	E 3RD ST	LIRR BAY RIDGE	N	O		1	S	9/1/2011	6.517	VG	1,840	\$7,360,000	312		
2243439	K	OCEAN PKWY	LIRR BAY RIDGE	N	O		1	S	9/27/2012	4.927	F	7,000	\$28,000,000	312		
2243440	K	CONEY ISLAND AVE	LIRR BAY RIDGE	N	O		1	S	9/26/2012	5.106	G	3,231	\$12,924,000	312		
2243450	K	E 14TH ST	LIRR BAY RIDGE	N	O		1	S	9/26/2012	4.809	F	1,775	\$7,100,000	314		
2243460	K	E 15TH ST PED BRDG	LIRR BAY RIDGE	N	O-PED		3	C	3/8/2012	5.592	G	900	\$3,600,000	314		
2243480	K	OCEAN AVE	LIRR BAY RIDGE	N	O		2	S	9/25/2012	4.825	F	5,000	\$20,000,000	314		
2243490	K	BEDFORD AVE	LIRR BAY RIDGE	N	O		6	S	9/24/2012	4.319	F	12,000	\$48,000,000	314		
2243500	K	NOSTRAND AVE	LIRR BAY RIDGE	N	O		2	S	9/26/2012	4.831	F	4,320	\$17,280,000	314		
2243510	K	FLATBUSH AVE	LIRR BAY RIDGE	N	O		2	S	10/5/2012	4.730	F	5,900	\$23,600,000	318		
2243520	K	BROOKLYN AVE	LIRR BAY RIDGE	N	O		3	S	9/9/2011	6.236	VG	4,500	\$18,000,000	318		
2243530	K	AVENUE H	LIRR BAY RIDGE	N	O		2	S	9/9/2011	5.956	G	35,100	\$140,400,000	318		
2243569	K	ATLANTIC AVE	LIRR ATLANTIC AVE	L	O		75	S	5/25/2012	3.676	F	135,100	\$540,400,000	316	305	
2243570	K	86TH ST	BMT SEA BEACH	T	O		1	S	8/27/2012	5.953	G	12,167	\$48,668,000	313		
2243580	K	5TH AVE	LIRR & SEA BEACH	NT	O		4	S	11/12/2012	3.941	F	12,395	\$49,580,000	310		
2243590	K	6TH AVE	LIRR & SEA BEACH	NT	O		2	S	9/30/2011	6.306	VG	14,382	\$57,528,000	310		
2243600	K	7TH AVE	LIRR & SEA BEACH	NT	O		7	S	11/12/2012	4.778	F	18,628	\$74,512,000	310		

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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2243610	K	8TH AVE	LIRR & SEA BEACH	NT	O		2	S	9/30/2011	6.181	VG	10,834	\$43,336,000	310		
2243620	K	FORT HAMILTON PKWY	LIRR & SEA BEACH	NT	O		3	S	9/19/2012	4.729	F	14,800	\$59,200,000	310		
2243630	K	11TH AVE	LIRR & SEA BEACH	NT	O		5	S	11/13/2012	5.985	G	9,700	\$38,800,000	310		
2243640	K	13TH AVE	LIRR & SEA BEACH	NT	O		5	S	9/23/2011	4.694	F	16,000	\$64,000,000	310		
2243650	K	14TH AVE	LIRR BAY RIDGE	N	O		1	S	11/13/2012	6.333	VG	4,720	\$18,880,000	311		
2243660	K	NEW UTRECHT AVE	LIRR BAY RIDGE	N	O		1	S	11/13/2012	6.083	VG	2,350	\$9,400,000	311		
2243670	K	15TH AVE	BMT SEA BEACH	T	O		4	S	6/26/2011	6.386	VG	16,020	\$64,080,000	311		
2243680	K	16TH AVE	BMT SEA BEACH	T	O		3	S	8/30/2012	5.296	G	6,816	\$27,264,000	311		
2243690	K	17TH AVE	BMT SEA BEACH	T	O		4	S	8/30/2012	6.173	VG	8,946	\$35,784,000	311		
2243700	K	18TH AVE	BMT SEA BEACH	T	O		1	S	8/25/2011	6.632	VG	5,200	\$20,800,000	311		
2243710	K	19TH AVE	BMT SEA BEACH	T	O		4	S	8/29/2012	4.184	F	4,800	\$19,200,000	311		
2243720	K	20TH AVE	BMT SEA BEACH	T	O		1	S	8/31/2012	6.673	VG	7,000	\$28,000,000	311		
2243730	K	65TH ST	BMT SEA BEACH	T	O		4	S	8/28/2012	5.132	G	12,000	\$48,000,000	311		
2243740	K	BAY PKWY	BMT SEA BEACH	T	O		4	S	8/28/2012	4.553	F	16,800	\$67,200,000	311		
2243750	K	AVENUE O	BMT SEA BEACH	T	O		1	S	9/1/2011	5.706	G	4,658	\$18,632,000	311		
2243760	K	AVENUE P	BMT SEA BEACH	T	O		1	S	8/31/2011	5.674	G	5,544	\$22,176,000	311		
2243770	K	KINGS HIGHWAY	BMT SEA BEACH	T	O		1	S	9/13/2011	6.767	VG	5,032	\$20,128,000	311		
2243780	K	HIGHLAWN AVE	BMT SEA BEACH	T	O		1	S	9/13/2011	6.400	VG	6,960	\$27,840,000	311		
2243790	K	AVENUE S	BMT SEA BEACH	T	O		1	S	9/15/2011	5.967	G	5,360	\$21,440,000	315		
2243800	K	AVENUE T	BMT SEA BEACH	T	O		1	S	9/15/2011	6.033	VG	5,360	\$21,440,000	311		
2243810	K	AVENUE U	BMT SEA BEACH	T	O		1	S	9/11/2012	5.294	G	5,880	\$23,520,000	315		
2243820	K	21ST AVE	BMT SEA BEACH	T	O		4	S	9/7/2012	3.974	F	21,400	\$85,600,000	311		
2243839	K	4TH AVE	NYCTA BMT TRACKS	T	O		1	S	8/24/2011	6.300	VG	4,440	\$17,760,000	307		
2243840	K	9TH AVE	NYCTA BMT YARD	T	O		5	S	8/19/2011	5.736	G	12,440	\$49,760,000	312		
2243850	K	LIBERTY AVE	LIRR BAY RIDGE	N	O		3	S	9/25/2012	6.294	VG	6,659	\$26,636,000	316		
2243860	K	GLENMORE AVE	LIRR BAY RIDGE	N	O		2	S	9/25/2012	6.559	VG	5,616	\$22,464,000	316		
2243870	K	PITKIN AVE	LIRR BAY RIDGE	N	O		2	S	9/25/2012	6.515	VG	5,328	\$21,312,000	316		
2243890	K	SUTTER AVE	LIRR BAY RIDGE	N	O		3	S	9/25/2012	6.542	VG	5,497	\$21,988,000	316		
2243900	K	BLAKE AVE	LIRR BAY RIDGE LINE	N	O		3	S	9/25/2012	5.000	G	4,912	\$19,648,000	316		
2243910	K	LIVONIA AVE PED BRDG	LIRR BAY RIDGE LINE	N	O-PED		6	C	4/16/2012	4.833	F	2,500	\$10,000,000	316		
2243920	K	7TH AVE	NYCTA BMT YARD	T	O		2	S	9/10/2012	6.042	VG	4,700	\$18,800,000	307		
2243940	K	9TH AVE	NYCTA IND SBWY	T	O		5	S	8/19/2011	4.737	F	6,300	\$25,200,000	312		
2244010	K	EAST DR (ENDALE ARCH)	PED PATH NR GRND ARMY PLZ		O	P	1	C	5/15/2012	4.833	F	1,533	\$6,132,000	355		
2244020	K	WEST DR (MEADOWPORT ARCH)	PED PATH NR GRND ARMY PLZ		O	P	1	S	4/26/2011	5.321	G	2,500	\$10,000,000	355		
2244030	K	EAST DRIVE	BRIDLE PATH NR ZOO		O	P	1	S	4/27/2011	4.878	F	2,000	\$8,000,000	355		
2244040	K	EAST DR (EAST WOOD ARCH)	PED PATH NR CENTER DR		O	P	1	C	6/27/2012	4.067	F	1,066	\$4,262,400	355		
2244050	K	CENTER DR (NETHERMEAD ARCHES)	PED PATH & STREAM		WO	P	3	S	5/9/2011	5.000	G	7,400	\$29,600,000	355		
2244060	K	HILL DR (CLEFT RIDGE SPAN)	PED PATH SO OF BOATHOUSE		O	P	1	C	5/2/2012	4.433	F	750	\$3,000,000	355		
2244100	K	WEST FOOTBRIDGE	PROSPCT PK STREAM		WO-PED	P	1	C	12/19/2011	4.875	F	3,200	\$12,800,000	355		
2244120	K	HILL DR (TERRACE BRDG)	PROSPECT PK LAKE		WO	P	3	S	8/22/2012	3.364	F	7,800	\$31,200,000	355		

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2244130	K	PED NR BOATHSE (LULLWATER BRDG)	PROSPECT PK LAKE		WO-PED	P	1	C	9/16/2011	4.898	F	1,000	\$4,000,000	355		
2244150	K	RIDGE BLVD	SHORE RD DRIVE		O		1	S	5/24/2011	6.667	VG	4,350	\$17,400,000	310		
2244160	K	3RD AVE	SHORE RD DRIVE		O		1	S	5/24/2011	6.727	VG	4,360	\$17,440,000	310		
2244170	K	ATLNTC AV SVC RD E.B.	EAST NEW YORK AVE		O		2	S	7/20/2011	5.474	G	3,192	\$12,768,000	305		
2244180	K	ATLNTC AV SVC RD W.B.	EAST NEW YORK AVE		O		2	S	7/20/2011	4.965	F	5,600	\$22,400,000	305		
2244440	K	SOUTH OF TILLARY ST	NAVY ST		O-PED		1	C	8/7/2012	3.958	F	6,200	\$24,800,000	302		
2244460	K	CONDUIT BLVD NB	ATLANTIC AVE EB		O		1	S	10/8/2012	4.833	F	3,800	\$15,200,000	305		
2244470	K	SEELEY ST	PROSPECT AVE		O		1	S	5/4/2012	4.033	F	8,482	\$33,928,000	307		
2244480	K	5TH AVE	GREENWOOD CEMETERY		O		1	S	9/8/2011	4.667	F	3,600	\$14,400,000	307		
2245010	M	11TH AVE VIADUCT	LIRR WEST SIDE YARD	AL	O		39	S	12/28/2012	4.056	F	157,500	\$630,000,000	104		
224501B	M	W 33RD ST	AMTRAK 30 ST BRANCH	A	O		8	S	3/13/2012	4.458	F	16,500	\$66,000,000	104		
224501C	M	W 33RD ST	LAND ADJ TO AMTRAK	A	O		2	S	6/14/2011	4.472	F	2,360	\$9,440,000	104		
224501D	M	W 34TH ST	AMTRAK 30 ST BRANCH	A	O		4	S	6/6/2011	4.597	F	11,800	\$47,200,000	104		
224501E	M	W 35TH ST	AMTRAK 30 ST BRANCH	A	O		3	S	11/16/2012	4.181	F	6,500	\$26,000,000	104		
224501F	M	W 36TH ST	AMTRAK 30 ST BRANCH	A	O		7	S	11/16/2012	3.985	F	16,400	\$65,600,000	104		
2245040	M	MARGARET CORBIN DR	PED PATH NEAR CAFÉ		O	P	1	C	6/29/2012	4.933	F	598	\$2,392,000	112		
2245050	M	MARGARET CORBIN DR	PED PATH NR NO ENTR		O	P	1	C	6/29/2012	4.333	F	889	\$3,556,000	112		
2245060	M	W 37TH ST	AMTRAK 30 ST BRANCH	A	O		3	S	12/8/2011	6.190	VG	7,505	\$30,020,000	104		
2245070	M	W 38TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	6/15/2012	4.135	F	6,200	\$24,800,000	104		
2245080	M	W 39TH ST	AMTRAK 30 ST BRANCH	A	O		3	S	6/15/2012	4.173	F	6,300	\$25,200,000	104		
2245090	M	W 43RD ST	AMTRAK 30 ST BRANCH	A	O		2	S	4/16/2012	4.662	F	4,140	\$16,560,000	104		
2245100	M	W 44TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	4/16/2012	4.662	F	4,300	\$17,200,000	104		
2245110	M	W 45TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	4/16/2012	5.397	G	4,100	\$16,400,000	104		
2245120	M	W 46TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/4/2012	4.500	F	4,100	\$16,400,000	104		
2245130	M	W 47TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/4/2012	4.721	F	4,100	\$16,400,000	104		
2245140	M	W 48TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/7/2012	4.618	F	4,100	\$16,400,000	104		
2245150	M	W 49TH ST	AMTRAK 30 ST BRANCH	A	O		3	S	5/7/2012	4.426	F	4,100	\$16,400,000	104		
2245160	M	W 51ST ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/11/2012	4.912	F	4,300	\$17,200,000	104		
2245170	M	W 52ND ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/29/2012	5.265	G	4,300	\$17,200,000	104		
2245180	M	W 53RD ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/29/2012	5.221	G	5,100	\$20,400,000	104		
2245190	M	W 58TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/25/2012	4.765	F	4,100	\$16,400,000	104		
2245209	M	11TH AVE	AMTRAK 30 ST BRANCH	A	O		2	S	6/4/2012	4.471	F	15,400	\$61,600,000	104		
2245210	M	W 42ND ST	AMTRAK 30 ST BRANCH	A	O		4	S	7/2/2012	4.651	F	10,300	\$41,200,000	104		
2245220	M	W 57TH ST	AMTRAK 30 ST BRANCH	A	O		3	S	5/25/2012	4.853	F	9,100	\$36,400,000	104		
2245230	M	W 148TH ST PED BRDG	AMTRAK 30 ST BRANCH	A	O-PED	P	3	C	4/17/2012	4.200	F	1,100	\$4,400,000	109		
2245250	M	W 158TH ST	AMTRAK 30 ST BRANCH	A	O		7	S	12/7/2011	6.125	VG	29,170	\$116,680,000	112		
2245260	M	W 173RD ST PED BRDG	AMTRAK 30 ST BRANCH	A	O-PED	P	2	C	4/13/2012	4.533	F	1,500	\$6,000,000	112		
2245290	M	W 155TH ST PED BRDG	AMTRAK 30 ST BRANCH	A	O-PED		3	C	1/27/2012	3.862	F	800	\$3,200,000	109	112	
2245300	M	INWOOD HILL PK FTBR	AMTRAK 30 ST BRANCH	A	O-PED	P	6	C	2/9/2012	4.100	F	700	\$2,800,000	112		
2245319	M	E 97TH ST	METRO NORTH MAIN LN	M	O		1	S	12/7/2012	4.647	F	3,200	\$12,800,000	111		

# INVENTORY SORTED BY B.I.N.

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2245330	M	W 41ST ST	AMTRAK 30 ST BRANCH	A	O		3	S	6/12/2012	4.508	F	6,200	\$24,800,000	104		
2245340	M	W 50TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/11/2012	4.471	F	4,100	\$16,400,000	104		
2245350	M	W 54TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/22/2012	5.476	G	4,700	\$18,800,000	104		
2245360	M	W 55TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/22/2012	5.529	G	4,300	\$17,200,000	104		
2245370	M	W 56TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	6/4/2012	5.706	G	4,400	\$17,600,000	104		
2245380	M	TRANSVERSE RD #1 WB	PED PATH OPP E 66TH ST		O	P	1	S	1/6/2012	5.000	G	1,500	\$6,000,000	164		
2245420	M	W 65TH ST ENTR EB	BRIDLE PATH W END		O	P	1	S	1/17/2012	5.100	G	1,300	\$5,200,000	164		
2245440	M	W 40TH ST	AMTRAK 30 ST BRANCH	A	O		4	S	6/18/2012	4.162	F	9,400	\$37,600,000	104		
2245460	M	PARK AVE S.B.	E 45TH ST		O		1	S	5/25/2012	4.514	F	2,400	\$9,600,000	105		
2245470	M	PARK AVE N.B	E 45TH ST		O		1	S	5/30/2012	4.865	F	2,400	\$9,600,000	105		
2245480	M	TO GWB OPP W 171ST ST	RIVERSIDE DRIVE		O		1	S	2/8/2012	4.524	F	10,773	\$43,092,000	112		
2246000	M	WEST DR (GREYSHOT ARCH)	PED BET 61ST & 62ST		O	P	1	S	1/10/2012	5.400	G	2,500	\$10,000,000	164		
2246010	M	W 62 ST PED BRDG (PINEBANK ARCH)	BRIDLE PATH		O-PED	P	1	C	7/27/2012	4.262	F	1,000	\$4,000,000	164		
2246030	M	E 62 ST PED BRDG (GAPSTOW BRDG)	THE POND		O-PED	P	1	C	5/25/2012	3.897	F	1,400	\$5,600,000	164		
2246040	M	EAST DR (INSCOPE ARCH)	PED PATH OPP E 62 ST		O	P	1	C	4/4/2012	4.400	F	1,515	\$6,060,000	164		
2246050	M	CENTER DR (DRIPROCK ARCH)	PED OPP 63RD ST		O	P	1	S	1/11/2012	4.867	F	1,725	\$6,900,000	164		
2246069	M	EAST DR (GREEN GAP ARCH)	PED BET E 63ST & E 64ST		O	P	1	S	1/18/2012	4.433	F	2,075	\$8,300,000	164		
2246070	M	CENTER DR (PLAYMATES ARCH)	PED PATH OPP 65TH ST		O	P	1	C	6/27/2012	4.367	F	1,129	\$4,516,000	164		
2246080	M	WEST DR (DALEHEAD ARCH)	BRIDLE OPP W 64TH ST		O	P	1	S	1/5/2012	4.667	F	2,000	\$8,000,000	164		
2246090	M	PED BRDG OPP 65 ST	TRANSVERSE RD #1		O-PED	P	1	C	7/17/2012	4.655	F	2,300	\$9,200,000	164		
2246100	M	CENTER DRIVE	TRANSVERSE RD #1		O	P	1	S	2/3/2012	4.333	F	6,000	\$24,000,000	164		
2246110	M	EAST DRIVE	TRANSVERSE RD #1		O	P	1	S	3/23/2012	4.667	F	6,000	\$24,000,000	164		
2246120	M	WEST DRIVE	TRANSVERSE RD #1		O	P	1	S	3/28/2012	4.967	F	7,900	\$31,600,000	164		
2246130	M	EAST DR (WILLOWDELL ARCH)	PED PATH OPP E 67TH ST		O	P	1	C	4/25/2012	3.395	F	666	\$2,665,600	164		
2246140	M	W 72 ST ENTR (RIFTSTONE ARCH)	BRIDLE PATH		O	P	1	S	1/9/2012	4.600	F	3,600	\$14,400,000	164		
2246150	M	72 ST CROSS DR (TERRACE BRDG)	PED PATH TO FOUNTAIN		O	P	3	S	3/1/2012	5.786	G	7,300	\$29,200,000	164		
2246160	M	73 ST PED BRDG (BOW BRIDGE)	THE LAKE		WO-PED	P	1	C	5/25/2012	4.244	F	1,700	\$6,800,000	164		
2246170	M	EAST DR (TREFOIL ARCH)	PED PATH OPP E 73RD ST		O	P	1	S	1/30/2012	5.130	G	1,900	\$7,600,000	164		
2246230	M	EAST DRIVE	TRANSVERSE RD #2		O	P	1	S	3/21/2012	4.600	F	5,080	\$20,320,000	164		
2246240	M	WEST DRIVE	TRANSVERSE RD #2		O	P	1	S	3/22/2012	4.167	F	7,200	\$28,800,000	164		
2246250	M	EAST DRIVE	TRANSVERSE RD #3		O	P	1	S	1/18/2012	4.433	F	4,500	\$18,000,000	164		
2246260	M	WEST DRIVE	TRANSVERSE RD #3		O	P	1	S	3/22/2012	4.933	F	5,100	\$20,400,000	164		
2246270	M	EAST DRIVE	TRANSVERSE RD #4		O	P	1	S	3/23/2012	4.100	F	7,000	\$28,000,000	164		
2246280	M	WEST DRIVE	TRANSVERSE RD #4		O	P	1	S	3/26/2012	4.300	F	4,700	\$18,800,000	164		
2246320	M	W77 ST PED (OAK BRDG)	THE LAKE		WO-PED	P	3	C	12/20/2011	6.684	VG	919	\$3,676,000	164		
2246330	M	WEST DR (BALCONY BRDG)	STREAM TO THE LAKE		WO	P	1	S	1/16/2012	5.000	G	1,817	\$7,268,000	164		
2246340	M	W77 ST PED (LADIES POND BRDG)	STREAM TO THE LAKE		WO-PED	P	3	C	12/3/2012	4.355	F	500	\$2,000,000	164		
2246350	M	EAST DR (GREYWACKE ARCH)	PED PATH OPP E 80TH ST		O	P	1	C	5/4/2012	3.733	F	1,266	\$5,064,000	164		
2246360	M	WEST DR (WINTERDALE ARCH)	PED PATH OPP W 82 ST		O	P	1	S	1/17/2012	5.273	G	2,502	\$10,008,000	164		
2246380	M	W86 ST PED (SW RESERVOIR BRDG)	BRIDLE PATH		O-PED	P	1	C	11/30/2012	4.852	F	700	\$2,800,000	164		



# INVENTORY SORTED BY B.I.N.

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2246390	M	E86 ST PED (SE RESERVOIR BRDG)	BRIDLE PATH		O-PED	P	3	C	10/31/2011	4.509	F	1,100	\$4,400,000	164		
2246400	M	PED PATH OPP E79 ST	TRANSVERSE RD #2		O-PED	P	1	C	8/15/2012	4.233	F	3,700	\$14,800,000	164		
2246410	M	TRNSVRS RD 1 EB (DENESMOUTH ARCH)	PED PATH OPP E 65TH ST		O	P	1	S	1/30/2012	4.636	F	1,739	\$6,956,000	164		
2246430	M	W110 ST ENTR (MOUNTCLIFF ARCH)	PED PATH OPP W109 ST		O	P	1	S	2/13/2012	4.383	F	1,200	\$4,800,000	164		
2246440	M	79 TH ST PED BRDG	TRANSVERSE RD #2		O-PED	P	1	C	8/9/2012	3.926	F	5,900	\$23,600,000	164		
2246450	M	E77 ST PED (GLADE ARCH)	PED PATH OPP E77 ST		O-PED	P	1	C	1/24/2012	4.138	F	5,000	\$20,000,000	164		
2246460	M	W77 ST ENTR (EAGLEVALE ARCH)	PED PATH OPP W77 ST		O	P	2	S	1/10/2012	4.263	F	3,066	\$12,264,000	164		
2246470	M	EAST DR (HUDDLESTONE ARCH)	THE LOCH		WO	P	1	S	1/26/2012	4.500	F	1,100	\$4,400,000	164		
2246489	M	W 181 ST	RAMP TO WASH BR		O		1	S	2/7/2012	5.333	G	8,200	\$32,800,000	112		
2246490	M	A.C. POWELL BLVD N.B.	A.C. POWELL BLVD		O		1	S	2/1/2012	4.367	F	3,000	\$12,000,000	110		
2246500	M	FORT TRYON PLACE	ENTR FROM RIVERSIDE DR		O	P	1	S	2/8/2012	4.200	F	3,280	\$13,120,000	112		
2246510	M	CORBIN PL OVERPASS	CORBIN PLACE		O	P	1	S	1/9/2012	5.000	G	2,223	\$8,892,000	112		
2246540	M	E 34TH ST	PARK AVE TUNNEL		OT		1	S	9/13/2012	4.117	F	36,200	\$144,800,000	105	106	
2246550	M	PARK AVE VIADUCT	E 42ND ST		O		10	S	12/14/2012	4.478	F	22,150	\$88,600,000	105		
2246560	M	TUDOR CITY PLACE	E 42ND ST		O		1	S	1/25/2012	5.133	G	6,600	\$26,400,000	106		
2246570	M	E42ND ST - E47TH ST	FIRST AVE TUNNEL		OT		2	S	5/22/2012	4.882	F	95,000	\$380,000,000	106		
2246580	BM	HIGH BRIDGE PDOVP	I87 - HARLEM RIVER	M	WA-PED	P	11	P	8/12/2002	3.759	F	34,100	\$136,400,000	112	204	
2246600	M	W 176TH ST PED BRDG	APPROACH TO G.W.B.		O-PED		1	C	3/30/2012	4.172	F	1,200	\$4,800,000	112		
2246620	M	W 128TH ST PED BRDG	3RD AVE BRDG APPR		O-PED		18	C	8/11/2011	3.791	F	2,300	\$9,200,000	111		
2246660	M	RIVERSIDE DRIVE	W125TH ST - W134TH ST		O		27	S	7/15/2011	4.306	F	148,300	\$593,200,000	109		
2246670	M	W 134 ST	TERRAIN		O		4	S	7/13/2011	4.833	F	7,500	\$30,000,000	109		
2246690	M	ISHAM PK VEHICULR	HARLEM RIVER INLET		O	P	1	S	5/4/2012	6.261	VG	911	\$3,644,000	112		
2246700	M	ISHAM PK PED BRDG	HARLEM RV INLET		WO-PED	P	1	C	1/6/2012	3.552	F	300	\$1,200,000	112		
2246710	M	W 153 ST	A.C. POWELL BLVD		O		1	S	2/1/2012	4.611	F	3,082	\$12,328,000	110		
2246720	M	RIVERSIDE DRIVE	W 158TH ST - AMTRAK	A	O		77	S	12/14/2011	3.472	F	185,658	\$742,632,000	109	112	
2246970	M	RIVERSIDE DRIVE	W 96TH ST		O		3	S	5/18/2011	5.471	G	10,600	\$42,400,000	107		
2246980	M	RIVERSIDE DRIVE	W 138TH ST		O		1	S	1/19/2012	4.900	F	6,700	\$26,800,000	109		
2246990	M	E 129TH ST PED BRDG	3RD AVE BRDG RAMP		O-PED		5	C	10/5/2012	4.095	F	1,046	\$4,184,000	111		
2247020	Q	94TH ST PED BRDG	LIRR PORT WASH BR	L	O-PED		5	C	4/9/2012	4.091	F	500	\$2,000,000	404		
2247040	Q	UNION ST	LIRR PORT WASH BR	L	O		1	S	9/12/2011	6.234	VG	3,313	\$13,252,000	407		
2247050	Q	BOWNE AVE	LIRR PORT WASH BR	L	O		1	S	10/4/2012	5.333	G	4,974	\$19,896,000	407		
2247060	Q	PARSONS BLVD	LIRR PORT WASH BR	L	O		1	S	10/5/2012	4.824	F	4,200	\$16,800,000	407		
2247070	Q	147TH ST	LIRR PORT WASH BR	L	O		1	S	9/13/2011	5.471	G	2,800	\$11,200,000	407		
2247080	Q	149TH ST	LIRR PORT WASH BR	L	O		1	S	12/10/2012	4.776	F	4,100	\$16,400,000	407		
2247090	Q	149TH PLACE	LIRR PORT WASH BR	L	O		2	S	9/13/2011	5.000	G	4,300	\$17,200,000	407		
2247100	Q	150TH ST	LIRR PORT WASH BR	L	O		2	S	9/13/2011	6.029	VG	7,830	\$31,320,000	407		
2247110	Q	MURRAY ST	LIRR PORT WASH BR	L	O		1	S	9/15/2011	5.370	G	4,000	\$16,000,000	407		
2247120	Q	WOODSIDE AVE	LIRR MAIN LINE	L	O		3	S	10/16/2012	4.444	F	14,900	\$59,600,000	402		
2247130	Q	CORPORAL KENNEDY ST	LIRR PORT WASH BR	L	O		1	S	11/3/2011	6.235	VG	3,379	\$13,516,000	411		
2247140	Q	BELL BLVD	LIRR PORT WASH BR	L	O		1	S	9/14/2011	5.780	G	4,320	\$17,280,000	411		

# INVENTORY SORTED BY B.I.N.

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2247150	Q	65TH ST	LIRR MAIN LINE	L	O		3	S	10/17/2011	6.375	VG	6,344	\$25,376,000	402		
2247160	Q	65TH PLACE	LIRR MAIN LINE	L	O		3	S	10/20/2011	6.441	VG	8,381	\$33,524,000	402		
2247170	Q	DOUGLASTON PKWY	LIRR PORT WASH BR	L	O		3	S	10/19/2012	4.746	F	6,300	\$25,200,000	411		
2247180	Q	GRAND AVE	LIRR MAIN LINE	L	O		3	S	10/24/2012	4.396	F	7,415	\$29,660,000	404		
2247190	Q	55TH AVE PED BRDG	LIRR MAIN LINE	L	O-PED		3	C	4/3/2012	4.240	F	13,000	\$52,000,000	404		
2247220	Q	80TH ROAD	LIRR MAIN LINE	L	O		3	S	9/29/2011	4.857	F	4,100	\$16,400,000	409		
2247230	Q	82ND AVE	LIRR MAIN LINE	L	O		3	S	9/21/2011	5.377	G	4,100	\$16,400,000	409		
2247240	Q	LEFFERTS BLVD	LIRR MAIN LINE	L	O		3	S	9/29/2011	5.806	G	5,460	\$21,840,000	409		
2247260	Q	JACKSON AVE	LIRR MONTAUK DIV	L	O		1	S	10/22/2012	6.117	VG	4,517	\$18,068,000	402		
2247270	Q	21ST ST	LIRR N SIDE DIV	L	O		6	S	11/14/2011	5.153	G	17,590	\$70,360,000	402		
2247290	Q	49TH AVE	LIRR,AMTRAK	L	O		5	S	12/3/2012	4.014	F	20,400	\$81,600,000	402		
2247300	Q	THOMPSON AVE	AMTRAK & LIRR YARD	AL	O		14	S	12/6/2012	5.042	G	61,280	\$245,120,000	402		
2247310	Q	QUEENS BLVD	AMTRAK & LIRR YARD	AL	O		19	S	12/6/2012	6.268	VG	92,400	\$369,600,000	402	401	
2247320	Q	HONEYWELL ST	AMTRAK & LIRR YARD	AL	O		22	S	11/4/2011	5.903	G	99,036	\$396,144,000	402	401	
2247330	Q	39TH ST (NORTH)	SUNNYSIDE YARD	A	O		14	S	10/31/2011	6.556	VG	48,200	\$192,800,000	402	401	
2247370	Q	37TH AVE	CSX - HELLGATE	C	O		1	S	8/29/2011	6.234	VG	6,868	\$27,472,000	402		
2247380	Q	ROOSEVELT AVE	CSX - HELLGATE	C	O		2	S	8/30/2011	6.333	VG	7,380	\$29,520,000	402	403	404
2247390	Q	41ST AVE	CSX - HELLGATE	C	O		2	S	9/8/2011	4.942	F	4,400	\$17,600,000	402	404	
2247400	Q	WOODSIDE AVE	CSX TRANSPORT	C	O		1	S	9/8/2011	5.033	G	8,200	\$32,800,000	402	404	
2247410	Q	43RD AVE	CSX TRANSPORT	C	O		1	S	9/8/2011	5.000	G	4,800	\$19,200,000	402	404	
2247420	Q	44TH AVE	CSX TRANSPORT	C	O		1	S	9/6/2011	5.000	G	5,100	\$20,400,000	402	404	
2247430	Q	45TH AVE	CSX TRANSPORT	C	O		1	S	9/9/2011	5.306	G	2,400	\$9,600,000	402	404	
2247440	Q	GRAND AVE	CSX TRANSPORT	C	O		1	S	9/9/2011	6.183	VG	3,280	\$13,120,000	405		
2247450	Q	57TH AVE	CSX TRANSPORT	C	O		1	S	9/9/2011	6.073	VG	2,248	\$8,992,000	405		
2247460	Q	CALDWELL AVE	CSX TRANSPORT	C	O		1	S	12/17/2012	5.889	G	2,243	\$8,972,000	405		
2247470	Q	ELIOT AVE	CSX TRANSPORT	C	O		1	S	10/4/2011	5.083	G	2,960	\$11,840,000	405		
2247480	Q	JUNIPER BLVD SO	CSX TRANSPORT	C	O		1	S	10/5/2011	5.000	G	9,000	\$36,000,000	405		
2247490	Q	69TH STREET	CSX TRANSPORT	C	O		1	S	12/17/2012	4.979	F	6,175	\$24,700,000	405		
2247500	Q	METROPOLITAN AVE	CSX TRANSPORT	C	O		1	S	10/5/2011	4.233	F	18,650	\$74,600,000	405		
2247530	Q	ANDREWS AVE	LIRR MONTAUK DIV	L	O		1	S	9/22/2011	7.000	VG	1,765	\$7,060,000	405		
2247540	Q	60TH ST	LIRR MONTAUK DIV	L	O		2	S	10/5/2011	5.208	G	5,340	\$21,360,000	405		
2247550	Q	ELIOT AVE	LIRR MONTAUK DIV	L	O		2	S	9/19/2011	5.712	G	9,550	\$38,200,000	405		
2247570	Q	80TH ST	77TH AVE - LIRR MT	L	O		5	S	11/27/2012	5.102	G	11,725	\$46,900,000	405		
2247590	Q	FOREST PARK DRIVE	LIRR MONTAUK DIV	L	O	P	5	S	10/1/2012	5.158	G	6,000	\$24,000,000	409		
2247600	Q	PARK LANE SOUTH	LIRR MONTAUK DIV	L	O		1	S	10/18/2012	6.983	VG	3,024	\$12,096,000	409	482	
2247620	Q	MYRTLE AVE	ABANDONED LIRR		O		3	S	1/6/2012	5.028	G	6,725	\$26,900,000	482	406	
2247630	Q	PED BRG NEAR UNION TPK	ABANDONED LIRR		O-PED		8	C	8/30/2012	5.077	G	1,449	\$5,796,000	406		
2247640	Q	39TH ST (SOUTH)	AMTRAK & LIRR YARD	AL	O		9	S	10/28/2011	6.014	VG	34,100	\$136,400,000	402		
2247650	Q	60TH RD PED BRDG	LIRR MAIN LINE	L	O-PED		3	C	3/7/2012	4.786	F	2,293	\$9,172,000	405	406	
2247660	Q	FOREST PARK DRIVE	ABANDONED LIRR		O	P	6	S	2/23/2012	4.524	F	10,000	\$40,000,000	409		

# INVENTORY SORTED BY B.I.N.

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2247680	Q	221ST ST	LIRR PORT WASH BR	L	O		3	S	9/14/2011	5.926	G	6,050	\$24,200,000	411		
2248019	Q	WOODHAVEN BLVD	ATLANTIC AVE		O		3	S	4/5/2012	4.236	F	19,400	\$77,600,000	409		
2248020	Q	WHITELAW PED BRDG	CONDUIT AVE		O-PED		7	C	9/28/2012	4.775	F	5,500	\$22,000,000	410		
2248039	Q	CROSS BAY BLVD	NASSAU EXPWY - RTE 27		O		2	S	6/23/2011	6.347	VG	16,544	\$66,176,000	410		
2248040	Q	RAMP TO LINDEN BLVD	SO. CONDUIT AVE		O		1	S	5/30/2012	5.200	G	3,352	\$13,408,000	410		
2248059	Q	MOTOR PKWY (PED)	FRANCIS LEWIS BLVD		O-PED	P	2	C	6/14/2012	4.194	F	2,800	\$11,200,000	408		
2248060	Q	MOTOR PKWY (PED)	BELL BLVD		O-PED	P	2	C	6/22/2012	4.208	F	2,650	\$10,600,000	411		
2248070	Q	MOTOR PKWY (PED)	SPRINGFIELD BLVD		O-PED	P	3	C	6/5/2012	3.582	F	2,900	\$11,600,000	411		
2248080	Q	MOTOR PKWY (PED)	HOLLIS COURT BLVD		O-PED	P	3	C	11/21/2012	4.612	F	2,700	\$10,800,000	408		
2248090	Q	FLSHG MDW PK PED	COLLEGE POINT BLVD		O-PED	P	3	C	2/23/2012	4.694	F	8,400	\$33,600,000	407		
2248100	Q	MOTOR PKWY (PED)	73RD AVE		O-PED	P	3	C	2/2/2012	4.541	F	2,600	\$10,400,000	408		
2248110	Q	MOTOR PKWY (PED)	ALLEY PK PED WALK		O-PED	P	1	C	6/7/2012	3.983	F	1,000	\$4,000,000	413		
2248129	Q	UNION TPKE	CREEDMOORE HOSP RD		O		1	S	6/24/2011	4.867	F	3,500	\$14,000,000	413		
2248130	Q	FLUSHING MEADOW PK PED	WILLOW LK&76TH RD		WO-PED	P	4	C	4/20/2002	1.000	C	1,891	\$7,564,000	481		
2248140	Q	FLUSHING MEADW PK RD	STREAM N OF LIE		WO	P	5	S	8/19/2011	4.481	F	4,100	\$16,400,000	481		
2248159	Q	WOODHAVEN BLVD	QUEENS BLVD		O		2	S	8/7/2012	4.275	F	11,500	\$46,000,000	404		
2248160	Q	ELLIOT AVE	QUEENS BLVD		O		2	S	8/7/2012	4.804	F	13,785	\$55,140,000	406		
2248200	Q	RUST ST	FLUSHING AVE		O		1	S	7/13/2011	5.000	G	2,940	\$11,760,000	405		
2248220	Q	SERVICE RD TURNAROUND	FLUSHING AVE		O		1	S	7/13/2011	5.078	G	2,940	\$11,760,000	405		
2248230	Q	BEACH CHANNEL DR WB	BEACH CHANNEL DR EB		O		1	S	7/13/2011	4.400	F	3,600	\$14,400,000	484		
2248240	Q	FLUSHING AV SERVICE RD	FLUSHING AVE		O		1	S	7/12/2011	5.250	G	2,940	\$11,760,000	405		
2248250	Q	102ND ST	HAWTREE BASIN		WO		3	S	8/15/2011	5.941	G	4,900	\$19,600,000	410		
2248260	Q	FLUSHING MDW PARK RD	MEADOW LAKE		WO	P	5	S	5/22/2012	4.458	F	4,200	\$16,800,000	481		
2248280	Q	HIGHLAND PK PED.	PEDESTRIAN PATH		O-PED	P	1	C	10/1/2012	3.667	F	1,900	\$7,600,000	405		
2248299	Q	J.R. PKWY-UNION TPKE	AUSTIN ST		O		1	S	5/30/2012	4.806	F	5,900	\$23,600,000	409	406	
2248300	Q	71ST AVE	COOPER AVE		O		1	S	7/12/2011	4.373	F	2,800	\$11,200,000	405		
2248340	Q	FOREST PARK DR	MYRTLE AVE		O	P	3	S	6/13/2011	4.984	F	5,100	\$20,400,000	409		
2248369	Q	ROCKAWAY BLVD	THURSTON BASIN		WO		2	S	8/17/2011	5.474	G	6,000	\$24,000,000	483	413	
2248379	Q	FLUSHING MDW PARK RD	AQUACADE LAKE		WO	P	5	S	8/19/2011	4.296	F	6,300	\$25,200,000	481		
2249040	R	TOMPKINS AVE	B&O RR (ABANDONED)		O		1	S	5/9/2012	5.953	G	5,096	\$20,384,000	501		
2249070	R	JOHN ST	B&O RR (ABANDONED)	O	O-PED		2	C	8/30/2012	5.620	G	1,050	\$4,200,000	501		
2249090	R	MORNINGSTAR ROAD	B&O RR (ABANDONED)	O	O		4	S	5/3/2012	4.864	F	7,900	\$31,600,000	501		
2249100	R	GRANITE AVE	B&O RR (ABANDONED)	O	O		4	S	3/13/2012	6.034	VG	7,300	\$29,200,000	501		
2249110	R	LAKE AVE	B&O RR (ABANDONED)	O	O		3	S	5/1/2012	5.333	G	5,900	\$23,600,000	501		
2249120	R	SIMONSON AVE	B&O RR (ABANDONED)	O	O		3	S	4/26/2011	5.963	G	5,819	\$23,276,000	501		
2249130	R	VAN NAME AVE	B&O RR (ABANDONED)	O	O		3	S	7/3/2012	5.186	G	5,474	\$21,896,000	501		
2249140	R	VAN PELT AVE	B&O RR (ABANDONED)	O	O		3	S	4/28/2011	5.576	G	5,000	\$20,000,000	501		
2249160	R	DE HART AVE	B&O RR (ABANDONED)	O	O		4	S	4/27/2011	6.389	VG	6,700	\$26,800,000	501		
2249170	R	UNION AVE	B&O RR (ABANDONED)	O	O		4	S	4/29/2011	5.167	G	6,500	\$26,000,000	501		
2249180	R	HARBOR ROAD	B&O RR (ABANDONED)	O	O		4	S	8/20/2011	6.220	VG	5,778	\$23,112,000	501		

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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2249200	R	SOUTH AVE	B&O RR (ABANDONED)	O	O		3	S	8/20/2011	6.709	VG	8,322	\$33,288,000	501		
2249210	R	MAIN ST PED BRDG	SIRT SOUTH SHORE	S	O-PED		9	C	7/24/2012	4.123	F	400	\$1,600,000	503		
2249230	R	TRACY AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED		9	C	7/19/2012	3.553	F	635	\$2,540,000	503		
2249240	R	ARTHUR KILL ROAD	SIRT SOUTH SHORE	S	O		1	S	10/22/2012	4.648	F	3,650	\$14,600,000	503		
2249250	R	BETHEL AV PED BRDG	SIRT SOUTH SHORE	S	O-PED		12	C	7/20/2012	3.525	F	111	\$444,000	503		
2249269	R	PAGE AVE	SIRT SOUTH SHORE	S	O		4	S	8/25/2011	5.889	G	30,710	\$122,840,000	503		
2249270	R	RICHMOND VALLY ROAD	SIRT SOUTH SHORE	S	O		4	S	8/23/2011	5.284	G	9,440	\$37,760,000	503		
2249280	R	CHAMP COURT PED BRDG	SIRT SOUTH SHORE	S	O-PED		7	C	7/20/2012	4.036	F	595	\$2,380,000	503		
2249290	R	SEGUINE AVE	SIRT SOUTH SHORE	S	O		1	S	9/26/2011	6.016	VG	3,250	\$13,000,000	503		
2249300	R	HUGUENOT AVE	SIRT SOUTH SHORE	S	O		2	S	10/3/2011	4.788	F	4,900	\$19,600,000	503		
2249320	R	ALBEE AVE	SIRT SOUTH SHORE	S	O		3	S	10/4/2011	4.492	F	6,500	\$26,000,000	503		
2249330	R	ANNADALE ROAD	SIRT SOUTH SHORE	S	O		1	S	8/17/2011	6.433	VG	3,540	\$14,160,000	503		
2249350	R	NELSON AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED		3	C	7/25/2012	4.115	F	300	\$1,200,000	503		
2249360	R	GIFFORDS LANE	SIRT SOUTH SHORE	S	O		1	S	10/23/2012	5.531	G	3,042	\$12,168,000	503		
2249370	R	GREAVES AVE	SIRT SOUTH SHORE	S	O		1	S	8/16/2011	6.550	VG	2,650	\$10,600,000	503		
2249380	R	GUYON AVE	SIRT SOUTH SHORE	S	O		3	S	9/9/2011	4.377	F	6,900	\$27,600,000	503		
2249390	R	CEDARVIEW AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED		5	C	7/26/2012	3.615	F	625	\$2,500,000	503		
2249400	R	BEACH AVE	SIRT SOUTH SHORE	S	O		2	S	8/4/2011	5.364	G	3,700	\$14,800,000	502		
2249410	R	ROSS AVE	SIRT SOUTH SHORE	S	O		2	S	8/5/2011	5.379	G	3,800	\$15,200,000	502		
2249420	R	ROSE AVE	SIRT SOUTH SHORE	S	O		2	S	8/8/2011	5.409	G	3,800	\$15,200,000	502		
2249430	R	NEW DORP LANE	SIRT SOUTH SHORE	S	O		2	S	10/14/2011	4.847	F	7,600	\$30,400,000	502		
2249440	R	BANCROFT AVE	SIRT SOUTH SHORE	S	O		3	S	10/13/2011	5.328	G	5,900	\$23,600,000	502		
2249450	R	FREMONT AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED		3	C	7/27/2012	3.618	F	800	\$3,200,000	502		
2249460	R	LINCOLN AVE	SIRT SOUTH SHORE	S	O		1	S	11/18/2011	5.172	G	4,500	\$18,000,000	502		
2249470	R	MIDLAND AVE	SIRT SOUTH SHORE	S	O		1	S	11/22/2011	5.466	G	3,000	\$12,000,000	502		
2249480	R	FINGERBOARD ROAD	SIRT SOUTH SHORE	S	O		2	S	10/5/2011	6.486	VG	5,100	\$20,400,000	502		
2249490	R	CLOVE ROAD	SIRT SOUTH SHORE	S	O		3	S	10/25/2012	5.917	G	5,104	\$20,416,000	502		
2249510	R	TOMPKINS AVE	WILLOW AVE, SIRT	S	O		2	S	10/24/2012	5.358	G	5,378	\$21,512,000	501		
2249520	R	HANNAH ST	SIRT SOUTH SHORE	S	O		10	S	9/22/2011	4.898	F	10,020	\$40,080,000	501		
2249530	R	MINTHORNE ST PED BRDG	SIRT SOUTH SHORE	S	O-PED		26	C	10/4/2012	4.453	F	6,000	\$24,000,000	501		
2249580	R	BELFIELD AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED		5	C	10/5/2012	3.902	F	400	\$1,600,000	503		
2249710	R	WEST FOOTBRIDGE	CLOVE LAKE		WO-PED	P	2	C	8/1/2011	4.086	F	900	\$3,600,000	501		
2249720	R	EAST FOOTBRIDGE	CLOVE LAKE		WO-PED	P	2	C	8/2/2011	4.229	F	900	\$3,600,000	501		
2249730	R	BRIDGE OVER DAM	N.END CLOVE LAKE		WO-PED	P	1	C	8/1/2011	3.351	F	1,000	\$4,000,000	501		
2249760	R	MARTLINGS AVE	RICHMOND LAKE DAM		WO		2	S	6/9/2011	4.600	F	7,000	\$28,000,000	501		
2249770	R	S OF BROOKS LAKE	STREAM IN PARK		WO-PED	P	3	C	12/3/2012	4.946	F	700	\$2,800,000	501		
2249780	R	FOOTBRIDGE	BROOKS LAKE DAM		WO-PED	P	1	C	5/24/2012	3.433	F	800	\$3,200,000	501		
2249790	R	FB S OF FOREST AV	STREAM IN PARK		WO-PED	P	3	C	10/5/2012	4.651	F	700	\$2,800,000	501		
2249800	R	FOREST AVE	CLOVE LAKES PK STREAM		WO	P	1	S	10/7/2011	4.567	F	1,600	\$6,400,000	501		
2249810	R	HYLAN BLVD	LEMON CREEK		WO		1	S	2/15/2012	6.313	VG	11,400	\$45,600,000	503		



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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2249820	R	ARTHUR KILL ROAD	ARTHUR KILL STREAM		WO		1	S	5/5/2011	4.184	F	1,300	\$5,200,000	503		
2249840	R	TOMPKINS AVE	GREENFIELD AVE		O		1	S	3/2/2012	5.021	G	2,690	\$10,760,000	501		
2249860	R	SLATER BLVD	NEW CREEK		WO		1	S	5/4/2011	5.510	G	2,037	\$8,148,000	502		
2249870	R	TRAVIS AVE	MAIN CREEK		WO		1	S	9/26/2011	5.483	G	1,700	\$6,800,000	502		
2249880	R	CHELSEA ROAD	SAWMILL CREEK		WO		1	S	5/6/2011	6.816	VG	2,205	\$8,820,000	502		
2257569	M	MILLER HIGHWAY	TERRAIN		A		64	S	10/22/2012	4.352	F	272,475	\$1,089,900,000	104	107	
2266129	Q	DOUGLASTON PKWY	BCIP SB		A		1	S	3/19/2012	4.592	F	4,400	\$17,600,000	411		
2266139	Q	DOUGLASTON PKWY	BCIP NB		A		1	S	3/20/2012	4.673	F	6,400	\$25,600,000	411		
2266149	Q	HEMPSTEAD AVE	BCIP RAMP NB		A		2	S	3/15/2012	3.937	F	9,500	\$38,000,000	413		
2266160	Q	678I SB TO BCIP EB	ACCESS RD FROM 678I		A		1	S	7/24/2012	3.734	F	2,300	\$9,200,000	407		
2266229	M	HHP	PED UNDERPASS @ 148 ST		A		1	S	2/2/2012	5.000	G	1,840	\$7,360,000	109		
2266230	M	HHP NB	PED UNDERPASS INWD PK		A		1	S	1/6/2012	5.000	G	800	\$3,200,000	112		
2266240	M	HHP SB	PED UNDERPASS INWD PK		A		1	S	1/6/2012	5.526	G	1,100	\$4,400,000	112		
2266540	B	278I	BRUCKNER BLVD		A		2	S	7/8/2011	4.371	F	32,900	\$131,600,000	201		
226672A	M	W 31ST ST	AMTRAK LAYUP TRACKS	A	O		9	S	12/28/2012	3.619	F	8,800	\$35,200,000	104		
2266770	Q	BCIP	LAURELTON PKWY		A		1	S	3/8/2012	4.972	F	9,508	\$38,032,000	413		
2267130	M	RIVERSIDE DRIVE	W 145TH ST		O		1	S	5/12/2011	4.867	F	5,800	\$23,200,000	109		
2267160	Q	ROOSEVELT AVE	FLUSHING MDW PK ROAD		O		4	S	8/10/2011	4.746	F	7,280	\$29,120,000	408		
2267199	Q	FRANCIS LEWIS BLVD	CUNNINGHAM PK RD		O		1	S	5/27/2011	5.033	G	7,085	\$28,340,000	408		
2267240	M	HRD RAMP TO GWB	HARLEM RIVER DR SB		A		55	S	10/15/2012	3.014	F	122,900	\$491,600,000	112		
2267250	M	HHP	AMTRAK - W96TH ST	A	A		55	S	12/5/2012	3.548	F	40,000	\$160,000,000	107		
2267380	M	WEST STREET	RECTOR ST		AT		1	S	11/15/2011	5.033	G	25,760	\$103,040,000	101		
2267717	M	79 ST PED PLAZA	79 ST BT BASIN GAR		A	P	10	S	5/3/2011	4.593	F	27,400	\$109,600,000	107		
2267718	M	79 ST TRAFFIC CIRC	79 ST PED PLAZA		A	P	34	S	5/11/2011	4.000	F	24,130	\$96,520,000	107		
226771A	M	79 ST RAMP TO HHP	79 ST BT BASIN GAR		AR	P	4	S	5/9/2012	4.221	F	3,131	\$12,524,000	107		
226771B	M	79 ST RAMP TO GAR	79 ST BT BASIN GAR		AR	P	21	S	5/22/2012	4.452	F	8,989	\$35,956,000	107		
226771C	M	GAR RAMP TO 79 ST	79 ST BT BASIN GAR		AR	P	21	S	5/22/2012	4.435	F	9,095	\$36,380,000	107		
226771D	M	SB HHP RAMP TO 79 ST	79 ST BT BASIN GAR		AR	P	4	S	5/9/2012	4.516	F	2,601	\$10,404,000	107		
2267860	K	BROOKLYN BR APPROACH	STORAGE (SANDS ST)		O		1	S	7/19/2012	4.411	F	6,490	\$25,960,000	302		
2268350	K	BROOKLYN PROMENADE	278I EB (BQE)		A-PED	P	35	C	5/31/2012	3.690	F	46,184	\$184,736,000	302		
2268480	M	CHAMBERS ST PED BRDG	RTE 9A - WEST ST		O-PED		10	C	5/24/2012	5.167	G	7,481	\$29,924,000	101		
2268497	K	278I W.B. (B.Q.E.)	FURMAN ST		A		45	S	8/6/2011	4.357	F	86,406	\$345,624,000	302		
2268498	K	278I E.B. (B.Q.E.)	278I WB (BQE)		A		69	S	11/13/2011	3.965	F	133,708	\$534,832,000	302		
2268507	K	278I W.B. (B.Q.E.)	YORK ST		A		6	S	6/8/2011	4.071	F	10,388	\$41,552,000	302		
2268508	K	278I E.B. (B.Q.E.)	278I W.B. (B.Q.E.)		A		11	S	6/5/2011	4.103	F	20,529	\$82,116,000	302		
2268517	K	278I W.B. (B.Q.E.)	FURMAN ST		A		7	S	6/28/2011	3.882	F	10,988	\$43,952,000	302		
2268518	K	278I E.B. (B.Q.E.)	278I W.B. (B.Q.E.)		A		5	S	6/9/2011	4.119	F	9,275	\$37,100,000	302		
2268650	M	FDR NB E42ND TO E49TH ST	EAST RIVER		A		119	S	10/28/2011	3.660	F	30,767	\$123,068,000	106		
2268760	M	PS-5 PED BRDG	TENTH AVE		O-PED		5	C	11/29/2012	4.816	F	1,285	\$5,140,000	112		
2268770	Q	SPRINGFIELD BLVD	EQUES. PATH (ABAND.)		O		1	S	6/3/2011	4.667	F	1,470	\$5,880,000	413		

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2268920	R	AMBOY ROAD	LEMON CREEK		WO		1	S	2/15/2012	6.333	VG	1,310	\$5,240,000	503		
2268930	M	MORRIS ST PED BRDG	BKLN-BATTERY TUNN PLZ		A-PED		3	C	6/4/2012	3.764	F	1,200	\$4,800,000	101		
2269030	B	MATTHEWSON ROAD	MAC CRACKEN AVE		O		15	S	12/7/2012	4.316	F	14,880	\$59,520,000	205		
2269190	M	W 70TH ST	AMTRAK	A	O		3	S	12/9/2011	5.597	G	17,258	\$69,032,000	107		
2269200	M	RIVERSIDE DRIVE SOUTH	AMTRAK	A	O		11	S	11/17/2011	6.069	VG	69,040	276,160,000.00	107		
2269210	M	W 68TH ST	AMTRAK	A	O		3	S	12/12/2011	6.576	VG	5,382	\$21,528,000	107		
2269240	M	RIVERSIDE DRIVE	W. 155TH ST		O		1	S	5/10/2011	4.640	F	2,780	\$11,120,000	109	112	
2269260	K	W. 8TH ST PED BRDG	SURF AVE.		O-PED	P	39	C	3/22/2012	3.629	F	14,742	\$58,968,000	313		
2269600	K	ERSKINE ST	BSHP		A		1	S	8/20/2012	5.938	G	8,258	\$33,032,000	305		
2269730	R	PARKING EXIT RAMP	SIRT	S	O	F	10	S	11/30/2012	6.097	VG	20,727	\$82,908,000	501		
2269740	R	BUS STATION NORTH	SIRT	S	O	F	12	S	10/26/2012	4.660	F	64,605	\$258,420,000	501		
2269750	R	BUS STATION SOUTH	SIRT	S	O	F	12	S	11/14/2012	5.360	G	154,688	\$618,752,000	501		
2269760	R	NORTH RAMP	SIRT	S	O	F	9	S	11/30/2012	6.278	VG	17,589	\$70,356,000	501		
2269770	R	BUS STA ENTR RAMP	SIRT	S	O	F	19	S	11/26/2012	4.181	F	39,333	\$157,332,000	501		
2269780	R	PARKING ENTR RAMP	SIRT	S	O	F	3	S	11/12/2012	5.944	G	8,589	\$34,356,000	501		
2269790	R	BUS STATION EXIT RAMP	SIRT	S	O	F	7	S	10/22/2012	4.778	F	28,721	\$114,884,000	501		
2269820	M	E 81 ST PED BRDG	FDR DRIVE N.B.		A-PED	P	3	C	5/15/2012	3.341	F	900	\$3,600,000	108		
2270030	B	E 156TH ST	ACCESS TO HOUSING		O	ED	16	S	12/14/2012	3.493	F	49,696	\$198,784,000	204		
2270170	R	SI FERRY PED BRDG	PARKING LOT EXIT RDWY		O-PED	F	5	C	6/17/2010	3.163	F	2,917	\$11,668,000	501		
2270180	R	BOROUGH PLACE - RAMP A	STATEN ISLAND RAILWAY	S	O	F	1	S	12/29/2005	4.938	F	1,250	\$5,000,000	501		
2270250	B	BROOKE AVE	CSX TRANS - PT MORRIS		O		1	S	3/22/2012	3.800	F	21,035	\$84,140,000	201		
2300130	Q	ROCKAWAY BLVD	HOOK CREEK		WO		3	S	8/17/2011	6.271	VG	18,302	\$73,208,000	413		
7703720	Q	216TH ST PED BRDG	LIRR PORT WASH BR	L	O-PED		6	C	3/13/2012	3.889	F	400	\$1,600,000	411		
7705510	Q	167TH ST PED BRDG	LIRR PORT WASH BR	L	O-PED		3	C	3/12/2012	3.902	F	600	\$2,400,000	407		
M00001	M	W191ST ST PED TNL	BROADWAY - IRT #1 SUBWAY		O-PED		1	C	12/10/2012	4.545	F	2,000	\$8,000,000	112		
M00003	M	HHP ON/OFF RMP-79TH ST SO. SIDE	PED PATH SO. OF 79TH ST		A		1	C	6/6/2012	3.667	F	900	\$3,600,000	107		
M00004	M	HHP ON/OFF RMP-79TH ST NO. SIDE	PED PATH NO. OF 79TH ST		A		1	C	6/27/2012	5.000	G	900	\$3,600,000	107		
Q00002	Q	BCIP	PATH OPP. 88TH RD		A		1	C	6/8/2012	4.667	F	1,272	\$5,088,000	413		
787 OPEN BRIDGES		OPEN SPANS 4,398									OPEN SF		14,533,529	\$	58,141,680,000	ALL

# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
224005B	B	TO BRUCKNER BLVD	RELIEF		OR		5	S	10/24/2011	6.746	VG	12,100	\$48,400,000	201		
224006A	B	FROM BRUCKNER BLVD	RELIEF		OR		5	S	9/28/2011	6.761	VG	14,037	\$56,148,000	201		
2241000	B	WESTCHESTER AVE	CSX TRANS - PT MORRIS	C	O		1	S	6/11/2012	4.660	F	1,740	\$6,960,000	201		
2241010	B	E 156TH STREET	CSX TRANS - PT MORRIS	C	O		1	S	6/18/2012	4.612	F	2,400	\$9,600,000	201		
2241040	B	THIRD AVE	CSX TRANS - PT MORRIS	C	O		1	S	7/25/2012	4.563	F	2,700	\$10,800,000	201	203	
2241050	B	E 149TH ST/JACKSON AVE	CSX TRANS - PT MORRIS	C	O		1	S	6/7/2012	4.850	F	65,000	\$260,000,000	201		
2241060	B	ST. MARYS & CONCORD	CSX TRANS - PT MORRIS	C	O		1	S	8/15/2012	5.370	G	4,500	\$18,000,000	201		
2241070	B	WALES AVE	CSX TRANS - PT MORRIS	C	O		1	S	8/8/2012	6.467	VG	2,535	\$10,140,000	201		
2241080	B	SOUTHERN BLVD	CSX TRANS - PT MORRIS	C	O		1	S	8/8/2012	4.093	F	3,900	\$15,600,000	201		
2241099	B	BRUCKNER BLVD	CSX TRANS - PT MORRIS	C	O		1	S	8/7/2012	6.450	VG	6,700	\$26,800,000	201		
2241129	B	E 149TH ST	AMTRAK - CSX	AC	O		2	S	10/8/2012	4.620	F	18,258	\$73,032,000	201	202	
2241550	B	E 144TH ST	METRO NORTH RR HAR	M	O		2	S	7/11/2011	6.264	VG	8,290	\$33,160,000	201		
2241560	B	E 149TH ST	METRO NORTH RR HAR	M	O		8	S	5/8/2012	4.819	F	27,900	\$111,600,000	201	204	
2242260	B	EAGLE AVE	E 161ST ST		O		1	S	2/10/2012	5.017	G	2,800	\$11,200,000	201	203	
2242299	B	GRAND CONCOURSE	E 138TH ST		O		1	S	5/25/2011	4.467	F	9,500	\$38,000,000	201		
2266540	B	278I	BRUCKNER BLVD		A		2	S	7/8/2011	4.371	F	32,900	\$131,600,000	201		
2270250	B	BROOKE AVE	CSX TRANS - PT MORRIS		O		1	S	3/22/2012	3.800	F	21,035	\$84,140,000	201		
2066671	B	BRUCKNER EXPWY SB	BRONX RIVER		WMA		3	S	10/22/2011	5.278	G	12,400	\$49,600,000	202	209	
2066672	B	BRUCKNER EXPWY NB	BRONX RIVER		WMA		8	S	10/22/2011	4.269	F	22,300	\$89,200,000	202	209	
2075351	B	BRUCKNER EXPWY SB	AMTRAK - CSX	AC	A		1	S	11/19/2012	6.032	VG	11,600	\$46,400,000	202		
2075352	B	BRUCKNER EXPWY NB	AMTRAK - CSX	AC	A		1	S	11/19/2012	6.444	VG	10,900	\$43,600,000	202		
2076929	B	BRUCKNER EXPWY	CSX - HUNTS POINT	C	A		1	S	9/15/2011	4.700	F	3,800	\$15,200,000	202		
2240180	B	WESTCHESTER AVE	BRONX RIVER		WO		1	S	9/16/2011	4.608	F	5,476	\$21,904,000	202	209	
2241139	B	LEGGETT AVE	AMTRAK - CSX	AC	O		3	S	10/8/2012	4.620	F	41,551	\$166,204,000	202		
2241159	B	LONGWOOD AVE	AMTRAK - CSX	AC	O		2	S	10/10/2012	5.236	G	10,625	\$42,500,000	202		
2241169	B	LAFAYETTE AVE	AMTRAK - CSX	AC	O		1	S	10/5/2012	5.651	G	12,000	\$48,000,000	202		
2241170	B	TIFFANY ST	AMTRAK - CSX	AC	O		1	S	11/1/2011	5.627	G	7,267	\$29,068,000	202		
2241180	B	BARRETTO ST	AMTRAK - CSX	AC	O		1	S	10/8/2012	6.000	G	5,313	\$21,252,000	202		
2241190	B	HUNTS POINT AVE	AMTRAK - CSX	AC	O		1	S	10/12/2012	4.828	F	10,049	\$40,196,000	202		
2241200	B	FAILE ST	AMTRAK - CSX	AC	O		1	S	10/12/2012	5.578	G	6,208	\$24,832,000	202		
2241210	B	BRYANT AVE	AMTRAK - CSX	AC	O		1	S	10/11/2012	3.051	F	5,300	\$21,200,000	202		
2241230	B	WESTCHESTER AVE	AMTRAK - CSX	AC	O		3	S	11/26/2012	5.944	G	15,600	\$62,400,000	202	209	
2241020	B	E 161ST STREET	CSX TRANS - PT MORRIS	C	O		1	S	3/21/2012	6.700	VG	12,800	\$51,200,000	203		
2241030	B	E 163RD STREET	CSX TRANS - PT MORRIS	C	O		1	S	3/1/2012	4.611	F	3,200	\$12,800,000	203		
2241110	B	MELROSE AVE	CSX TRANS - PT MORRIS	C	O		8	S	8/3/2011	5.611	G	37,854	\$151,416,000	203		
2241620	B	E 162ND ST	METRO NORTH RR HAR	M	O		1	S	4/20/2012	4.859	F	4,700	\$18,800,000	203		
2241630	B	E 165TH ST	METRO NORTH RR HAR	M	O		1	S	4/20/2012	4.300	F	16,400	\$65,600,000	203		
2241650	B	E 167TH ST	METRO NORTH RR HAR	M	O		1	S	4/17/2012	5.510	G	3,363	\$13,452,000	203		
2241660	B	E 168TH ST	METRO NORTH RR HAR	M	O		1	S	4/18/2012	4.641	F	4,800	\$19,200,000	203		
2241670	B	E 169TH ST	METRO NORTH RR HAR	M	O		1	S	4/18/2012	4.250	F	3,300	\$13,200,000	203		

# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2241680	B	E 170TH ST	METRO NORTH RR HAR	M	O		1	S	4/16/2012	6.333	VG	3,150	\$12,600,000	203		
2241700	B	ST PAULS PL PED BRDG	METRO NORTH RR HAR	M	O-PED		2	C	2/7/2012	4.884	F	600	\$2,400,000	203		
2241710	B	CLAREMONT PKWY	METRO NORTH RR HAR	M	O		1	S	4/16/2012	4.426	F	6,300	\$25,200,000	203		
2241720	B	E 173RD ST	METRO NORTH RR HAR	M	O		1	S	4/16/2012	4.875	F	3,000	\$12,000,000	203		
2076640	B	DEPOT PLACE	METRO NORTH RR HUD	CM	O		11	S	6/8/2012	4.944	F	26,566	\$106,264,000	204		
2241409	B	GRAND CONCOURSE	METRO NORTH RR HUD	MT	O		1	S	5/16/2012	3.797	F	14,300	\$57,200,000	204		
2241410	B	WALTON AVE	METRO NORTH RR HUD	M	O		1	S	5/16/2012	4.953	F	3,600	\$14,400,000	204		
2241420	B	GERARD AVE	METRO NORTH RR HUD	M	O		1	S	5/16/2012	5.797	G	5,063	\$20,252,000	204		
2241430	B	RIVER AVE	METRO NORTH RR HUD	M	O		1	S	7/13/2011	6.156	VG	5,040	\$20,160,000	204		
2241590	B	CONCOURSE VILL AVE	METRO NORTH RR HAR	M	O		1	S	4/20/2012	3.969	F	12,077	\$48,308,000	204		
2241600	B	E 158TH ST	METRO NORTH RR HAR	M	O		1	S	7/12/2011	5.200	G	3,400	\$13,600,000	204		
2241610	B	E 161ST ST	METRO NORTH RR HAR	M	O		1	S	10/12/2011	5.017	G	6,600	\$26,400,000	204	203	
2242259	B	GRAND CONCOURSE	E 161ST ST		O		1	S	7/31/2012	6.333	VG	27,017	\$108,068,000	204		
2242280	B	GRAND CONCOURSE	E 167TH ST		O		2	S	7/20/2012	4.754	F	42,900	\$171,600,000	204		
2242300	B	GRAND CONCOURSE	E 170TH ST		O		2	S	2/23/2012	4.789	F	39,300	\$157,200,000	204		
2242319	B	GRAND CONCOURSE	E 174TH ST	T	O		1	S	2/24/2012	4.067	F	14,900	\$59,600,000	204		
2270030	B	E 156TH ST	ACCESS TO HOUSING		O	ED	16	S	12/14/2012	3.493	F	49,696	\$198,784,000	204		
2241460	B	W TREMONT AVE	METRO NORTH RR HUD	M	O		8	S	6/7/2012	3.955	F	12,900	\$51,600,000	205		
2242329	B	GRAND CONCOURSE	E 175TH ST	T	O		1	S	7/17/2012	4.833	F	11,900	\$47,600,000	205		
2242330	B	GRAND CONCOURSE	E TREMONT AVE		O		1	S	9/28/2011	5.983	G	11,700	\$46,800,000	205		
2242350	B	EAST FORDHAM RD	GRAND CONCOURSE		O		1	S	2/17/2012	4.567	F	10,300	\$41,200,000	205	207	
2242360	B	GRAND CONCOURSE	BURNSIDE AVE		O		2	S	8/2/2012	4.441	F	8,400	\$33,600,000	205		
2269030	B	MATTHEWSON ROAD	MAC CRACKEN AVE		O		15	S	12/7/2012	4.316	F	14,880	\$59,520,000	205		
2241269	B	E 177TH ST	AMTRAK - CSX	AC	O		3	S	8/27/2012	5.403	G	16,606	\$66,424,000	206		
2241740	B	E 175TH ST	METRO NORTH RR HAR	M	O		1	S	4/16/2012	3.938	F	3,600	\$14,400,000	206		
2241760	B	E TREMONT AVE	METRO NORTH RR HAR	M	O		1	S	7/6/2011	6.450	VG	8,424	\$33,696,000	206		
2241770	B	E 178TH ST PED BRDG	METRO NORTH RR HAR	M	O-PED		1	C	2/6/2012	4.918	F	700	\$2,800,000	206		
2241780	B	E 179TH ST PED BRDG	METRO NORTH RR HAR	M	O-PED		6	C	2/3/2012	5.763	G	700	\$2,800,000	206		
2241790	B	E 180TH ST	METRO NORTH RR HAR	M	O		1	S	4/11/2012	3.906	F	5,000	\$20,000,000	206		
2241800	B	E 183TH ST	METRO NORTH RR HAR	M	O		1	S	4/11/2012	4.109	F	4,080	\$16,320,000	206		
2241810	B	E 188TH ST	METRO NORTH RR HAR	M	O		1	S	4/11/2012	4.063	F	5,300	\$21,200,000	206		
2241820	B	E 187TH ST	METRO NORTH RR HAR	M	O		1	S	4/11/2012	4.344	F	3,800	\$15,200,000	206		
2241839	B	E 189TH ST	METRO NORTH RR HAR	M	O		1	S	7/6/2011	6.333	VG	43,157	\$172,628,000	206	207	
2242030	B	CROTONA AVE	BRONX PELHAM PKWY		O		2	S	1/18/2012	5.447	G	7,600	\$30,400,000	206		
2242149	B	E TREMONT AVE	BRONX RIVER		WO		2	S	5/30/2012	4.500	F	12,900	\$51,600,000	206		
2242400	B	E 180TH ST	BRONX RIVER		WO		1	S	8/28/2012	4.810	F	4,500	\$18,000,000	206	227	
2230270	B	MOSHOLU PARKWAY	WEBSTER AVE		A		1	S	5/13/2011	5.328	G	8,480	\$33,920,000	207		
2230287	B	JEROME AVE	MOSHOLU PARKWAY	T	A		3	S	4/22/2011	4.816	F	11,800	\$47,200,000	207		
2241470	B	W FORDHAM RD	METRO NORTH RR HUD	M	O		4	S	7/14/2011	5.694	G	16,052	\$64,208,000	207		
2241489	B	W 225TH ST	CSX TRASP - PUTNAM	C	O		2	S	6/9/2012	5.328	G	10,900	\$43,600,000	207	208	



# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RT NG SRC	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2241930	B	BEDFORD PARK BLVD	NYCTA IND YARDS	T	O		4	S	11/20/2012	5.403	G	46,300	\$185,200,000	207		
2241940	B	W 205TH ST	NYCTA IND YARDS	T	O		4	S	11/20/2012	5.514	G	32,508	\$130,032,000	207		
2242340	B	GRAND CONCOURSE	EAST KINGSBRIDGE		O		2	S	7/24/2012	4.714	F	18,285	\$73,140,000	207		
2242370	B	GRAND CONCOURSE	BEDFORD PARK BLVD		O		1	S	2/16/2012	4.137	F	8,418	\$33,672,000	207		
2242380	B	GRAND CONCOURSE	E 204TH ST		O		1	S	9/26/2011	5.484	G	9,272	\$37,088,000	207		
2229440	B	HHP	KAPPOCK ST		A		1	S	7/18/2011	4.931	F	3,900	\$15,600,000	208		
2229450	B	232ND ST	HHP		A		2	S	7/19/2011	5.026	G	4,900	\$19,600,000	208		
2229460	B	236TH ST PED BRDG	HHP		A-PED		3	C	6/12/2012	4.672	F	2,500	\$10,000,000	208		
2229470	B	239TH ST	HHP		A		2	S	4/29/2011	5.053	G	6,100	\$24,400,000	208		
2229480	B	MANHATTAN COLL PKWY	HHP		A		3	S	4/29/2011	5.053	G	6,200	\$24,800,000	208		
2229490	B	246TH ST	HHP		A		2	S	4/29/2011	4.868	F	5,600	\$22,400,000	208		
2229500	B	252ND ST	HHP		A		2	S	1/20/2012	5.372	G	4,500	\$18,000,000	208		
2229510	B	RIVERDALE AVE	HHP		A		2	S	7/20/2011	5.079	G	5,200	\$20,800,000	208		
2229520	B	FIELDSTON ROAD	HHP		A		1	S	7/21/2011	5.033	G	6,600	\$26,400,000	208		
2229530	B	HHP	BROADWAY		A		1	S	7/22/2011	4.574	F	7,500	\$30,000,000	208		
2241490	B	W 230TH ST	CONRAIL (ABANDONED) PUTNAM		O		1	S	4/8/2011	5.563	G	5,600	\$22,400,000	208		
2241509	B	W 231ST ST	CONRAIL (ABANDONED) PUTNAM		O		1	S	7/26/2012	4.745	F	4,723	\$18,892,000	208		
2241510	B	W 233RD ST	CONRAIL (ABANDONED) PUTNAM		O		1	S	4/7/2011	5.275	G	3,760	\$15,040,000	208		
2241520	B	W 234TH ST	CONRAIL (ABANDONED) PUTNAM		O		1	S	4/7/2011	5.176	G	3,770	\$15,080,000	208		
1066510	B	BRUCKNER EXPWY SVC RD	WESTCHESTER CREEK		WMA		17	S	10/8/2012	3.516	F	39,400	\$157,600,000	209		
2066720	B	E 174TH ST	SHERIDAN EXPWY/AMTRAK	A	A		13	S	8/20/2012	4.153	F	35,573	\$142,292,000	209	203	
206672A	B	174TH ST-NTH PED BRDG	895I - SHERIDAN EXPWY		A-PED		4	C	6/6/2012	4.667	F	1,800	\$7,200,000	209		
206672B	B	174TH ST-STH PED BRDG	895I - SHERIDAN EXPWY		A-PED		4	C	6/6/2012	4.750	F	1,900	\$7,600,000	209		
2241270	B	E TREMONT AVE	AMTRAK - CSX	AC	O		2	S	8/27/2012	5.153	G	22,300	\$89,200,000	209	211	
2075820	B	E TREMONT AVE	HUTCHINSON RVR PKWY		A		2	S	11/21/2011	4.444	F	10,200	\$40,800,000	210		
2075837	B	WESTCHESTER AVE	HUTCHINSON RVR PKWY		A		2	S	2/1/2012	4.083	F	15,858	\$63,432,000	210	211	
2075849	B	BRONX PELHAM PKWY	HUTCHINSON RVR PKWY		A		2	S	6/6/2012	3.763	F	17,600	\$70,400,000	210	211	
2075859	B	HUTCHINSON RVR PKWY	HUTCHINSON RIVER		WMA		7	S	10/16/2012	4.703	F	60,500	\$242,000,000	210	228	
2076109	B	BE NB SERVICE RD	HUTCHINSON RVR PKWY		A		2	S	9/1/2011	4.632	F	7,800	\$31,200,000	210		
2076129	B	BE SB SERVICE RD	HUTCHINSON RVR PKWY		A		2	S	1/19/2012	5.079	G	7,100	\$28,400,000	210		
2241959	B	HUTCHINSON RVR PKWY	AMTRAK - CSX	AC	O		1	S	5/25/2012	5.780	G	15,444	\$61,776,000	210	211	
2229560	B	BRONX PELHAM PKWY	AMTRAK - CSX	AC	A		3	S	5/25/2012	4.542	F	24,591	\$98,364,000	211		
2241329	B	WHITE PLAINS ROAD	AMTRAK - CSX	AC	O		1	S	10/9/2012	4.781	F	6,900	\$27,600,000	211		
2241330	B	UNIONPORT ROAD	AMTRAK - CSX	AC	O		1	S	10/9/2012	4.781	F	7,631	\$30,524,000	211		
2241369	B	WILLIAMSBRIDGE RD	AMTRAK - CSX	AC	O		2	S	8/27/2012	4.836	F	6,510	\$26,040,000	211		
2241910	B	GUN HILL ROAD	NYCTA-DYRE AVE LN	T	O		1	S	11/19/2012	5.750	G	7,500	\$30,000,000	211	212	
1067150	B	NEREID AVE (E. 240TH ST)	BRONX RIVER PKWY	M	O		10	S	10/6/2011	4.474	F	57,750	\$231,000,000	212		
2229579	B	BOSTON POST ROAD	HUTCHINSON RIVER		WO		14	S	5/23/2012	4.194	F	95,700	\$382,800,000	212		
2241860	B	GUN HILL RD	METRO NORTH RR HAR	M	O		1	S	5/1/2012	6.531	VG	9,128	\$36,512,000	212		
2241870	B	E 233RD ST	METRO NORTH RR HAR	M	O		1	S	4/30/2012	4.902	F	7,664	\$30,656,000	212	207	

# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RT NG SRC	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2241890	B	E 241ST ST	BRP, METRO NORTH HAR	M	WO		28	S	10/5/2011	4.306	F	49,500	\$198,000,000	212		
2241900	B	EASTCHESTER ROAD	NYCTA-DYRE AVE LN	T	O		3	S	11/19/2012	4.486	F	13,500	\$54,000,000	212		
2242071	B	BRONX BLVD S.B.	BRONX RIVER		WO		1	S	3/19/2012	4.633	F	1,800	\$7,200,000	212		
2242072	B	BRONX BLVD N.B.	BRONX RIVER		WO		1	S	3/19/2012	4.967	F	1,800	\$7,200,000	212		
2242081	B	BRONX BLVD S.B.	BRONX RIVER		WO		1	S	3/21/2012	4.467	F	2,800	\$11,200,000	212		
2242082	B	BRONX BLVD N.B.	BRONX RIVER		WO		1	S	3/22/2012	4.467	F	2,800	\$11,200,000	212		
2242099	B	PARK ROAD (204TH ST)	BRONX RIVER		WO		1	S	6/4/2012	4.655	F	4,700	\$18,800,000	212		
2242430	B	GUN HILL ROAD	BRONX BLVD		O		4	S	2/15/2012	5.018	G	9,400	\$37,600,000	212		
2242440	B	GUN HILL ROAD	BRONX RIVER		WO		1	S	2/13/2012	5.300	G	8,700	\$34,800,000	212		
2242459	B	E 233RD ST	BRONX RIVER		WO		1	S	2/22/2012	4.233	F	7,000	\$28,000,000	212		
2242460	B	E 233RD ST	ENTR RD BNX RVR PKWY		O		1	S	1/10/2012	4.867	F	5,300	\$21,200,000	212		
2229540	B	VAN CRTLDT PARK	HHP		A-PED	P	2	C	8/8/2012	4.759	F	3,900	\$15,600,000	226		
2229550	B	VAN CRTLDT EQUES	HHP		A-PED	P	2	C	8/8/2012	4.556	F	2,100	\$8,400,000	226		
2230290	B	MOSHOLU PARKWAY	EQUESTRIAN PATH		A		1	S	1/20/2012	4.310	F	4,300	\$17,200,000	226		
2230300	B	MOSHOLU PARKWAY	CONRAIL (ABANDONED)	C	A		1	S	8/31/2012	4.271	F	4,600	\$18,400,000	226		
2230310	B	MOSHOLU PARKWAY	SB RAMP TO HHP		A		2	S	9/26/2011	4.919	F	7,400	\$29,600,000	226		
2065629	B	BRONX RIVER PKWY	BOSTON RD BX ZOO		A		1	S	8/22/2011	5.276	G	6,300	\$25,200,000	227		
2230250	B	MOSHOLU PARKWAY	BRONX RIVER		WA		5	S	1/12/2012	4.211	F	16,300	\$65,200,000	227		
2230260	B	MOSHOLU PARKWAY	METRO NORTH	M	A		1	S	4/21/2012	5.516	G	8,880	\$35,520,000	227	207	
2241259	B	204TH ST PED BRDG	METRO NORTH RR HAR	M	O-PED	P	1	C	2/2/2012	3.948	F	4,700	\$18,800,000	227	207	
2241840	B	BEDFORD PARK BLVD	METRO NORTH RR HAR	M	O		1	S	4/20/2012	4.844	F	6,400	\$25,600,000	227	207	
2242010	B	EAST FORDHAM RD	BRONX RIVER		WA		1	S	3/5/2012	5.207	G	9,200	\$36,800,000	227		
2242029	B	SOUTHERN BLVD	EAST FORDHAM ROAD		O		2	S	1/18/2012	4.605	F	12,900	\$51,600,000	227		
2242100	B	BOTANICAL GARDEN ROAD	TWIN LAKES		WO	P	1	S	3/1/2012	4.833	F	2,200	\$8,800,000	227		
2242110	B	BOSTON ROAD	BRONX RIVER		WO		1	S	3/2/2012	4.227	F	6,200	\$24,800,000	227		
2242120	B	FTBG N OF RTE 1	BRONX RIVER		WO-PED	P	1	C	7/13/2012	3.583	F	1,900	\$7,600,000	227		
2242210	B	MAGNOLIA WAY	BRONX RIVER		WO		3	S	5/31/2012	4.763	F	6,200	\$24,800,000	227		
2242220	B	SNUFF MILL ROAD	BRONX RIVER		WO		2	S	1/13/2012	4.395	F	4,800	\$19,200,000	227		
2240200	B	SHORE ROAD	HUTCHINSON RIVER		WMO		7	S	6/15/2012	4.537	F	43,576	\$174,304,000	228		
2240210	B	CITY ISLAND ROAD	EASTCHESTER BAY		WO		7	S	10/19/2012	3.389	F	19,915	\$79,660,000	228		
2241380	B	PELHAM BAY PK EQUES	AMTRAK - CSX	AC	O-PED	P	1	C	1/7/2012	3.775	F	4,223	\$16,892,000	228		
2241390	B	SHORE RD CIRCLE	AMTRAK - CSX	AC	O		1	S	7/3/2012	7.000	VG	8,067	\$32,268,000	228		
1240090	BM	MACCOMBS DAM BRIDGE	HARLEM RIVER	M	WMO		52	S	11/30/2011	3.930	F	220,000	\$880,000,000	110	204	
2240089	BM	145TH ST BRIDGE	HARLEM RIVER		WMO		8	S	9/23/2011	6.250	VG	56,700	\$226,800,000	110	204	201
2240059	BM	WILLIS AVENUE	HARLEM RIVER		WMO		15	S	12/17/2012	6.833	VG	171,105	\$684,420,000	111	201	
2240069	BM	THIRD AVE BRIDGE	HARLEM RIVER		WMO		14	S	9/20/2012	5.845	G	100,232	\$400,928,000	111	201	
2240079	BM	MADISON AVE BRIDGE	HARLEM RIVER		WMO		21	S	9/20/2012	4.944	F	80,000	\$320,000,000	111	201	
2066919	BM	WASHINGTON BRIDGE	HARLEM RIVER	M	WO		9	S	11/29/2012	4.642	F	128,339	\$513,356,000	112	205	204
2240120	BM	W 207TH/W FORDHAM RD	HARLEM RIVER		WMO		5	S	9/5/2012	5.056	G	31,784	\$127,136,000	112	207	
2240137	BM	BROADWAY BRIDGE	HARLEM RIVER	TM	WMO		3	S	12/7/2012	3.806	F	46,848	\$187,392,000	112	207	208

# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2240138	BM	NYCTA IRT	HARLEM RVR/BROADWAY	TM	WMO		3	S	11/21/2011	4.720	F	19,520	\$78,080,000	112	207	208
2246580	BM	HIGH BRIDGE PDOVP	I87 - HARLEM RIVER	M	WA-PED	P	11	P	8/12/2002	3.759	F	34,100	\$136,400,000	112	204	
2240290	K	METROPOLITAN AVE	ENGLISH KILLS		WMO		5	S	6/28/2011	6.000	G	10,550	\$42,200,000	301		
2230410	K	278I EB (B.Q.E.)	WASHINGTON ST		A		1	S	6/25/2012	4.500	F	2,500	\$10,000,000	302		
2230420	K	278I WB (B.Q.E.)	WASHINGTON ST		A		1	S	6/25/2012	5.047	G	2,500	\$10,000,000	302		
2230430	K	278I (B.Q.E.) RAMP TO BKLN BRDG	PROSPECT ST		A		1	S	1/5/2012	5.000	G	1,100	\$4,400,000	302		
2230440	K	278I WB (B.Q.E.)	ADAMS ST		A		1	S	1/10/2012	5.167	G	2,700	\$10,800,000	302		
2230450	K	278I EB (B.Q.E.)	ADAMS ST		A		1	S	1/10/2012	4.933	F	2,500	\$10,000,000	302		
2230460	K	278I (B.Q.E.)	PEARL ST		A		1	S	2/2/2012	5.467	G	4,500	\$18,000,000	302		
2230470	K	278I (B.Q.E.)	JAY ST		A		1	S	2/3/2012	4.833	F	5,100	\$20,400,000	302		
2230480	K	278I (B.Q.E.)	PROSPECT ST		A		1	S	2/13/2012	5.056	G	8,400	\$33,600,000	302		
2230490	K	278I (B.Q.E.)	SANDS ST		A		1	S	2/22/2012	5.093	G	12,600	\$50,400,000	302		
2230500	K	278I (B.Q.E.)	RAMP TO BQE EB		A		1	S	2/21/2012	4.967	F	1,300	\$5,200,000	302		
2230510	K	278I (B.Q.E.)	NASSAU ST		A		6	S	6/11/2012	5.169	G	51,200	\$204,800,000	302		
2230857	K	278I WB (B.Q.E.)	JORALEMON ST		A		1	S	3/5/2012	5.000	G	2,100	\$8,400,000	302		
2230858	K	278I EB (B.Q.E.)	JORALEMON ST / BQE WB		A		1	S	10/9/2011	4.619	F	5,900	\$23,600,000	302		
2230870	K	COLUMBIA HEIGHTS	278I (B.Q.E.)		A		1	S	7/9/2012	4.383	F	16,500	\$66,000,000	302		
2230887	K	278I W.B. (B.Q.E.)	CADMAN PLAZA		A		2	S	6/29/2012	4.569	F	4,500	\$18,000,000	302		
2230888	K	278I E.B. (B.Q.E.)	CADMAN PLAZA / 278I WB		A		2	S	6/29/2012	5.263	G	4,500	\$18,000,000	302		
2243280	K	6TH AVE	LIRR ATLANTIC AVE	L	O		9	S	9/13/2012	5.431	G	12,276	\$49,104,000	302		
2243290	K	CARLTON AVE	LIRR ATLANTIC AVE	L	O		7	S	3/7/2012	5.069	G	10,823	\$43,292,000	302		
2244440	K	SOUTH OF TILLARY ST	NAVY ST		O-PED		1	C	8/7/2012	3.958	F	6,200	\$24,800,000	302		
2267860	K	BROOKLYN BR APPROACH	STORAGE (SANDS ST)		O		1	S	7/19/2012	4.411	F	6,490	\$25,960,000	302		
2268350	K	BROOKLYN PROMENADE	278I EB (BQE)		A-PED	P	35	C	5/31/2012	3.690	F	46,184	\$184,736,000	302		
2268497	K	278I W.B. (B.Q.E.)	FURMAN ST		A		45	S	8/6/2011	4.357	F	86,406	\$345,624,000	302		
2268498	K	278I E.B. (B.Q.E.)	278I WB (BQE)		A		69	S	11/13/2011	3.965	F	133,708	\$534,832,000	302		
2268507	K	278I W.B. (B.Q.E.)	YORK ST		A		6	S	6/8/2011	4.071	F	10,388	\$41,552,000	302		
2268508	K	278I E.B. (B.Q.E.)	278I W.B. (B.Q.E.)		A		11	S	6/5/2011	4.103	F	20,529	\$82,116,000	302		
2268517	K	278I W.B. (B.Q.E.)	FURMAN ST		A		7	S	6/28/2011	3.882	F	10,988	\$43,952,000	302		
2268518	K	278I E.B. (B.Q.E.)	278I W.B. (B.Q.E.)		A		5	S	6/9/2011	4.119	F	9,275	\$37,100,000	302		
2230000	K	HIGHLAND BLVD E.B.	JACKIE ROBINSON PKWY		A		1	S	3/14/2012	4.724	F	4,900	\$19,600,000	305		
2230010	K	HIGHLAND BLVD W.B.	JACKIE ROBINSON PKWY		A		1	S	3/14/2012	4.767	F	3,500	\$14,000,000	305		
2230020	K	HIGHLAND BLVD W.B.	JACKIE ROBINSON PKWY		A		2	S	3/14/2012	4.974	F	4,700	\$18,800,000	305		
2230220	K	HIGHLAND BLVD NB	VERMONT AVE		A		1	S	5/18/2011	5.857	G	3,995	\$15,980,000	305		
2244170	K	ATLNTC AV SVC RD E.B.	EAST NEW YORK AVE		O		2	S	7/20/2011	5.474	G	3,192	\$12,768,000	305		
2244180	K	ATLNTC AV SVC RD W.B.	EAST NEW YORK AVE		O		2	S	7/20/2011	4.965	F	5,600	\$22,400,000	305		
2244460	K	CONDUIT BLVD NB	ATLANTIC AVE EB		O		1	S	10/8/2012	4.833	F	3,800	\$15,200,000	305		
2269600	K	ERSKINE ST	BSHP		A		1	S	8/20/2012	5.938	G	8,258	\$33,032,000	305		
2230350	K	SUMMIT ST PED BRDG	278I (B.Q.E.)		A-PED		2	S	3/19/2012	4.614	F	1,400	\$5,600,000	306		
2230360	K	UNION ST	278I (B.Q.E.)		A		2	S	3/19/2012	4.375	F	5,000	\$20,000,000	306		

# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2230370	K	SACKETT ST	278I (B.Q.E.)		A		2	S	3/14/2012	4.500	F	5,000	\$20,000,000	306		
2230380	K	KANE ST	278I (B.Q.E.)		A		2	S	3/26/2012	4.208	F	5,000	\$20,000,000	306		
2230390	K	CONGRESS ST	278I (B.Q.E.)		A		2	S	3/26/2012	6.029	VG	5,000	\$20,000,000	306		
2240232	K	HAMILTON AVE BRIDGE	GOWANUS CANAL		WMO		3	S	9/7/2011	5.306	G	7,300	\$29,200,000	306		
2240240	K	NINTH ST BRIDGE	GOWANUS CANAL		WMO		3	S	5/27/2011	6.581	VG	5,772	\$23,088,000	306		
2240250	K	THIRD ST	GOWANUS CANAL		WMO		5	S	5/19/2011	4.903	F	4,900	\$19,600,000	306		
2240260	K	CARROLL ST	GOWANUS CANAL		WMO		2	S	7/6/2012	4.634	F	3,000	\$12,000,000	306		
2240270	K	UNION ST	GOWANUS CANAL		WMO		5	S	8/10/2012	4.000	F	4,900	\$19,600,000	306		
2240310	K	THIRD AVE	GOWANUS CANAL		WO		1	S	5/18/2011	6.900	VG	3,200	\$12,800,000	306		
2066100	K	5TH AVE	27 X PROSPECT EXPWY		A		1	S	5/18/2012	5.063	G	8,800	\$35,200,000	307		
2240231	K	HAMILTON AVE BRIDGE	GOWANUS CANAL		WMO		3	S	9/13/2012	5.472	G	7,300	\$29,200,000	307	306	
2243839	K	4TH AVE	NYCTA BMT TRACKS	T	O		1	S	8/24/2011	6.300	VG	4,440	\$17,760,000	307		
2243920	K	7TH AVE	NYCTA BMT YARD	T	O		2	S	9/10/2012	6.042	VG	4,700	\$18,800,000	307		
2244470	K	SEELEY ST	PROSPECT AVE		O		1	S	5/4/2012	4.033	F	8,482	\$33,928,000	307		
2244480	K	5TH AVE	GREENWOOD CEMETERY		O		1	S	9/8/2011	4.667	F	3,600	\$14,400,000	307		
2243170	K	STERLING PLACE	FRANKLIN SHUTTLE	T	O		1	S	8/24/2011	6.500	VG	2,300	\$9,200,000	308		
2243180	K	ST JOHNS PLACE	FRANKLIN SHUTTLE	T	O		1	S	8/24/2011	6.781	VG	2,300	\$9,200,000	308		
2243190	K	LINCOLN PLACE	FRANKLIN SHUTTLE	T	O		1	S	9/6/2012	6.797	VG	2,460	\$9,840,000	308		
2243200	K	UNION ST	FRANKLIN SHUTTLE	T	O		2	S	9/5/2012	5.000	G	4,100	\$16,400,000	309		
2243210	K	PRESIDENT ST	FRANKLIN SHUTTLE	T	O		2	S	9/5/2012	5.157	G	2,500	\$10,000,000	309		
2243220	K	CARROLL ST PED BRDG	FRANKLIN SHUTTLE	T	O-PED		3	C	12/17/2012	5.099	G	600	\$2,400,000	309		
2243230	K	CROWN ST	FRANKLIN SHUTTLE	T	O		3	S	10/11/2011	5.097	G	4,060	\$16,240,000	309		
2243240	K	MONTGOMERY ST	FRANKLIN SHUTTLE	T	O		1	S	8/11/2011	5.961	G	2,240	\$8,960,000	309		
2243250	K	WASHINGTON AVE	FRANKLIN SHUTTLE	T	O		1	S	9/4/2012	6.000	G	3,657	\$14,628,000	309	355	
2243260	K	FLATBUSH AVE	FRANKLIN SHUTTLE	T	O		2	S	7/23/2012	4.922	F	11,300	\$45,200,000	309		
2243279	K	EASTERN PKWY	FRANKLIN SHUTTLE	T	O		1	S	9/6/2012	4.861	F	7,700	\$30,800,000	309	308	
2231249	K	BSHP	BAY RIDGE AVE		A		1	S	3/26/2012	3.625	F	4,900	\$19,600,000	310		
2231250	K	81ST ST PED BRDG	BSHP		A-PED	P	5	C	3/23/2012	4.761	F	3,100	\$12,400,000	310		
2231260	K	92ND ST PED BRDG	BSHP		A-PED	P	6	C	9/18/2012	3.475	F	3,000	\$12,000,000	310		
2231270	K	4TH AVE	BSHP		A		2	S	3/16/2012	4.579	F	6,100	\$24,400,000	310		
2243310	K	2ND AVE	LIRR BAY RIDGE	N	O		2	S	10/2/2012	6.236	VG	17,751	\$71,004,000	310		
2243320	K	3RD AVE	LIRR BAY RIDGE	N	O		4	S	9/14/2011	5.083	G	17,230	\$68,920,000	310		
2243330	K	4TH AVE	LIRR BAY RIDGE	NT	O		4	S	8/30/2011	5.653	G	13,668	\$54,672,000	310		
2243580	K	5TH AVE	LIRR & SEA BEACH	NT	O		4	S	11/12/2012	3.941	F	12,395	\$49,580,000	310		
2243590	K	6TH AVE	LIRR & SEA BEACH	NT	O		2	S	9/30/2011	6.306	VG	14,382	\$57,528,000	310		
2243600	K	7TH AVE	LIRR & SEA BEACH	NT	O		7	S	11/12/2012	4.778	F	18,628	\$74,512,000	310		
2243610	K	8TH AVE	LIRR & SEA BEACH	NT	O		2	S	9/30/2011	6.181	VG	10,834	\$43,336,000	310		
2243620	K	FORT HAMILTON PKWY	LIRR & SEA BEACH	NT	O		3	S	9/19/2012	4.729	F	14,800	\$59,200,000	310		
2243630	K	11TH AVE	LIRR & SEA BEACH	NT	O		5	S	11/13/2012	5.985	G	9,700	\$38,800,000	310		
2243640	K	13TH AVE	LIRR & SEA BEACH	NT	O		5	S	9/23/2011	4.694	F	16,000	\$64,000,000	310		



# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2244150	K	RIDGE BLVD	SHORE RD DRIVE		O		1	S	5/24/2011	6.667	VG	4,350	\$17,400,000	310		
2244160	K	3RD AVE	SHORE RD DRIVE		O		1	S	5/24/2011	6.727	VG	4,360	\$17,440,000	310		
2231290	K	BAY 8TH ST	BSHP		A		1	S	5/14/2011	5.952	G	4,950	\$19,800,000	311		
2231300	K	17TH AVE PED BRDG	BSHP		A-PED	P	1	C	8/22/2012	3.614	F	2,100	\$8,400,000	311		
2231319	K	BSHP	BAY PKWY		A		1	S	6/2/2012	4.267	F	7,200	\$28,800,000	311		
2243340	K	15TH AVE	LIRR BAY RIDGE	N	O		1	S	11/14/2012	4.872	F	3,614	\$14,456,000	311		
2243350	K	60TH ST	LIRR BAY RIDGE	N	O		1	S	8/31/2011	6.133	VG	3,900	\$15,600,000	311		
2243360	K	16TH AVE	LIRR BAY RIDGE	N	O		1	S	10/4/2012	5.350	G	4,345	\$17,380,000	311		
2243650	K	14TH AVE	LIRR BAY RIDGE	N	O		1	S	11/13/2012	6.333	VG	4,720	\$18,880,000	311		
2243660	K	NEW UTRECHT AVE	LIRR BAY RIDGE	N	O		1	S	11/13/2012	6.083	VG	2,350	\$9,400,000	311		
2243670	K	15TH AVE	BMT SEA BEACH	T	O		4	S	6/26/2011	6.386	VG	16,020	\$64,080,000	311		
2243680	K	16TH AVE	BMT SEA BEACH	T	O		3	S	8/30/2012	5.296	G	6,816	\$27,264,000	311		
2243690	K	17TH AVE	BMT SEA BEACH	T	O		4	S	8/30/2012	6.173	VG	8,946	\$35,784,000	311		
2243700	K	18TH AVE	BMT SEA BEACH	T	O		1	S	8/25/2011	6.632	VG	5,200	\$20,800,000	311		
2243710	K	19TH AVE	BMT SEA BEACH	T	O		4	S	8/29/2012	4.184	F	4,800	\$19,200,000	311		
2243720	K	20TH AVE	BMT SEA BEACH	T	O		1	S	8/31/2012	6.673	VG	7,000	\$28,000,000	311		
2243730	K	65TH ST	BMT SEA BEACH	T	O		4	S	8/28/2012	5.132	G	12,000	\$48,000,000	311		
2243740	K	BAY PKWY	BMT SEA BEACH	T	O		4	S	8/28/2012	4.553	F	16,800	\$67,200,000	311		
2243750	K	AVENUE O	BMT SEA BEACH	T	O		1	S	9/1/2011	5.706	G	4,658	\$18,632,000	311		
2243760	K	AVENUE P	BMT SEA BEACH	T	O		1	S	8/31/2011	5.674	G	5,544	\$22,176,000	311		
2243770	K	KINGS HIGHWAY	BMT SEA BEACH	T	O		1	S	9/13/2011	6.767	VG	5,032	\$20,128,000	311		
2243780	K	HIGHLAWN AVE	BMT SEA BEACH	T	O		1	S	9/13/2011	6.400	VG	6,960	\$27,840,000	311		
2243800	K	AVENUE T	BMT SEA BEACH	T	O		1	S	9/15/2011	6.033	VG	5,360	\$21,440,000	311		
2243820	K	21ST AVE	BMT SEA BEACH	T	O		4	S	9/7/2012	3.974	F	21,400	\$85,600,000	311		
2243370	K	17TH AVE	LIRR BAY RIDGE	N	O		1	S	10/5/2012	4.745	F	3,406	\$13,624,000	312		
2243380	K	18TH AVE	LIRR BAY RIDGE	N	O		1	S	9/28/2012	4.688	F	6,006	\$24,024,000	312		
2243390	K	52ND ST	LIRR BAY RIDGE	N	O		1	S	9/28/2012	6.250	VG	3,293	\$13,172,000	312		
2243400	K	50TH ST	LIRR BAY RIDGE	N	O		2	S	9/1/2011	4.731	F	7,100	\$28,400,000	312		
2243410	K	MCDONALD AVE	LIRR BAY RIDGE	N	O		1	S	9/27/2012	5.047	G	2,760	\$11,040,000	312		
2243420	K	E 3RD ST	LIRR BAY RIDGE	N	O		1	S	9/1/2011	6.517	VG	1,840	\$7,360,000	312		
2243439	K	OCEAN PKWY	LIRR BAY RIDGE	N	O		1	S	9/27/2012	4.927	F	7,000	\$28,000,000	312		
2243440	K	CONEY ISLAND AVE	LIRR BAY RIDGE	N	O		1	S	9/26/2012	5.106	G	3,231	\$12,924,000	312		
2243840	K	9TH AVE	NYCTA BMT YARD	T	O		5	S	8/19/2011	5.736	G	12,440	\$49,760,000	312		
2243940	K	9TH AVE	NYCTA IND SBWY	T	O		5	S	8/19/2011	4.737	F	6,300	\$25,200,000	312		
2231329	K	BSHP	26TH AVE		A		1	S	4/20/2012	4.600	F	6,700	\$26,800,000	313		
2231330	K	27TH AVE PED BRDG	BSHP		A-PED	P	1	C	1/20/2012	4.106	F	2,100	\$8,400,000	313		
2231340	K	CROPSEY AVE	BSHP		A		2	S	6/13/2012	4.722	F	13,100	\$52,400,000	313		
2231360	K	BSHP	OCEAN PKWY		A		3	S	6/25/2012	6.299	VG	29,637	\$118,548,000	313		
2231370	K	GUIDER AV RAMP TO BSHP	BSHP		A		4	S	9/14/2012	6.944	VG	10,548	\$42,192,000	313		
2231380	K	CONEY ISLAND AVE	BSHP		A		4	S	9/20/2011	5.986	G	19,866	\$79,464,000	313		

# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2240301	K	CROPSEY AVE	CONEY ISLAND CREEK		WO		3	S	6/10/2011	5.225	G	9,400	\$37,600,000	313		
2240302	K	CROPSEY AVE	CONEY ISLAND CREEK		WO		3	S	10/2/2012	4.718	F	9,400	\$37,600,000	313		
2240540	K	STILLWELL AVE	CONEY ISLAND CRK		WO		2	S	5/27/2011	6.292	VG	17,000	\$68,000,000	313		
2243570	K	86TH ST	BMT SEA BEACH	T	O		1	S	8/27/2012	5.953	G	12,167	\$48,668,000	313		
2269260	K	W. 8TH ST PED BRDG	SURF AVE.		O-PED	P	39	C	3/22/2012	3.629	F	14,742	\$58,968,000	313		
2243020	K	PARKSIDE AVE	BMT SUBWAY, BRIGHTON	T	O		6	S	9/14/2012	3.826	F	48,700	\$194,800,000	314		
2243040	K	CROOKE AVE	BMT SUBWAY, BRIGHTON	T	O		4	S	10/8/2012	4.211	F	6,000	\$24,000,000	314		
2243050	K	CATON AVE	BMT SUBWAY, BRIGHTON	T	O		4	S	8/10/2011	4.500	F	20,800	\$83,200,000	314		
2243080	K	CHURCH AVE	BMT SUBWAY, BRIGHTON	T	O		4	S	8/10/2011	4.545	F	18,200	\$72,800,000	314		
2243100	K	BEVERLY ROAD	BMT SUBWAY, BRIGHTON	T	O		3	S	7/27/2012	3.982	F	4,200	\$16,800,000	314		
2243110	K	CORTEYOU ROAD	BMT SUBWAY, BRIGHTON	T	O		3	S	8/25/2011	6.139	VG	4,810	\$19,240,000	314		
2243120	K	DORCHESTER ROAD	BMT SUBWAY, BRIGHTON	T	O		1	S	12/3/2012	5.863	G	4,825	\$19,300,000	314		
2243130	K	DITMAS AVE	BMT SUBWAY, BRIGHTON	T	O		1	S	10/4/2011	5.723	G	5,150	\$20,600,000	314		
2243140	K	NEWKIRK AVE	BMT SUBWAY, BRIGHTON	T	O		3	S	9/14/2012	4.662	F	4,100	\$16,400,000	314		
2243150	K	FOSTER AVE	BMT SUBWAY, BRIGHTON	T	O		1	S	7/25/2012	4.383	F	3,000	\$12,000,000	314		
2243450	K	E 14TH ST	LIRR BAY RIDGE	N	O		1	S	9/26/2012	4.809	F	1,775	\$7,100,000	314		
2243460	K	E 15TH ST PED BRDG	LIRR BAY RIDGE	N	O-PED		3	C	3/8/2012	5.592	G	900	\$3,600,000	314		
2243480	K	OCEAN AVE	LIRR BAY RIDGE	N	O		2	S	9/25/2012	4.825	F	5,000	\$20,000,000	314		
2243490	K	BEDFORD AVE	LIRR BAY RIDGE	N	O		6	S	9/24/2012	4.319	F	12,000	\$48,000,000	314		
2243500	K	NOSTRAND AVE	LIRR BAY RIDGE	N	O		2	S	9/26/2012	4.831	F	4,320	\$17,280,000	314		
2231390	K	E 12TH ST	BSHP		A		4	S	6/13/2012	4.542	F	17,200	\$68,800,000	315		
2231409	K	BSHP	SHEEPSHEAD BAY ROAD		A		1	S	4/12/2012	4.672	F	6,500	\$26,000,000	315		
2231419	K	BSHP	OCEAN AVE		A		3	S	4/12/2012	4.500	F	14,000	\$56,000,000	315		
2231429	K	BSHP	BEDFORD AVE		A		3	S	4/20/2012	4.042	F	12,000	\$48,000,000	315		
2231439	K	BSHP	NOSTRAND AVE		A		3	S	4/20/2012	3.986	F	13,000	\$52,000,000	315		
2231449	K	KNAPP ST	BSHP		A		1	S	4/20/2012	4.406	F	9,500	\$38,000,000	315		
2233080	K	E 14 ST PED BRDG	BSHP		A-PED		14	C	7/16/2012	3.836	F	4,700	\$18,800,000	315		
2240320	K	OCEAN AVE PED BRDG	SHEEPSHEAD BAY		WO-PED		30	C	9/15/2011	4.571	F	4,450	\$17,800,000	315		
2243790	K	AVENUE S	BMT SEA BEACH	T	O		1	S	9/15/2011	5.967	G	5,360	\$21,440,000	315		
2243810	K	AVENUE U	BMT SEA BEACH	T	O		1	S	9/11/2012	5.294	G	5,880	\$23,520,000	315		
2243569	K	ATLANTIC AVE	LIRR ATLANTIC AVE	L	O		75	S	5/25/2012	3.676	F	135,100	\$540,400,000	316	305	
2243850	K	LIBERTY AVE	LIRR BAY RIDGE	N	O		3	S	9/25/2012	6.294	VG	6,659	\$26,636,000	316		
2243860	K	GLENMORE AVE	LIRR BAY RIDGE	N	O		2	S	9/25/2012	6.559	VG	5,616	\$22,464,000	316		
2243870	K	PITKIN AVE	LIRR BAY RIDGE	N	O		2	S	9/25/2012	6.515	VG	5,328	\$21,312,000	316		
2243890	K	SUTTER AVE	LIRR BAY RIDGE	N	O		3	S	9/25/2012	6.542	VG	5,497	\$21,988,000	316		
2243900	K	BLAKE AVE	LIRR BAY RIDGE LINE	N	O		3	S	9/25/2012	5.000	G	4,912	\$19,648,000	316		
2243910	K	LIVONIA AVE PED BRDG	LIRR BAY RIDGE LINE	N	O-PED		6	C	4/16/2012	4.833	F	2,500	\$10,000,000	316		
2231479	K	BSHP	MILL BASIN		WMA		14	S	10/10/2012	3.179	F	73,500	\$294,000,000	318		
2231489	K	BSHP	PAERDEGAT BASIN		WA		15	S	11/28/2012	3.340	F	58,300	\$233,200,000	318		
2243510	K	FLATBUSH AVE	LIRR BAY RIDGE	N	O		2	S	10/5/2012	4.730	F	5,900	\$23,600,000	318		

# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2243520	K	BROOKLYN AVE	LIRR BAY RIDGE	N	O		3	S	9/9/2011	6.236	VG	4,500	\$18,000,000	318		
2243530	K	AVENUE H	LIRR BAY RIDGE	N	O		2	S	9/9/2011	5.956	G	35,100	\$140,400,000	318		
2243010	K	LINCOLN ROAD	BMT SUBWAY, BRIGHTON	T	O		1	S	7/24/2012	6.685	VG	6,016	\$24,064,000	355		
2244010	K	EAST DR (ENDALE ARCH)	PED PATH NR GRND ARMY PLZ		O	P	1	C	5/15/2012	4.833	F	1,533	\$6,132,000	355		
2244020	K	WEST DR (MEADOWPORT ARCH)	PED PATH NR GRND ARMY PLZ		O	P	1	S	4/26/2011	5.321	G	2,500	\$10,000,000	355		
2244030	K	EAST DRIVE	BRIDLE PATH NR ZOO		O	P	1	S	4/27/2011	4.878	F	2,000	\$8,000,000	355		
2244040	K	EAST DR (EAST WOOD ARCH)	PED PATH NR CENTER DR		O	P	1	C	6/27/2012	4.067	F	1,066	\$4,262,400	355		
2244050	K	CENTER DR (NETHERMEAD ARCHES)	PED PATH & STREAM		WO	P	3	S	5/9/2011	5.000	G	7,400	\$29,600,000	355		
2244060	K	HILL DR (CLEFT RIDGE SPAN)	PED PATH SO OF BOATHOUSE		O	P	1	C	5/2/2012	4.433	F	750	\$3,000,000	355		
2244100	K	WEST FOOTBRIDGE	PROSPECT PK STREAM		WO-PED	P	1	C	12/19/2011	4.875	F	3,200	\$12,800,000	355		
2244120	K	HILL DR (TERRACE BRDG)	PROSPECT PK LAKE		WO	P	3	S	8/22/2012	3.364	F	7,800	\$31,200,000	355		
2244130	K	PED NR BOATHSE (LULLWATER BRDG)	PROSPECT PK LAKE		WO-PED	P	1	C	9/16/2011	4.898	F	1,000	\$4,000,000	355		
2231450	K	BSHP	GERRITSEN INLET		WA		11	S	7/24/2012	3.463	F	52,000	\$208,000,000	356		
2231460	K	FLATBUSH AVE	BSHP		A		2	S	9/22/2011	6.250	VG	14,058	\$56,232,000	356		
2231499	K	BSHP	ROCKAWAY PKWY		A		4	S	10/27/2012	6.644	VG	11,500	\$46,000,000	356		
2231509	K	BSHP	FRESH CREEK		WA		5	S	10/21/2012	6.915	VG	23,000	\$92,000,000	356		
2231519	K	PENNSYLVANIA AVE	BSHP		A		2	S	5/20/2011	5.694	G	6,640	\$26,560,000	356		
2240019	KM	BROOKLYN BRIDGE	EAST RIVER		WEO		75	S	11/12/2012	2.944	P	503,788	\$2,015,152,000	103	302	101
2240027	KM	MANHATTAN BRIDGE(LL)	EAST RIVER	T	WEO		23	S	11/19/2012	4.653	F	616,390	\$2,465,560,000	103	302	
2240028	KM	MANHATTAN BRIDGE(UL)	NYCTA TRACKS-BMT	T	WEO		43	S	11/19/2012	3.757	F	587,424	\$2,349,696,000	103	302	
2240039	KM	WILLIAMSBURG BRIDGE	EAST RIVER	T	WEO		53	S	10/27/2012	4.431	F	824,000	\$3,296,000,000	103	301	
2240370	KQ	GREENPOINT AVE BRIDGE	NEWTOWN CREEK	L	WMO		12	S	7/8/2011	5.222	G	76,106	\$304,424,000	301	402	
2240390	KQ	GRAND ST BRIDGE	NEWTOWN CREEK		WMO		2	S	10/7/2012	4.042	F	5,100	\$20,400,000	301	405	
2240639	KQ	PULASKI BRIDGE	NEWTOWN CREEK		WMO		44	S	5/11/2012	4.662	F	205,770	\$823,080,000	301	402	
2232000	M	BATTERY PLACE	FDR DRIVE		AT		2	S	12/21/2011	5.318	G	142,000	\$568,000,000	101		
223201A	M	FDR DR N.B. OFF RMP	FDR DR & SOUTH ST		AR		17	S	4/24/2012	3.925	F	23,373	\$93,492,000	101		
223201B	M	STH ST RMP TO FDR S.B.	SOUTH ST		AR		10	S	2/17/2012	3.791	F	13,388	\$53,552,000	101		
223201D	M	RAMP TO N.B. FDR DRIVE	FDR & SOUTH ST.		AR		22	S	2/10/2012	4.967	F	15,825	\$63,300,000	101	103	
224001A	M	PARK ROW TO BKLN	WILLIAM ST N.B.		OE		4	S	4/24/2012	4.500	F	10,167	\$40,668,000	101		
224001B	M	TO BKLN FRM FDR	FRANKFORT & PEARL ST		OE		31	S	8/20/2012	4.333	F	51,400	\$205,600,000	101	103	
224001C	M	PEARL ST TO BKLN	LAND ADJ TO BRDG		OE		9	S	3/14/2012	3.814	F	6,365	\$25,460,000	101		
224001D	M	TO FDR DR N.B.	PEARL STREET		OE		30	S	7/15/2011	4.868	F	49,600	\$198,400,000	101	103	
224001E	M	TO PEARL ST	LAND ADJ TO BRDG		OE		3	S	6/28/2011	5.141	G	5,300	\$21,200,000	101		
224001G	M	TO PARK ROW	ROSE ST		OE		11	S	3/27/2012	4.408	F	16,551	\$66,204,000	101		
2267380	M	WEST STREET	RECTOR ST		AT		1	S	11/15/2011	5.033	G	25,760	\$103,040,000	101		
2268480	M	CHAMBERS ST PED BRDG	RTE 9A - WEST ST		O-PED		10	C	5/24/2012	5.167	G	7,481	\$29,924,000	101		
2268930	M	MORRIS ST PED BRDG	BKLN-BATTERY TUNN PLZ		A-PED		3	C	6/4/2012	3.764	F	1,200	\$4,800,000	101		
223201C	M	FDR DR S.B. OFF RMP	SOUTH ST		AR		8	S	2/9/2012	4.821	F	36,700	\$146,800,000	103		
2232029	M	CORLEARS PARK ROAD	FDR DRIVE		A	P	4	S	3/28/2012	3.938	F	4,100	\$16,400,000	103		
2232030	M	DELANCEY ST PED BRDG	FDR DRIVE		A-PED	P	12	C	5/2/2012	4.443	F	2,900	\$11,600,000	103		

# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2232040	M	HOUSTON ST	FDR DRIVE		A		2	S	4/30/2012	3.773	F	11,010	\$44,040,000	103		
223204A	M	FDR NB RAMP TO HOUSTON ST	RELIEF		AR		4	S	1/20/2012	4.706	F	6,150	\$24,600,000	103		
223204B	M	HOUSTON ST RAMP TO FDR NB	RELIEF		AR		4	S	1/23/2012	4.792	F	7,125	\$28,500,000	103		
2232050	M	E 6TH ST PED BRDG	FDR DRIVE		A-PED	P	19	C	3/22/2012	4.233	F	2,200	\$8,800,000	103		
2233020	M	E 10TH ST PED BRDG	FDR DRIVE		A-PED	P	21	C	3/20/2012	4.193	F	2,754	\$11,016,000	103		
224001F	M	PEARL ST TO FDR DR	LAND ADJ TO BRDG		OE		3	S	4/2/2012	5.282	G	5,200	\$20,800,000	103		
2245010	M	11TH AVE VIADUCT	LIRR WEST SIDE YARD	AL	O		39	S	12/28/2012	4.056	F	157,500	\$630,000,000	104		
224501B	M	W 33RD ST	AMTRAK 30 ST BRANCH	A	O		8	S	3/13/2012	4.458	F	16,500	\$66,000,000	104		
224501C	M	W 33RD ST	LAND ADJ TO AMTRAK	A	O		2	S	6/14/2011	4.472	F	2,360	\$9,440,000	104		
224501D	M	W 34TH ST	AMTRAK 30 ST BRANCH	A	O		4	S	6/6/2011	4.597	F	11,800	\$47,200,000	104		
224501E	M	W 35TH ST	AMTRAK 30 ST BRANCH	A	O		3	S	11/16/2012	4.181	F	6,500	\$26,000,000	104		
224501F	M	W 36TH ST	AMTRAK 30 ST BRANCH	A	O		7	S	11/16/2012	3.985	F	16,400	\$65,600,000	104		
2245060	M	W 37TH ST	AMTRAK 30 ST BRANCH	A	O		3	S	12/8/2011	6.190	VG	7,505	\$30,020,000	104		
2245070	M	W 38TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	6/15/2012	4.135	F	6,200	\$24,800,000	104		
2245080	M	W 39TH ST	AMTRAK 30 ST BRANCH	A	O		3	S	6/15/2012	4.173	F	6,300	\$25,200,000	104		
2245090	M	W 43RD ST	AMTRAK 30 ST BRANCH	A	O		2	S	4/16/2012	4.662	F	4,140	\$16,560,000	104		
2245100	M	W 44TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	4/16/2012	4.662	F	4,300	\$17,200,000	104		
2245110	M	W 45TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	4/16/2012	5.397	G	4,100	\$16,400,000	104		
2245120	M	W 46TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/4/2012	4.500	F	4,100	\$16,400,000	104		
2245130	M	W 47TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/4/2012	4.721	F	4,100	\$16,400,000	104		
2245140	M	W 48TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/7/2012	4.618	F	4,100	\$16,400,000	104		
2245150	M	W 49TH ST	AMTRAK 30 ST BRANCH	A	O		3	S	5/7/2012	4.426	F	4,100	\$16,400,000	104		
2245160	M	W 51ST ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/11/2012	4.912	F	4,300	\$17,200,000	104		
2245170	M	W 52ND ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/29/2012	5.265	G	4,300	\$17,200,000	104		
2245180	M	W 53RD ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/29/2012	5.221	G	5,100	\$20,400,000	104		
2245190	M	W 58TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/25/2012	4.765	F	4,100	\$16,400,000	104		
2245209	M	11TH AVE	AMTRAK 30 ST BRANCH	A	O		2	S	6/4/2012	4.471	F	15,400	\$61,600,000	104		
2245210	M	W 42ND ST	AMTRAK 30 ST BRANCH	A	O		4	S	7/2/2012	4.651	F	10,300	\$41,200,000	104		
2245220	M	W 57TH ST	AMTRAK 30 ST BRANCH	A	O		3	S	5/25/2012	4.853	F	9,100	\$36,400,000	104		
2245330	M	W 41ST ST	AMTRAK 30 ST BRANCH	A	O		3	S	6/12/2012	4.508	F	6,200	\$24,800,000	104		
2245340	M	W 50TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/11/2012	4.471	F	4,100	\$16,400,000	104		
2245350	M	W 54TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/22/2012	5.476	G	4,700	\$18,800,000	104		
2245360	M	W 55TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/22/2012	5.529	G	4,300	\$17,200,000	104		
2245370	M	W 56TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	6/4/2012	5.706	G	4,400	\$17,600,000	104		
2245440	M	W 40TH ST	AMTRAK 30 ST BRANCH	A	O		4	S	6/18/2012	4.162	F	9,400	\$37,600,000	104		
2257569	M	MILLER HIGHWAY	TERRAIN		A		64	S	10/22/2012	4.352	F	272,475	\$1,089,900,000	104	107	
226672A	M	W 31ST ST	AMTRAK LAYUP TRACKS	A	O		9	S	12/28/2012	3.619	F	8,800	\$35,200,000	104		
2245460	M	PARK AVE S.B.	E 45TH ST		O		1	S	5/25/2012	4.514	F	2,400	\$9,600,000	105		
2245470	M	PARK AVE N.B	E 45TH ST		O		1	S	5/30/2012	4.865	F	2,400	\$9,600,000	105		
2246540	M	E 34TH ST	PARK AVE TUNNEL		OT		1	S	9/13/2012	4.117	F	36,200	\$144,800,000	105	106	



# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2246550	M	PARK AVE VIADUCT	E 42ND ST		O		10	S	12/14/2012	4.478	F	22,150	\$88,600,000	105		
2232070	M	E 25TH ST PED BRDG	FDR DRIVE		A-PED		3	C	3/16/2012	4.627	F	1,700	\$6,800,000	106		
2232100	M	E 51ST ST PED BRDG	FDR DRIVE		A-PED	P	6	C	3/23/2012	4.567	F	2,800	\$11,200,000	106		
2233038	M	FDR DRIVE SB	FDR NB / E 62ND ST		AT		34	S	12/5/2012	6.563	VG	58,700	\$234,800,000	106	108	
224004D	M	TO QNS FROM E 58TH ST	E 59TH ST		OE		12	S	6/28/2012	4.245	F	10,858	\$43,432,000	106	108	
2246560	M	TUDOR CITY PLACE	E 42ND ST		O		1	S	1/25/2012	5.133	G	6,600	\$26,400,000	106		
2246570	M	E42ND ST - E47TH ST	FIRST AVE TUNNEL		OT		2	S	5/22/2012	4.882	F	95,000	\$380,000,000	106		
2268650	M	FDR NB E42ND TO E49TH ST	EAST RIVER		A		119	S	10/28/2011	3.660	F	30,767	\$123,068,000	106		
2229289	M	HHP VIADUCT	AMTRAK - W72 ST - W79 ST	A	A		145	S	10/22/2012	3.597	F	236,100	\$944,400,000	107		
222928C	M	PED BR AT 73RD ST	HHP - AMTRAK	A	A-PED	P	5	C	2/14/2012	3.359	F	3,480	\$13,920,000	107		
2229290	M	W 79 ST	AMTRAK	A	A		1	S	6/7/2012	4.492	F	4,500	\$18,000,000	107		
2229309	M	HHP	RIVERSIDE PARK		A		1	S	1/5/2012	5.133	G	2,172	\$8,688,000	107		
2229311	M	HHP SB	RAMP TO 96 ST		A		1	S	2/1/2012	4.455	F	2,000	\$8,000,000	107		
2229312	M	HHP NB	RAMP TO 96 ST		A		1	S	2/1/2012	4.182	F	2,000	\$8,000,000	107		
2229321	M	HHP SB	RAMP FROM 96 ST		A		1	S	2/6/2012	5.133	G	2,000	\$8,000,000	107		
2229322	M	HHP NB	RAMP FROM 96 ST		A		1	S	2/6/2012	5.300	G	2,000	\$8,000,000	107		
2246970	M	RIVERSIDE DRIVE	W 96TH ST		O		3	S	5/18/2011	5.471	G	10,600	\$42,400,000	107		
2267250	M	HHP	AMTRAK - W96TH ST	A	A		55	S	12/5/2012	3.548	F	40,000	\$160,000,000	107		
2267717	M	79 ST PED PLAZA	79 ST BT BASIN GAR		A	P	10	S	5/3/2011	4.593	F	27,400	\$109,600,000	107		
2267718	M	79 ST TRAFFIC CIRC	79 ST PED PLAZA		A	P	34	S	5/11/2011	4.000	F	24,130	\$96,520,000	107		
226771A	M	79 ST RAMP TO HHP	79 ST BT BASIN GAR		AR	P	4	S	5/9/2012	4.221	F	3,131	\$12,524,000	107		
226771B	M	79 ST RAMP TO GAR	79 ST BT BASIN GAR		AR	P	21	S	5/22/2012	4.452	F	8,989	\$35,956,000	107		
226771C	M	GAR RAMP TO 79 ST	79 ST BT BASIN GAR		AR	P	21	S	5/22/2012	4.435	F	9,095	\$36,380,000	107		
226771D	M	SB HHP RAMP TO 79 ST	79 ST BT BASIN GAR		AR	P	4	S	5/9/2012	4.516	F	2,601	\$10,404,000	107		
2269190	M	W 70TH ST	AMTRAK	A	O		3	S	12/9/2011	5.597	G	17,258	\$69,032,000	107		
2269200	M	RIVERSIDE DRIVE SOUTH	AMTRAK	A	O		11	S	11/17/2011	6.069	VG	69,040	276,160,000.00	107		
2269210	M	W 68TH ST	AMTRAK	A	O		3	S	12/12/2011	6.576	VG	5,382	\$21,528,000	107		
M00003	M	HHP ON/OFF RMP-79TH ST SO. SIDE	PED PATH SO. OF 79TH ST		A		1	C	6/6/2012	3.667	F	900	\$3,600,000	107		
M00004	M	HHP ON/OFF RMP-79TH ST NO. SIDE	PED PATH NO. OF 79TH ST		A		1	C	6/27/2012	5.000	G	900	\$3,600,000	107		
2232110	M	E 64TH ST PED BRDG	FDR DRIVE		A-PED	P	11	U	11/23/2011	4.912	F	2,100	\$8,400,000	108		
2232120	M	E 71ST ST PED BRDG	FDR DRIVE		A-PED	P	19	C	9/7/2012	5.000	G	340	\$1,360,000	108		
2232140	M	E 78TH ST PED BRDG	FDR DRIVE		A-PED	P	9	C	4/17/2012	6.944	VG	3,120	\$12,480,000	108		
2232167	M	PROMENADE OVER FDR	FDR - E81ST ST - E90TH ST		A-PED	P	53	S	7/6/2011	3.143	F	93,000	\$372,000,000	108		
2233040	M	E 60TH ST	FDR DRIVE		A		17	S	7/3/2012	5.000	G	24,480	\$97,920,000	108		
224004A	M	TO E 60TH ST FROM QNS	FIRST AVE		OE		13	S	4/20/2012	5.338	G	14,800	\$59,200,000	108		
224004B	M	TO QNS FRM E 59TH ST	FIRST AVE		OE		13	S	4/20/2012	5.653	G	14,800	\$59,200,000	108		
224004C	M	TO E 62ND ST FROM QNS	E 60TH - E 61ST ST		OE		10	S	8/30/2012	4.985	F	16,720	\$66,880,000	108		
224004J	M	25X	NYC GARAGE		OE		14	S	4/23/2012	4.829	F	22,058	\$88,232,000	108		
2269820	M	E 81 ST PED BRDG	FDR DRIVE N.B.		A-PED	P	3	C	5/15/2012	3.341	F	900	\$3,600,000	108		
2229349	M	HHP	W 158 ST	A	A		44	S	12/17/2012	4.155	F	140,000	\$560,000,000	109	112	

# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD D	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2245230	M	W 148TH ST PED BRDG	AMTRAK 30 ST BRANCH	A	O-PED	P	3	C	4/17/2012	4.200	F	1,100	\$4,400,000	109		
2245290	M	W 155TH ST PED BRDG	AMTRAK 30 ST BRANCH	A	O-PED		3	C	1/27/2012	3.862	F	800	\$3,200,000	109	112	
2246660	M	RIVERSIDE DRIVE	W125TH ST - W134TH ST		O		27	S	7/15/2011	4.306	F	148,300	\$593,200,000	109		
2246670	M	W 134 ST	TERRAIN		O		4	S	7/13/2011	4.833	F	7,500	\$30,000,000	109		
2246720	M	RIVERSIDE DRIVE	W 158TH ST - AMTRAK	A	O		77	S	12/14/2011	3.472	F	185,658	\$742,632,000	109	112	
2246980	M	RIVERSIDE DRIVE	W 138TH ST		O		1	S	1/19/2012	4.900	F	6,700	\$26,800,000	109		
2266229	M	HHP	PED UNDERPASS @ 148 ST		A		1	S	2/2/2012	5.000	G	1,840	\$7,360,000	109		
2267130	M	RIVERSIDE DRIVE	W 145TH ST		O		1	S	5/12/2011	4.867	F	5,800	\$23,200,000	109		
2269240	M	RIVERSIDE DRIVE	W. 155TH ST		O		1	S	5/10/2011	4.640	F	2,780	\$11,120,000	109	112	
2246490	M	A.C. POWELL BLVD N.B.	A.C. POWELL BLVD		O		1	S	2/1/2012	4.367	F	3,000	\$12,000,000	110		
2246710	M	W 153 ST	A.C. POWELL BLVD		O		1	S	2/1/2012	4.611	F	3,082	\$12,328,000	110		
2232180	M	E 103RD ST PED BRDG	FDR DRIVE		A-PED		18	C	9/8/2012	4.395	F	4,800	\$19,200,000	111		
2232190	M	E 111TH ST PED BRDG	FDR DRIVE		A-PED	P	9	C	9/20/2012	4.128	F	4,200	\$16,800,000	111		
2232200	M	E 120TH ST PED BRDG	FDR DRIVE		A-PED	P	18	C	9/18/2012	3.914	F	3,978	\$15,912,000	111		
2233059	M	HARLEM RIVER DRIVE	RAMP TO & FROM HRD N.B.		A		11	S	7/12/2012	3.507	F	51,000	\$204,000,000	111		
224005A	M	FROM FDR DRIVE	HARLEM RIVER DR		OR		11	S	11/29/2012	7.000	VG	28,233	\$112,932,000	111		
224007A	M	TO MADISON AVENUE	E 138TH ST		OR		7	S	2/9/2012	5.028	G	19,880	\$79,520,000	111		
2240620	M	WARDS ISLAND PED BRDG	HARLEM RIVER		WMO-PED		10	C	4/15/2011	4.097	F	12,600	\$50,400,000	111		
2245319	M	E 97TH ST	METRO NORTH MAIN LN	M	O		1	S	12/7/2012	4.647	F	3,200	\$12,800,000	111		
2246620	M	W 128TH ST PED BRDG	3RD AVE BRDG APPR		O-PED		18	C	8/11/2011	3.791	F	2,300	\$9,200,000	111		
2246990	M	E 129TH ST PED BRDG	3RD AVE BRDG RAMP		O-PED		5	C	10/5/2012	4.095	F	1,046	\$4,184,000	111		
222934A	M	RAMP TO N.B. HHP	AMTRAK WEST SIDE	A	AR		26	S	8/13/2012	3.875	F	10,800	\$43,200,000	112		
2229400	M	W 181ST ST PED BRDG	HHP N.B.		A-PED	P	7	C	2/15/2012	4.477	F	1,500	\$6,000,000	112		
2245040	M	MARGARET CORBIN DR	PED PATH NEAR CAFÉ		O	P	1	C	6/29/2012	4.933	F	598	\$2,392,000	112		
2245050	M	MARGARET CORBIN DR	PED PATH NR NO ENTR		O	P	1	C	6/29/2012	4.333	F	889	\$3,556,000	112		
2245250	M	W 158TH ST	AMTRAK 30 ST BRANCH	A	O		7	S	12/7/2011	6.125	VG	29,170	\$116,680,000	112		
2245260	M	W 173RD ST PED BRDG	AMTRAK 30 ST BRANCH	A	O-PED	P	2	C	4/13/2012	4.533	F	1,500	\$6,000,000	112		
2245300	M	INWOOD HILL PK FTBR	AMTRAK 30 ST BRANCH	A	O-PED	P	6	C	2/9/2012	4.100	F	700	\$2,800,000	112		
2245480	M	TO GWB OPP W 171ST ST	RIVERSIDE DRIVE		O		1	S	2/8/2012	4.524	F	10,773	\$43,092,000	112		
2246489	M	W 181 ST	RAMP TO WASH BR		O		1	S	2/7/2012	5.333	G	8,200	\$32,800,000	112		
2246500	M	FORT TRYON PLACE	ENTR FROM RIVERSIDE DR		O	P	1	S	2/8/2012	4.200	F	3,280	\$13,120,000	112		
2246510	M	CORBIN PL OVERPASS	CORBIN PLACE		O	P	1	S	1/9/2012	5.000	G	2,223	\$8,892,000	112		
2246600	M	W 176TH ST PED BRDG	APPROACH TO G.W.B.		O-PED		1	C	3/30/2012	4.172	F	1,200	\$4,800,000	112		
2246690	M	ISHAM PK VEHICULR	HARLEM RIVER INLET		O	P	1	S	5/4/2012	6.261	VG	911	\$3,644,000	112		
2246700	M	ISHAM PK PED BRDG	HARLEM RV INLET		WO-PED	P	1	C	1/6/2012	3.552	F	300	\$1,200,000	112		
2266230	M	HHP NB	PED UNDERPASS INWD PK		A		1	S	1/6/2012	5.000	G	800	\$3,200,000	112		
2266240	M	HHP SB	PED UNDERPASS INWD PK		A		1	S	1/6/2012	5.526	G	1,100	\$4,400,000	112		
2267240	M	HRD RAMP TO GWB	HARLEM RIVER DR SB		A		55	S	10/15/2012	3.014	F	122,900	\$491,600,000	112		
2268760	M	PS-5 PED BRDG	TENTH AVE		O-PED		5	C	11/29/2012	4.816	F	1,285	\$5,140,000	112		
M00001	M	W191ST ST PED TNL	BROADWAY - IRT #1 SUBWAY		O-PED		1	C	12/10/2012	4.545	F	2,000	\$8,000,000	112		

# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2245380	M	TRANSVERSE RD #1 WB	PED PATH OPP E 66TH ST		O	P	1	S	1/6/2012	5.000	G	1,500	\$6,000,000	164		
2245420	M	W 65TH ST ENTR EB	BRIDLE PATH W END		O	P	1	S	1/17/2012	5.100	G	1,300	\$5,200,000	164		
2246000	M	WEST DR (GREYSHOT ARCH)	PED BET 61ST & 62ST		O	P	1	S	1/10/2012	5.400	G	2,500	\$10,000,000	164		
2246010	M	W 62 ST PED BRDG (PINEBANK ARCH)	BRIDLE PATH		O-PED	P	1	C	7/27/2012	4.262	F	1,000	\$4,000,000	164		
2246030	M	E 62 ST PED BRDG (GAPSTOW BRDG)	THE POND		O-PED	P	1	C	5/25/2012	3.897	F	1,400	\$5,600,000	164		
2246040	M	EAST DR (INSOPE ARCH)	PED PATH OPP E 62 ST		O	P	1	C	4/4/2012	4.400	F	1,515	\$6,060,000	164		
2246050	M	CENTER DR (DRIPROCK ARCH)	PED OPP 63RD ST		O	P	1	S	1/11/2012	4.867	F	1,725	\$6,900,000	164		
2246069	M	EAST DR (GREEN GAP ARCH)	PED BET E 63ST & E 64ST		O	P	1	S	1/18/2012	4.433	F	2,075	\$8,300,000	164		
2246070	M	CENTER DR (PLAYMATES ARCH)	PED PATH OPP 65TH ST		O	P	1	C	6/27/2012	4.367	F	1,129	\$4,516,000	164		
2246080	M	WEST DR (DALEHEAD ARCH)	BRIDLE OPP W 64TH ST		O	P	1	S	1/5/2012	4.667	F	2,000	\$8,000,000	164		
2246090	M	PED BRDG OPP 65 ST	TRANSVERSE RD #1		O-PED	P	1	C	7/17/2012	4.655	F	2,300	\$9,200,000	164		
2246100	M	CENTER DRIVE	TRANSVERSE RD #1		O	P	1	S	2/3/2012	4.333	F	6,000	\$24,000,000	164		
2246110	M	EAST DRIVE	TRANSVERSE RD #1		O	P	1	S	3/23/2012	4.667	F	6,000	\$24,000,000	164		
2246120	M	WEST DRIVE	TRANSVERSE RD #1		O	P	1	S	3/28/2012	4.967	F	7,900	\$31,600,000	164		
2246130	M	EAST DR (WILLOWDELL ARCH)	PED PATH OPP E 67TH ST		O	P	1	C	4/25/2012	3.395	F	666	\$2,665,600	164		
2246140	M	W 72 ST ENTR (RIFTSTONE ARCH)	BRIDLE PATH		O	P	1	S	1/9/2012	4.600	F	3,600	\$14,400,000	164		
2246150	M	72 ST CROSS DR (TERRACE BRDG)	PED PATH TO FOUNTAIN		O	P	3	S	3/1/2012	5.786	G	7,300	\$29,200,000	164		
2246160	M	73 ST PED BRDG (BOW BRIDGE)	THE LAKE		WO-PED	P	1	C	5/25/2012	4.244	F	1,700	\$6,800,000	164		
2246170	M	EAST DR (TREFOIL ARCH)	PED PATH OPP E 73RD ST		O	P	1	S	1/30/2012	5.130	G	1,900	\$7,600,000	164		
2246230	M	EAST DRIVE	TRANSVERSE RD #2		O	P	1	S	3/21/2012	4.600	F	5,080	\$20,320,000	164		
2246240	M	WEST DRIVE	TRANSVERSE RD #2		O	P	1	S	3/22/2012	4.167	F	7,200	\$28,800,000	164		
2246250	M	EAST DRIVE	TRANSVERSE RD #3		O	P	1	S	1/18/2012	4.433	F	4,500	\$18,000,000	164		
2246260	M	WEST DRIVE	TRANSVERSE RD #3		O	P	1	S	3/22/2012	4.933	F	5,100	\$20,400,000	164		
2246270	M	EAST DRIVE	TRANSVERSE RD #4		O	P	1	S	3/23/2012	4.100	F	7,000	\$28,000,000	164		
2246280	M	WEST DRIVE	TRANSVERSE RD #4		O	P	1	S	3/26/2012	4.300	F	4,700	\$18,800,000	164		
2246320	M	W77 ST PED (OAK BRDG)	THE LAKE		WO-PED	P	3	C	12/20/2011	6.684	VG	919	\$3,676,000	164		
2246330	M	WEST DR (BALCONY BRDG)	STREAM TO THE LAKE		WO	P	1	S	1/16/2012	5.000	G	1,817	\$7,268,000	164		
2246340	M	W77 ST PED (LADIES POND BRDG)	STREAM TO THE LAKE		WO-PED	P	3	C	12/3/2012	4.355	F	500	\$2,000,000	164		
2246350	M	EAST DR (GREYWACKE ARCH)	PED PATH OPP E 80TH ST		O	P	1	C	5/4/2012	3.733	F	1,266	\$5,064,000	164		
2246360	M	WEST DR (WINTERDALE ARCH)	PED PATH OPP W 82 ST		O	P	1	S	1/17/2012	5.273	G	2,502	\$10,008,000	164		
2246380	M	W86 ST PED (SW RESERVOIR BRDG)	BRIDLE PATH		O-PED	P	1	C	11/30/2012	4.852	F	700	\$2,800,000	164		
2246390	M	E86 ST PED (SE RESERVOIR BRDG)	BRIDLE PATH		O-PED	P	3	C	10/31/2011	4.509	F	1,100	\$4,400,000	164		
2246400	M	PED PATH OPP E79 ST	TRANSVERSE RD #2		O-PED	P	1	C	8/15/2012	4.233	F	3,700	\$14,800,000	164		
2246410	M	TRNSVRS RD 1 EB (DENESMOUTH ARCH)	PED PATH OPP E 65TH ST		O	P	1	S	1/30/2012	4.636	F	1,739	\$6,956,000	164		
2246430	M	W110 ST ENTR (MOUNTCLIFF ARCH)	PED PATH OPP W109 ST		O	P	1	S	2/13/2012	4.383	F	1,200	\$4,800,000	164		
2246440	M	79 TH ST PED BRDG	TRANSVERSE RD #2		O-PED	P	1	C	8/9/2012	3.926	F	5,900	\$23,600,000	164		
2246450	M	E77 ST PED (GLADE ARCH)	PED PATH OPP E77 ST		O-PED	P	1	C	1/24/2012	4.138	F	5,000	\$20,000,000	164		
2246460	M	W77 ST ENTR (EAGLEVALE ARCH)	PED PATH OPP W77 ST		O	P	2	S	1/10/2012	4.263	F	3,066	\$12,264,000	164		
2246470	M	EAST DR (HUDDLESTONE ARCH)	THE LOCH		WO	P	1	S	1/26/2012	4.500	F	1,100	\$4,400,000	164		
2240047	MQ	QUEENSBORO BRIDGE (LL)	EAST RIVER	AL	WEO		53	S	12/5/2012	4.264	F	626,900	\$2,507,600,000	108	402	401

# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2240048	MQ	QUEENSBORO BRIDGE (UL)	EAST RIVER - LL		WEO		37	S	10/26/2012	4.189	F	322,300	\$1,289,200,000	108	402	401
2240640	MQ	ROOSEVELT ISLAND BRDG	E. RIVER E. CHANNEL		WMO		8	S	11/19/2012	5.611	G	36,500	\$146,000,000	108	401	
2230600	Q	STEINWAY ST	278I WB (BQE)		A		1	S	9/12/2012	6.349	VG	5,229	\$20,916,000	401		
2230610	Q	STEINWAY ST	278I EB (BQE)		A		1	S	9/13/2012	6.349	VG	5,146	\$20,584,000	401		
2230620	Q	37TH ST	278I (B.Q.E.)		A		2	S	3/22/2012	4.681	F	5,300	\$21,200,000	401		
2230630	Q	35TH ST	278I (B.Q.E.)		A		4	S	3/22/2012	4.667	F	9,000	\$36,000,000	401		
2230640	Q	32ND ST	278I (B.Q.E.)		A		2	S	6/24/2011	4.875	F	8,100	\$32,400,000	401		
2230657	Q	31ST ST	278I (B.Q.E.)		A		2	S	12/5/2012	4.569	F	9,500	\$38,000,000	401		
2230690	Q	278I NB (BQE WEST LEG)	32ND AVE		A		1	S	6/22/2012	6.407	VG	4,080	\$16,320,000	401		
2230700	Q	278I NB (BQE EAST LEG)	32ND AVE (TO BQE WEST LEG)		A		8	S	12/4/2012	6.465	VG	31,600	\$126,400,000	401	403	
2230710	Q	278I SB (BQE WEST LEG)	32ND AVE		A		1	S	8/2/2011	6.559	VG	5,240	\$20,960,000	401		
2230720	Q	278I SB (BQE EAST LEG)	278I NB (BQE WEST LEG)		A		3	S	7/22/2011	6.182	VG	20,896	\$83,584,000	401		
2230730	Q	31ST AVE	278I NB (BQE WEST LEG)		A		1	S	7/15/2011	6.217	VG	5,875	\$23,500,000	401		
2230740	Q	278I SB (BQE WEST LEG)	31ST AVE		A		1	S	8/1/2011	6.217	VG	5,246	\$20,984,000	401		
2230750	Q	278I SB (BQE EAST LEG)	31ST AVE		A		1	S	8/1/2011	6.508	VG	4,221	\$16,884,000	401	403	
2230760	Q	278I NB (BQE EAST LEG)	31ST AVE		A		1	S	8/30/2012	6.610	VG	4,161	\$16,644,000	401		
2230770	Q	278I (BQE WEST LEG)	30TH AVE		A		1	S	6/15/2011	6.322	VG	6,199	\$24,796,000	401		
2230790	Q	BULOVA AVE	278I (BQE WEST LEG)		A		2	S	4/16/2012	5.278	G	3,300	\$13,200,000	401		
2230800	Q	49TH ST	278I (BQE WEST LEG)		A		2	S	4/16/2012	5.278	G	4,900	\$19,600,000	401		
2230810	Q	ASTORIA BLVD EB	278I (BQE WEST LEG)		A		4	S	3/28/2012	4.044	F	8,200	\$32,800,000	401		
2230820	Q	47TH ST	GCP		A		2	S	5/17/2012	4.889	F	5,700	\$22,800,000	401		
2230830	Q	278I NB (BQE WEST LEG)	GCP		A		2	S	5/17/2012	4.583	F	7,600	\$30,400,000	401		
2230840	Q	44TH ST	GCP		A		2	S	5/17/2012	4.764	F	5,000	\$20,000,000	401		
2230890	Q	49TH ST	GCP		A		2	S	5/17/2012	4.444	F	6,350	\$25,400,000	401		
224004G	Q	TO NY FROM 11TH ST	TERRAIN (CHAMBER)		OE		36	S	8/14/2012	5.268	G	8,360	\$33,440,000	401	402	
2240660	Q	RIKERS ISLAND BRIDGE	RIKERS ISL CHANNEL		WO		56	S	12/18/2012	4.380	F	183,100	\$732,400,000	401	480	
1247280	Q	51 AVE PED BR (2247280)	LIRR MAIN LINE	L	O-PED		5	C	3/8/2012	3.018	F	700	\$2,800,000	402		
2230520	Q	65TH PLACE	278I (B.Q.E.)		A		2	S	2/7/2012	5.972	G	11,668	\$46,672,000	402		
2230530	Q	QUEENS BLVD	278I (B.Q.E.)		A		2	S	11/20/2012	6.417	VG	25,543	\$102,172,000	402		
2230540	Q	WOODSIDE AVE	278I (B.Q.E.)		A		1	S	2/3/2012	5.672	G	7,529	\$30,116,000	402		
2230550	Q	69TH ST	278I (B.Q.E.)		A		2	S	1/19/2012	5.263	G	12,600	\$50,400,000	402		
2230560	Q	70TH ST	278I (B.Q.E.)		A		2	S	11/20/2012	6.722	VG	8,580	\$34,320,000	402		
2230570	Q	41ST AVE	278I (B.Q.E.)		A		2	S	11/20/2012	6.735	VG	8,580	\$34,320,000	402		
2230587	Q	ROOSEVELT AVE	278I (B.Q.E.)		A		2	S	10/28/2011	5.889	G	11,022	\$44,088,000	402		
2230590	Q	BROADWAY	278I (B.Q.E.)		O		2	S	12/6/2012	5.789	G	16,000	\$64,000,000	402		
2230669	Q	278I (B.Q.E.)	35TH AVE		A		1	S	8/3/2011	6.390	VG	13,135	\$52,540,000	402		
2230679	Q	278I (B.Q.E.)	34TH AVE		A		1	S	6/7/2011	6.203	VG	7,793	\$31,172,000	402		
2230680	Q	278I (B.Q.E.)	NORTHERN BLVD		A		1	S	12/4/2012	6.016	VG	27,011	\$108,044,000	402	401	
2230869	Q	QUEENS BLVD	ACCESS RD BQE S.B.		A		1	S	10/17/2012	5.909	G	7,900	\$31,600,000	402		
224004E	Q	TO NY FR THOMSON AVE	JACKSON AVE	L	OE		94	S	12/12/2012	4.604	F	104,600	\$418,400,000	402		



# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
224004F	Q	TO NY FROM 21ST ST	21ST ST		OE		63	S	12/19/2012	4.712	F	63,310	\$253,240,000	402	401	
224004H	Q	TO 21ST ST FROM NY	22ND ST		OE		43	S	12/18/2012	4.437	F	48,100	\$192,400,000	402		
224004I	Q	TO THOMSON AVE FROM NY	JACKSON AVE	L	OE		39	S	12/18/2012	4.951	F	59,100	\$236,400,000	402		
2240410	Q	BORDEN AVE	DUTCH KILLS		WMO		2	S	7/26/2011	4.792	F	8,400	\$33,600,000	402		
2240450	Q	HUNTERS PT AVE	DUTCH KILLS		WMO		4	S	7/3/2012	5.083	G	12,168	\$48,672,000	402		
2247120	Q	WOODSIDE AVE	LIRR MAIN LINE	L	O		3	S	10/16/2012	4.444	F	14,900	\$59,600,000	402		
2247150	Q	65TH ST	LIRR MAIN LINE	L	O		3	S	10/17/2011	6.375	VG	6,344	\$25,376,000	402		
2247160	Q	65TH PLACE	LIRR MAIN LINE	L	O		3	S	10/20/2011	6.441	VG	8,381	\$33,524,000	402		
2247260	Q	JACKSON AVE	LIRR MONTAUK DIV	L	O		1	S	10/22/2012	6.117	VG	4,517	\$18,068,000	402		
2247270	Q	21ST ST	LIRR N SIDE DIV	L	O		6	S	11/14/2011	5.153	G	17,590	\$70,360,000	402		
2247290	Q	49TH AVE	LIRR,AMTRAK	L	O		5	S	12/3/2012	4.014	F	20,400	\$81,600,000	402		
2247300	Q	THOMPSON AVE	AMTRAK & LIRR YARD	AL	O		14	S	12/6/2012	5.042	G	61,280	\$245,120,000	402		
2247310	Q	QUEENS BLVD	AMTRAK & LIRR YARD	AL	O		19	S	12/6/2012	6.268	VG	92,400	\$369,600,000	402	401	
2247320	Q	HONEYWELL ST	AMTRAK & LIRR YARD	AL	O		22	S	11/4/2011	5.903	G	99,036	\$396,144,000	402	401	
2247330	Q	39TH ST (NORTH)	SUNNYSIDE YARD	A	O		14	S	10/31/2011	6.556	VG	48,200	\$192,800,000	402	401	
2247370	Q	37TH AVE	CSX - HELLGATE	C	O		1	S	8/29/2011	6.234	VG	6,868	\$27,472,000	402		
2247380	Q	ROOSEVELT AVE	CSX - HELLGATE	C	O		2	S	8/30/2011	6.333	VG	7,380	\$29,520,000	402	403	404
2247390	Q	41ST AVE	CSX - HELLGATE	C	O		2	S	9/8/2011	4.942	F	4,400	\$17,600,000	402	404	
2247400	Q	WOODSIDE AVE	CSX TRANSPORT	C	O		1	S	9/8/2011	5.033	G	8,200	\$32,800,000	402	404	
2247410	Q	43RD AVE	CSX TRANSPORT	C	O		1	S	9/8/2011	5.000	G	4,800	\$19,200,000	402	404	
2247420	Q	44TH AVE	CSX TRANSPORT	C	O		1	S	9/6/2011	5.000	G	5,100	\$20,400,000	402	404	
2247430	Q	45TH AVE	CSX TRANSPORT	C	O		1	S	9/9/2011	5.306	G	2,400	\$9,600,000	402	404	
2247640	Q	39TH ST (SOUTH)	AMTRAK & LIRR YARD	AL	O		9	S	10/28/2011	6.014	VG	34,100	\$136,400,000	402		
2230780	Q	278I (BQE EAST LEG)	30TH AVE		A		1	S	6/14/2011	6.206	VG	7,071	\$28,284,000	403	401	
1247010	Q	91 PLACE (2247010)	LIRR PT WASH BR	L	O		1	S	11/3/2011	6.567	VG	2,760	\$11,040,000	404		
2247020	Q	94TH ST PED BRDG	LIRR PORT WASH BR	L	O-PED		5	C	4/9/2012	4.091	F	500	\$2,000,000	404		
2247180	Q	GRAND AVE	LIRR MAIN LINE	L	O		3	S	10/24/2012	4.396	F	7,415	\$29,660,000	404		
2247190	Q	55TH AVE PED BRDG	LIRR MAIN LINE	L	O-PED		3	C	4/3/2012	4.240	F	13,000	\$52,000,000	404		
2248159	Q	WOODHAVEN BLVD	QUEENS BLVD		O		2	S	8/7/2012	4.275	F	11,500	\$46,000,000	404		
1247560	Q	METROPOLITAN AVE	LIRR -NY&ATL	LN	O		2	S	10/3/2012	3.603	F	20,900	\$83,600,000	405		
2065930	Q	HAMILTON PLACE	495I (L.I.E.)		A		2	S	3/5/2012	5.611	G	11,111	\$44,444,000	405		
2065940	Q	GRAND AVE	495I (L.I.E.)		A		2	S	12/6/2012	4.861	F	12,850	\$51,400,000	405		
2065950	Q	69TH STREET	495I (L.I.E.)		A		2	S	7/27/2011	5.250	G	10,336	\$41,344,000	405		
2230040	Q	CYPRESS HILLS ST	JACKIE ROBINSON PKWY		A		1	S	4/5/2012	4.722	F	5,000	\$20,000,000	405		
2230099	Q	JACKIE ROBINSON PKWY	CYPRESS HILLS CEMETRY		A		1	S	1/5/2012	5.444	G	4,200	\$16,800,000	405		
2230120	Q	MYRTLE AVE	JACKIE ROBINSON PKWY		A		1	S	4/26/2012	5.250	G	6,400	\$25,600,000	405	482	
2247440	Q	GRAND AVE	CSX TRANSPORT	C	O		1	S	9/9/2011	6.183	VG	3,280	\$13,120,000	405		
2247450	Q	57TH AVE	CSX TRANSPORT	C	O		1	S	9/9/2011	6.073	VG	2,248	\$8,992,000	405		
2247460	Q	CALDWELL AVE	CSX TRANSPORT	C	O		1	S	12/17/2012	5.889	G	2,243	\$8,972,000	405		
2247470	Q	ELIOT AVE	CSX TRANSPORT	C	O		1	S	10/4/2011	5.083	G	2,960	\$11,840,000	405		

# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2247480	Q	JUNIPER BLVD SO	CSX TRANSPORT	C	O		1	S	10/5/2011	5.000	G	9,000	\$36,000,000	405		
2247490	Q	69TH STREET	CSX TRANSPORT	C	O		1	S	12/17/2012	4.979	F	6,175	\$24,700,000	405		
2247500	Q	METROPOLITAN AVE	CSX TRANSPORT	C	O		1	S	10/5/2011	4.233	F	18,650	\$74,600,000	405		
2247530	Q	ANDREWS AVE	LIRR MONTAUK DIV	L	O		1	S	9/22/2011	7.000	VG	1,765	\$7,060,000	405		
2247540	Q	60TH ST	LIRR MONTAUK DIV	L	O		2	S	10/5/2011	5.208	G	5,340	\$21,360,000	405		
2247550	Q	ELIOT AVE	LIRR MONTAUK DIV	L	O		2	S	9/19/2011	5.712	G	9,550	\$38,200,000	405		
2247570	Q	80TH ST	77TH AVE - LIRR MT	L	O		5	S	11/27/2012	5.102	G	11,725	\$46,900,000	405		
2247650	Q	60TH RD PED BRDG	LIRR MAIN LINE	L	O-PED		3	C	3/7/2012	4.786	F	2,293	\$9,172,000	405	406	
2248200	Q	RUST ST	FLUSHING AVE		O		1	S	7/13/2011	5.000	G	2,940	\$11,760,000	405		
2248220	Q	SERVICE RD TURNAROUND	FLUSHING AVE		O		1	S	7/13/2011	5.078	G	2,940	\$11,760,000	405		
2248240	Q	FLUSHING AV SERVICE RD	FLUSHING AVE		O		1	S	7/12/2011	5.250	G	2,940	\$11,760,000	405		
2248280	Q	HIGHLAND PK PED.	PEDESTRIAN PATH		O-PED	P	1	C	10/1/2012	3.667	F	1,900	\$7,600,000	405		
2248300	Q	71ST AVE	COOPER AVE		O		1	S	7/12/2011	4.373	F	2,800	\$11,200,000	405		
1247200	Q	67 AVE PED BR (2247200)	LIRR MAIN LINE	L	O-PED		3	C	4/3/2012	4.219	F	1,300	\$5,200,000	406		
2066002	Q	495I (2066000)	WOODHAVEN BLVD		A		2	S	6/14/2011	5.592	G	25,200	\$100,800,000	406	404	
2247630	Q	PED BRG NEAR UNION TPK	ABANDONED LIRR		O-PED		8	C	8/30/2012	5.077	G	1,449	\$5,796,000	406		
2248160	Q	ELLIOT AVE	QUEENS BLVD		O		2	S	8/7/2012	4.804	F	13,785	\$55,140,000	406		
1065210	Q	WHITESTONE EXP NB	BCIP (2065210)		A		1	S	7/24/2012	4.603	F	2,500	\$10,000,000	407		
2055801	Q	NORTHERN BLVD WB	FLUSHING RIVER		WO		40	S	11/21/2012	4.338	F	71,900	\$287,600,000	407		
2055802	Q	NORTHERN BLVD EB	FLUSHING RIVER		WO		40	S	11/21/2012	4.324	F	78,894	\$315,576,000	407		
205580A	Q	N.BLVD WB TO 678I SB	VACANT LAND		AR		16	S	6/19/2012	5.619	G	8,600	\$34,400,000	407		
2231900	Q	BCIP	TOTTEN AVE		A		1	S	6/1/2012	4.609	F	4,900	\$19,600,000	407		
2231910	Q	UTOPIA PKWY	BCIP		A		2	S	3/15/2012	5.114	G	7,200	\$28,800,000	407		
2231920	Q	160TH ST	BCIP		A		2	S	6/27/2011	5.750	G	5,550	\$22,200,000	407		
2231930	Q	FRANCIS LEWIS BLVD	BCIP		A		3	S	2/3/2012	4.682	F	9,100	\$36,400,000	407		
2231940	Q	CLINTONVILLE ST	BCIP		A		2	S	2/3/2012	4.705	F	7,400	\$29,600,000	407		
2231950	Q	150TH ST	BCIP		A		2	S	2/8/2012	4.682	F	5,900	\$23,600,000	407		
2231960	Q	149TH ST	BCIP		A		2	S	2/8/2012	4.795	F	6,210	\$24,840,000	407		
2231970	Q	14TH AVE	BCIP		A		2	S	2/8/2012	4.614	F	8,100	\$32,400,000	407		
2231980	Q	147TH ST	BCIP		A		2	S	3/8/2012	4.705	F	6,300	\$25,200,000	407		
2240507	Q	ROOSEVELT AVE	678I - FLUSHING RIVER		WA		27	S	11/30/2012	3.465	F	84,424	\$337,696,000	407	481	
2247040	Q	UNION ST	LIRR PORT WASH BR	L	O		1	S	9/12/2011	6.234	VG	3,313	\$13,252,000	407		
2247050	Q	BOWNE AVE	LIRR PORT WASH BR	L	O		1	S	10/4/2012	5.333	G	4,974	\$19,896,000	407		
2247060	Q	PARSONS BLVD	LIRR PORT WASH BR	L	O		1	S	10/5/2012	4.824	F	4,200	\$16,800,000	407		
2247070	Q	147TH ST	LIRR PORT WASH BR	L	O		1	S	9/13/2011	5.471	G	2,800	\$11,200,000	407		
2247080	Q	149TH ST	LIRR PORT WASH BR	L	O		1	S	12/10/2012	4.776	F	4,100	\$16,400,000	407		
2247090	Q	149TH PLACE	LIRR PORT WASH BR	L	O		2	S	9/13/2011	5.000	G	4,300	\$17,200,000	407		
2247100	Q	150TH ST	LIRR PORT WASH BR	L	O		2	S	9/13/2011	6.029	VG	7,830	\$31,320,000	407		
2247110	Q	MURRAY ST	LIRR PORT WASH BR	L	O		1	S	9/15/2011	5.370	G	4,000	\$16,000,000	407		
2248090	Q	FLSHG MDW PK PED	COLLEGE POINT BLVD		O-PED	P	3	C	2/23/2012	4.694	F	8,400	\$33,600,000	407		

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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2266160	Q	678I SB TO BCIP EB	ACCESS RD FROM 678I		A		1	S	7/24/2012	3.734	F	2,300	\$9,200,000	407		
7705510	Q	167TH ST PED BRDG	LIRR PORT WASH BR	L	O-PED		3	C	3/12/2012	3.902	F	600	\$2,400,000	407		
2248059	Q	MOTOR PKWY (PED)	FRANCIS LEWIS BLVD		O-PED	P	2	C	6/14/2012	4.194	F	2,800	\$11,200,000	408		
2248080	Q	MOTOR PKWY (PED)	HOLLIS COURT BLVD		O-PED	P	3	C	11/21/2012	4.612	F	2,700	\$10,800,000	408		
2248100	Q	MOTOR PKWY (PED)	73RD AVE		O-PED	P	3	C	2/2/2012	4.541	F	2,600	\$10,400,000	408		
2267160	Q	ROOSEVELT AVE	FLUSHING MDW PK ROAD		O		4	S	8/10/2011	4.746	F	7,280	\$29,120,000	408		
2267199	Q	FRANCIS LEWIS BLVD	CUNNINGHAM PK RD		O		1	S	5/27/2011	5.033	G	7,085	\$28,340,000	408		
2230209	Q	QUEENS BLVD	JACKIE ROBINSON PKWY	T	A		5	S	7/9/2012	4.968	F	37,700	\$150,800,000	409		
2247220	Q	80TH ROAD	LIRR MAIN LINE	L	O		3	S	9/29/2011	4.857	F	4,100	\$16,400,000	409		
2247230	Q	82ND AVE	LIRR MAIN LINE	L	O		3	S	9/21/2011	5.377	G	4,100	\$16,400,000	409		
2247240	Q	LEFFERTS BLVD	LIRR MAIN LINE	L	O		3	S	9/29/2011	5.806	G	5,460	\$21,840,000	409		
2247590	Q	FOREST PARK DRIVE	LIRR MONTAUK DIV	L	O	P	5	S	10/1/2012	5.158	G	6,000	\$24,000,000	409		
2247600	Q	PARK LANE SOUTH	LIRR MONTAUK DIV	L	O		1	S	10/18/2012	6.983	VG	3,024	\$12,096,000	409	482	
2247660	Q	FOREST PARK DRIVE	ABANDONED LIRR		O	P	6	S	2/23/2012	4.524	F	10,000	\$40,000,000	409		
2248019	Q	WOODHAVEN BLVD	ATLANTIC AVE		O		3	S	4/5/2012	4.236	F	19,400	\$77,600,000	409		
2248299	Q	J.R. PKWY-UNION TPKE	AUSTIN ST		O		1	S	5/30/2012	4.806	F	5,900	\$23,600,000	409	406	
2248340	Q	FOREST PARK DR	MYRTLE AVE		O	P	3	S	6/13/2011	4.984	F	5,100	\$20,400,000	409		
2231559	Q	CROSS BAY BLVD	BSHP		A		4	S	6/1/2012	5.139	G	23,205	\$92,820,000	410		
2231560	Q	S CONDUIT BLVD	BSOP		A		2	S	7/12/2012	5.296	G	15,776	\$63,104,000	410		
2231570	Q	COHANCY ST	BSOP		A		2	S	4/24/2012	4.395	F	6,400	\$25,600,000	410		
2231590	Q	130TH ST	BSOP		A		2	S	1/30/2012	4.659	F	6,800	\$27,200,000	410		
2240650	Q	163RD AVE PED BRDG	HAWTREE BASIN		WO-PED		13	C	9/19/2011	4.174	F	5,000	\$20,000,000	410		
2248020	Q	WHITELAW PED BRDG	CONDUIT AVE		O-PED		7	C	9/28/2012	4.775	F	5,500	\$22,000,000	410		
2248039	Q	CROSS BAY BLVD	NASSAU EXPWY - RTE 27		O		2	S	6/23/2011	6.347	VG	16,544	\$66,176,000	410		
2248040	Q	RAMP TO LINDEN BLVD	SO. CONDUIT AVE		O		1	S	5/30/2012	5.200	G	3,352	\$13,408,000	410		
2248250	Q	102ND ST	HAWTREE BASIN		WO		3	S	8/15/2011	5.941	G	4,900	\$19,600,000	410		
2231860	Q	W ALLEY ROAD	BCIP		A		2	S	7/20/2011	5.474	G	7,200	\$28,800,000	411		
2231870	Q	NORTHERN BLVD	BCIP		A		2	S	8/28/2012	5.875	G	9,400	\$37,600,000	411		
2231880	Q	CROCHERON PK PED	BCIP		A-PED	P	9	C	6/23/2011	4.188	F	2,300	\$9,200,000	411		
2231890	Q	28TH AVE PED BRDG	BCIP		A-PED	P	24	C	6/11/2012	4.517	F	7,600	\$30,400,000	411		
2240440	Q	NORTHERN BLVD	ALLEY CREEK		WO		2	S	8/9/2012	4.681	F	8,300	\$33,200,000	411		
2247130	Q	CORPORAL KENNEDY ST	LIRR PORT WASH BR	L	O		1	S	11/3/2011	6.235	VG	3,379	\$13,516,000	411		
2247140	Q	BELL BLVD	LIRR PORT WASH BR	L	O		1	S	9/14/2011	5.780	G	4,320	\$17,280,000	411		
2247170	Q	DOUGLASTON PKWY	LIRR PORT WASH BR	L	O		3	S	10/19/2012	4.746	F	6,300	\$25,200,000	411		
2247680	Q	221ST ST	LIRR PORT WASH BR	L	O		3	S	9/14/2011	5.926	G	6,050	\$24,200,000	411		
2248060	Q	MOTOR PKWY (PED)	BELL BLVD		O-PED	P	2	C	6/22/2012	4.208	F	2,650	\$10,600,000	411		
2248070	Q	MOTOR PKWY (PED)	SPRINGFIELD BLVD		O-PED	P	3	C	6/5/2012	3.582	F	2,900	\$11,600,000	411		
2266129	Q	DOUGLASTON PKWY	BCIP SB		A		1	S	3/19/2012	4.592	F	4,400	\$17,600,000	411		
2266139	Q	DOUGLASTON PKWY	BCIP NB		A		1	S	3/20/2012	4.673	F	6,400	\$25,600,000	411		
7703720	Q	216TH ST PED BRDG	LIRR PORT WASH BR	L	O-PED		6	C	3/13/2012	3.889	F	400	\$1,600,000	411		

# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2231610	Q	GUY R. BREWER BLVD	BSOP		A		4	S	6/2/2011	6.222	VG	12,342	\$49,368,000	413		
2231620	Q	FARMERS BLVD	BSOP		A		2	S	5/10/2012	4.477	F	6,400	\$25,600,000	413		
2231630	Q	SPRINGFIELD BLVD	BSOP		A		2	S	5/10/2012	4.591	F	8,500	\$34,000,000	413		
2231640	Q	225TH ST	BSOP		A		2	S	5/10/2012	4.614	F	7,000	\$28,000,000	413		
2231650	Q	SUNRISE HWY W.B.	BLP E.B.		A		1	S	4/2/2012	4.393	F	4,100	\$16,400,000	413		
2231660	Q	SUNRISE HWY W.B.	BLP W.B.		A		2	S	3/6/2012	4.565	F	5,350	\$21,400,000	413		
2231670	Q	N CONDUIT AVE WB	BLP E.B.		A		1	S	1/25/2012	4.917	F	4,000	\$16,000,000	413		
2231680	Q	N CONDUIT AVE WB	BLP W.B.		A		2	S	1/25/2012	4.932	F	6,500	\$26,000,000	413		
2231690	Q	FRANCIS LEWIS BLVD	BLP E.B.		A		1	S	3/29/2012	5.167	G	6,000	\$24,000,000	413		
2231700	Q	FRANCIS LEWIS BLVD	BLP W.B.		A		1	S	3/29/2012	4.700	F	6,000	\$24,000,000	413		
2231710	Q	MERRICK BLVD	BLP N.B.		A		1	S	2/22/2012	4.467	F	6,000	\$24,000,000	413		
2231720	Q	MERRICK BLVD	BLP S.B.		A		1	S	2/15/2012	4.200	F	6,000	\$24,000,000	413		
2231730	Q	130TH AVE	BLP N.B.		A		1	S	1/20/2012	5.267	G	4,400	\$17,600,000	413		
2231740	Q	130TH AVE	BLP S.B.		A		1	S	1/20/2012	4.833	F	4,400	\$17,600,000	413		
2231750	Q	LINDEN BLVD	BCIP		A		2	S	3/2/2012	4.250	F	6,700	\$26,800,000	413		
2231760	Q	BCIP	DUTCH BROADWAY-115 AVE		A		1	S	3/6/2012	4.047	F	7,300	\$29,200,000	413		
2231770	Q	BELMONT PARK RAMP	BCIP		A	P	1	S	2/3/2012	4.688	F	3,200	\$12,800,000	413		
2231780	Q	HEMPSTEAD AVE	BCIP		A		2	S	2/3/2012	4.065	F	14,200	\$56,800,000	413		
2231790	Q	BELMONT PARK RAMP	BCIP		A	P	1	S	1/13/2012	4.563	F	3,400	\$13,600,000	413		
2231800	Q	SUPERIOR ROAD	BCIP		A		2	S	4/12/2012	4.659	F	7,000	\$28,000,000	413		
2231819	Q	JAMAICA AVE	BCIP		A		2	S	3/23/2012	4.773	F	11,500	\$46,000,000	413		
2231829	Q	BRADDOCK AVE	BCIP		A		2	S	3/23/2012	4.955	F	10,600	\$42,400,000	413		
2231840	Q	HILLSIDE AVE	BCIP		A		2	S	3/30/2012	4.026	F	9,672	\$38,688,000	413		
2231850	Q	UNION TPKE	BCIP		A		2	S	3/28/2012	4.409	F	13,600	\$54,400,000	413		
2248110	Q	MOTOR PKWY (PED)	ALLEY PK PED WALK		O-PED	P	1	C	6/7/2012	3.983	F	1,000	\$4,000,000	413		
2248129	Q	UNION TPKE	CREEDMOORE HOSP RD		O		1	S	6/24/2011	4.867	F	3,500	\$14,000,000	413		
2266149	Q	HEMPSTEAD AVE	BCIP RAMP NB		A		2	S	3/15/2012	3.937	F	9,500	\$38,000,000	413		
2266770	Q	BCIP	LAURELTON PKWY		A		1	S	3/8/2012	4.972	F	9,508	\$38,032,000	413		
2268770	Q	SPRINGFIELD BLVD	EQUES. PATH (ABAND.)		O		1	S	6/3/2011	4.667	F	1,470	\$5,880,000	413		
2300130	Q	ROCKAWAY BLVD	HOOK CREEK		WO		3	S	8/17/2011	6.271	VG	18,302	\$73,208,000	413		
Q000002	Q	BCIP	PATH OPP. 88TH RD		A		1	C	6/8/2012	4.667	F	1,272	\$5,088,000	413		
2248130	Q	FLUSHING MEADOW PK PED	WILLOW LK&76TH RD		WO-PED	P	4	C	4/20/2002	1.000	C	1,891	\$7,564,000	481		
2248140	Q	FLUSHING MEADW PK RD	STREAM N OF LIE		WO	P	5	S	8/19/2011	4.481	F	4,100	\$16,400,000	481		
2248260	Q	FLUSHING MDW PARK RD	MEADOW LAKE		WO	P	5	S	5/22/2012	4.458	F	4,200	\$16,800,000	481		
2248379	Q	FLUSHING MDW PARK RD	AQUACADE LAKE		WO	P	5	S	8/19/2011	4.296	F	6,300	\$25,200,000	481		
2230179	Q	JACKIE ROBINSON PKWY	METROPOLITAN AVE		A		2	S	5/4/2012	5.286	G	8,673	\$34,692,000	482		
2230180	Q	UNION TPKE	JACKIE ROBINSON PKWY		A		1	S	2/1/2012	5.672	G	5,359	\$21,436,000	482		
2230190	Q	MARKWOOD ROAD	JACKIE ROBINSON PKWY		A		1	S	2/1/2012	5.167	G	4,400	\$17,600,000	482	406	
2247620	Q	MYRTLE AVE	ABANDONED LIRR		O		3	S	1/6/2012	5.028	G	6,725	\$26,900,000	482	406	
2248369	Q	ROCKAWAY BLVD	THURSTON BASIN		WO		2	S	8/17/2011	5.474	G	6,000	\$24,000,000	483	413	

# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2248230	Q	BEACH CHANNEL DR WB	BEACH CHANNEL DR EB		O		1	S	7/13/2011	4.400	F	3,600	\$14,400,000	484		
2249040	R	TOMPKINS AVE	B&O RR (ABANDONED)		O		1	S	5/9/2012	5.953	G	5,096	\$20,384,000	501		
2249070	R	JOHN ST	B&O RR (ABANDONED)	O	O-PED		2	C	8/30/2012	5.620	G	1,050	\$4,200,000	501		
2249090	R	MORNINGSTAR ROAD	B&O RR (ABANDONED)	O	O		4	S	5/3/2012	4.864	F	7,900	\$31,600,000	501		
2249100	R	GRANITE AVE	B&O RR (ABANDONED)	O	O		4	S	3/13/2012	6.034	VG	7,300	\$29,200,000	501		
2249110	R	LAKE AVE	B&O RR (ABANDONED)	O	O		3	S	5/1/2012	5.333	G	5,900	\$23,600,000	501		
2249120	R	SIMONSON AVE	B&O RR (ABANDONED)	O	O		3	S	4/26/2011	5.963	G	5,819	\$23,276,000	501		
2249130	R	VAN NAME AVE	B&O RR (ABANDONED)	O	O		3	S	7/3/2012	5.186	G	5,474	\$21,896,000	501		
2249140	R	VAN PELT AVE	B&O RR (ABANDONED)	O	O		3	S	4/28/2011	5.576	G	5,000	\$20,000,000	501		
2249160	R	DE HART AVE	B&O RR (ABANDONED)	O	O		4	S	4/27/2011	6.389	VG	6,700	\$26,800,000	501		
2249170	R	UNION AVE	B&O RR (ABANDONED)	O	O		4	S	4/29/2011	5.167	G	6,500	\$26,000,000	501		
2249180	R	HARBOR ROAD	B&O RR (ABANDONED)	O	O		4	S	8/20/2011	6.220	VG	5,778	\$23,112,000	501		
2249200	R	SOUTH AVE	B&O RR (ABANDONED)	O	O		3	S	8/20/2011	6.709	VG	8,322	\$33,288,000	501		
2249510	R	TOMPKINS AVE	WILLOW AVE, SIRT	S	O		2	S	10/24/2012	5.358	G	5,378	\$21,512,000	501		
2249520	R	HANNAH ST	SIRT SOUTH SHORE	S	O		10	S	9/22/2011	4.898	F	10,020	\$40,080,000	501		
2249530	R	MINTHORNE ST PED BRDG	SIRT SOUTH SHORE	S	O-PED		26	C	10/4/2012	4.453	F	6,000	\$24,000,000	501		
2249710	R	WEST FOOTBRIDGE	CLOVE LAKE		WO-PED	P	2	C	8/1/2011	4.086	F	900	\$3,600,000	501		
2249720	R	EAST FOOTBRIDGE	CLOVE LAKE		WO-PED	P	2	C	8/2/2011	4.229	F	900	\$3,600,000	501		
2249730	R	BRIDGE OVER DAM	N.END CLOVE LAKE		WO-PED	P	1	C	8/1/2011	3.351	F	1,000	\$4,000,000	501		
2249760	R	MARTLINGS AVE	RICHMOND LAKE DAM		WO		2	S	6/9/2011	4.600	F	7,000	\$28,000,000	501		
2249770	R	S OF BROOKS LAKE	STREAM IN PARK		WO-PED	P	3	C	12/3/2012	4.946	F	700	\$2,800,000	501		
2249780	R	FOOTBRIDGE	BROOKS LAKE DAM		WO-PED	P	1	C	5/24/2012	3.433	F	800	\$3,200,000	501		
2249790	R	FB S OF FOREST AV	STREAM IN PARK		WO-PED	P	3	C	10/5/2012	4.651	F	700	\$2,800,000	501		
2249800	R	FOREST AVE	CLOVE LAKES PK STREAM		WO	P	1	S	10/7/2011	4.567	F	1,600	\$6,400,000	501		
2249840	R	TOMPKINS AVE	GREENFIELD AVE		O		1	S	3/2/2012	5.021	G	2,690	\$10,760,000	501		
2269730	R	PARKING EXIT RAMP	SIRT	S	O	F	10	S	11/30/2012	6.097	VG	20,727	\$82,908,000	501		
2269740	R	BUS STATION NORTH	SIRT	S	O	F	12	S	10/26/2012	4.660	F	64,605	\$258,420,000	501		
2269750	R	BUS STATION SOUTH	SIRT	S	O	F	12	S	11/14/2012	5.360	G	154,688	\$618,752,000	501		
2269760	R	NORTH RAMP	SIRT	S	O	F	9	S	11/30/2012	6.278	VG	17,589	\$70,356,000	501		
2269770	R	BUS STA ENTR RAMP	SIRT	S	O	F	19	S	11/26/2012	4.181	F	39,333	\$157,332,000	501		
2269780	R	PARKING ENTR RAMP	SIRT	S	O	F	3	S	11/12/2012	5.944	G	8,589	\$34,356,000	501		
2269790	R	BUS STATION EXIT RAMP	SIRT	S	O	F	7	S	10/22/2012	4.778	F	28,721	\$114,884,000	501		
2270170	R	SI FERRY PED BRDG	PARKING LOT EXIT RDWY		O-PED	F	5	C	6/17/2010	3.163	F	2,917	\$11,668,000	501		
2270180	R	BOROUGH PLACE - RAMP A	STATEN ISLAND RAILWAY	S	O	F	1	S	12/29/2005	4.938	F	1,250	\$5,000,000	501		
2240350	R	RICHMOND AVE	RICHMOND CREEK		WO		3	S	6/8/2011	5.472	G	32,589	\$130,356,000	502		
2249400	R	BEACH AVE	SIRT SOUTH SHORE	S	O		2	S	8/4/2011	5.364	G	3,700	\$14,800,000	502		
2249410	R	ROSS AVE	SIRT SOUTH SHORE	S	O		2	S	8/5/2011	5.379	G	3,800	\$15,200,000	502		
2249420	R	ROSE AVE	SIRT SOUTH SHORE	S	O		2	S	8/8/2011	5.409	G	3,800	\$15,200,000	502		
2249430	R	NEW DORP LANE	SIRT SOUTH SHORE	S	O		2	S	10/14/2011	4.847	F	7,600	\$30,400,000	502		
2249440	R	BANCROFT AVE	SIRT SOUTH SHORE	S	O		3	S	10/13/2011	5.328	G	5,900	\$23,600,000	502		



# INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2249450	R	FREMONT AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED		3	C	7/27/2012	3.618	F	800	\$3,200,000	502		
2249460	R	LINCOLN AVE	SIRT SOUTH SHORE	S	O		1	S	11/18/2011	5.172	G	4,500	\$18,000,000	502		
2249470	R	MIDLAND AVE	SIRT SOUTH SHORE	S	O		1	S	11/22/2011	5.466	G	3,000	\$12,000,000	502		
2249480	R	FINGERBOARD ROAD	SIRT SOUTH SHORE	S	O		2	S	10/5/2011	6.486	VG	5,100	\$20,400,000	502		
2249490	R	CLOVE ROAD	SIRT SOUTH SHORE	S	O		3	S	10/25/2012	5.917	G	5,104	\$20,416,000	502		
2249860	R	SLATER BLVD	NEW CREEK		WO		1	S	5/4/2011	5.510	G	2,037	\$8,148,000	502		
2249870	R	TRAVIS AVE	MAIN CREEK		WO		1	S	9/26/2011	5.483	G	1,700	\$6,800,000	502		
2249880	R	CHELSEA ROAD	SAWMILL CREEK		WO		1	S	5/6/2011	6.816	VG	2,205	\$8,820,000	502		
2249210	R	MAIN ST PED BRDG	SIRT SOUTH SHORE	S	O-PED		9	C	7/24/2012	4.123	F	400	\$1,600,000	503		
2249230	R	TRACY AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED		9	C	7/19/2012	3.553	F	635	\$2,540,000	503		
2249240	R	ARTHUR KILL ROAD	SIRT SOUTH SHORE	S	O		1	S	10/22/2012	4.648	F	3,650	\$14,600,000	503		
2249250	R	BETHEL AV PED BRDG	SIRT SOUTH SHORE	S	O-PED		12	C	7/20/2012	3.525	F	111	\$444,000	503		
2249269	R	PAGE AVE	SIRT SOUTH SHORE	S	O		4	S	8/25/2011	5.889	G	30,710	\$122,840,000	503		
2249270	R	RICHMOND VALLY ROAD	SIRT SOUTH SHORE	S	O		4	S	8/23/2011	5.284	G	9,440	\$37,760,000	503		
2249280	R	CHAMP COURT PED BRDG	SIRT SOUTH SHORE	S	O-PED		7	C	7/20/2012	4.036	F	595	\$2,380,000	503		
2249290	R	SEGUINE AVE	SIRT SOUTH SHORE	S	O		1	S	9/26/2011	6.016	VG	3,250	\$13,000,000	503		
2249300	R	HUGENOT AVE	SIRT SOUTH SHORE	S	O		2	S	10/3/2011	4.788	F	4,900	\$19,600,000	503		
2249320	R	ALBEE AVE	SIRT SOUTH SHORE	S	O		3	S	10/4/2011	4.492	F	6,500	\$26,000,000	503		
2249330	R	ANNADALE ROAD	SIRT SOUTH SHORE	S	O		1	S	8/17/2011	6.433	VG	3,540	\$14,160,000	503		
2249350	R	NELSON AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED		3	C	7/25/2012	4.115	F	300	\$1,200,000	503		
2249360	R	GIFFORDS LANE	SIRT SOUTH SHORE	S	O		1	S	10/23/2012	5.531	G	3,042	\$12,168,000	503		
2249370	R	GREAVES AVE	SIRT SOUTH SHORE	S	O		1	S	8/16/2011	6.550	VG	2,650	\$10,600,000	503		
2249380	R	GUYON AVE	SIRT SOUTH SHORE	S	O		3	S	9/9/2011	4.377	F	6,900	\$27,600,000	503		
2249390	R	CEDARVIEW AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED		5	C	7/26/2012	3.615	F	625	\$2,500,000	503		
2249580	R	BELFIELD AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED		5	C	10/5/2012	3.902	F	400	\$1,600,000	503		
2249810	R	HYLAN BLVD	LEMON CREEK		WO		1	S	2/15/2012	6.313	VG	11,400	\$45,600,000	503		
2249820	R	ARTHUR KILL ROAD	ARTHUR KILL STREAM		WO		1	S	5/5/2011	4.184	F	1,300	\$5,200,000	503		
2268920	R	AMBOY ROAD	LEMON CREEK		WO		1	S	2/15/2012	6.333	VG	1,310	\$5,240,000	503		
787 OPEN BRIDGES		OPEN SPANS 4,398									OPEN SF	14,533,529	\$ 58,141,680,000	ALL		

# INVENTORY SORTED BY FEATURE CARRIED

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2243310	K	2ND AVE	LIRR BAY RIDGE	N	O		2	S	10/2/2012	6.236	VG	17,751	\$71,004,000	310		
2243320	K	3RD AVE	LIRR BAY RIDGE	N	O		4	S	9/14/2011	5.083	G	17,230	\$68,920,000	310		
2244160	K	3RD AVE	SHORE RD DRIVE		O		1	S	5/24/2011	6.727	VG	4,360	\$17,440,000	310		
2231270	K	4TH AVE	BSHP		A		2	S	3/16/2012	4.579	F	6,100	\$24,400,000	310		
2243330	K	4TH AVE	LIRR BAY RIDGE	NT	O		4	S	8/30/2011	5.653	G	13,668	\$54,672,000	310		
2243839	K	4TH AVE	NYCTA BMT TRACKS	T	O		1	S	8/24/2011	6.300	VG	4,440	\$17,760,000	307		
2066100	K	5TH AVE	27 X PROSPECT EXPWY		A		1	S	5/18/2012	5.063	G	8,800	\$35,200,000	307		
2244480	K	5TH AVE	GREENWOOD CEMETERY		O		1	S	9/8/2011	4.667	F	3,600	\$14,400,000	307		
2243580	K	5TH AVE	LIRR & SEA BEACH	NT	O		4	S	11/12/2012	3.941	F	12,395	\$49,580,000	310		
2243590	K	6TH AVE	LIRR & SEA BEACH	NT	O		2	S	9/30/2011	6.306	VG	14,382	\$57,528,000	310		
2243280	K	6TH AVE	LIRR ATLANTIC AVE	L	O		9	S	9/13/2012	5.431	G	12,276	\$49,104,000	302		
2243600	K	7TH AVE	LIRR & SEA BEACH	NT	O		7	S	11/12/2012	4.778	F	18,628	\$74,512,000	310		
2243920	K	7TH AVE	NYCTA BMT YARD	T	O		2	S	9/10/2012	6.042	VG	4,700	\$18,800,000	307		
2243610	K	8TH AVE	LIRR & SEA BEACH	NT	O		2	S	9/30/2011	6.181	VG	10,834	\$43,336,000	310		
2243840	K	9TH AVE	NYCTA BMT YARD	T	O		5	S	8/19/2011	5.736	G	12,440	\$49,760,000	312		
2243940	K	9TH AVE	NYCTA IND SBWY	T	O		5	S	8/19/2011	4.737	F	6,300	\$25,200,000	312		
2245209	M	11TH AVE	AMTRAK 30 ST BRANCH	A	O		2	S	6/4/2012	4.471	F	15,400	\$61,600,000	104		
2243630	K	11TH AVE	LIRR & SEA BEACH	NT	O		5	S	11/13/2012	5.985	G	9,700	\$38,800,000	310		
2245010	M	11TH AVE VIADUCT	LIRR WEST SIDE YARD	AL	O		39	S	12/28/2012	4.056	F	157,500	\$630,000,000	104		
2243640	K	13TH AVE	LIRR & SEA BEACH	NT	O		5	S	9/23/2011	4.694	F	16,000	\$64,000,000	310		
2231970	Q	14TH AVE	BCIP		A		2	S	2/8/2012	4.614	F	8,100	\$32,400,000	407		
2243650	K	14TH AVE	LIRR BAY RIDGE	N	O		1	S	11/13/2012	6.333	VG	4,720	\$18,880,000	311		
2243670	K	15TH AVE	BMT SEA BEACH	T	O		4	S	6/26/2011	6.386	VG	16,020	\$64,080,000	311		
2243340	K	15TH AVE	LIRR BAY RIDGE	N	O		1	S	11/14/2012	4.872	F	3,614	\$14,456,000	311		
2243680	K	16TH AVE	BMT SEA BEACH	T	O		3	S	8/30/2012	5.296	G	6,816	\$27,264,000	311		
2243360	K	16TH AVE	LIRR BAY RIDGE	N	O		1	S	10/4/2012	5.350	G	4,345	\$17,380,000	311		
2243690	K	17TH AVE	BMT SEA BEACH	T	O		4	S	8/30/2012	6.173	VG	8,946	\$35,784,000	311		
2243370	K	17TH AVE	LIRR BAY RIDGE	N	O		1	S	10/5/2012	4.745	F	3,406	\$13,624,000	312		
2231300	K	17TH AVE PED BRDG	BSHP		A-PED	P	1	C	8/22/2012	3.614	F	2,100	\$8,400,000	311		
2243700	K	18TH AVE	BMT SEA BEACH	T	O		1	S	8/25/2011	6.632	VG	5,200	\$20,800,000	311		
2243380	K	18TH AVE	LIRR BAY RIDGE	N	O		1	S	9/28/2012	4.688	F	6,006	\$24,024,000	312		
2243710	K	19TH AVE	BMT SEA BEACH	T	O		4	S	8/29/2012	4.184	F	4,800	\$19,200,000	311		
2243720	K	20TH AVE	BMT SEA BEACH	T	O		1	S	8/31/2012	6.673	VG	7,000	\$28,000,000	311		
2243820	K	21ST AVE	BMT SEA BEACH	T	O		4	S	9/7/2012	3.974	F	21,400	\$85,600,000	311		
2247270	Q	21ST ST	LIRR N SIDE DIV	L	O		6	S	11/14/2011	5.153	G	17,590	\$70,360,000	402		
2231330	K	27TH AVE PED BRDG	BSHP		A-PED	P	1	C	1/20/2012	4.106	F	2,100	\$8,400,000	313		
2231890	Q	28TH AVE PED BRDG	BCIP		A-PED	P	24	C	6/11/2012	4.517	F	7,600	\$30,400,000	411		
2230730	Q	31ST AVE	278I NB (BQE WEST LEG)		A		1	S	7/15/2011	6.217	VG	5,875	\$23,500,000	401		
2230657	Q	31ST ST	278I (B.Q.E.)		A		2	S	12/5/2012	4.569	F	9,500	\$38,000,000	401		
2230640	Q	32ND ST	278I (B.Q.E.)		A		2	S	6/24/2011	4.875	F	8,100	\$32,400,000	401		

# INVENTORY SORTED BY FEATURE CARRIED

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SRC	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2230630	Q	35TH ST	278I (B.Q.E.)		A		4	S	3/22/2012	4.667	F	9,000	\$36,000,000	401		
2247370	Q	37TH AVE	CSX - HELLGATE	C	O		1	S	8/29/2011	6.234	VG	6,868	\$27,472,000	402		
2230620	Q	37TH ST	278I (B.Q.E.)		A		2	S	3/22/2012	4.681	F	5,300	\$21,200,000	401		
2247330	Q	39TH ST (NORTH)	SUNNYSIDE YARD	A	O		14	S	10/31/2011	6.556	VG	48,200	\$192,800,000	402	401	
2247640	Q	39TH ST (SOUTH)	AMTRAK & LIRR YARD	AL	O		9	S	10/28/2011	6.014	VG	34,100	\$136,400,000	402		
2230570	Q	41ST AVE	278I (B.Q.E.)		A		2	S	11/20/2012	6.735	VG	8,580	\$34,320,000	402		
2247390	Q	41ST AVE	CSX - HELLGATE	C	O		2	S	9/8/2011	4.942	F	4,400	\$17,600,000	402	404	
2247410	Q	43RD AVE	CSX TRANSPORT	C	O		1	S	9/8/2011	5.000	G	4,800	\$19,200,000	402	404	
2247420	Q	44TH AVE	CSX TRANSPORT	C	O		1	S	9/6/2011	5.000	G	5,100	\$20,400,000	402	404	
2230840	Q	44TH ST	GCP		A		2	S	5/17/2012	4.764	F	5,000	\$20,000,000	401		
2247430	Q	45TH AVE	CSX TRANSPORT	C	O		1	S	9/9/2011	5.306	G	2,400	\$9,600,000	402	404	
2230820	Q	47TH ST	GCP		A		2	S	5/17/2012	4.889	F	5,700	\$22,800,000	401		
2247290	Q	49TH AVE	LIRR,AMTRAK	L	O		5	S	12/3/2012	4.014	F	20,400	\$81,600,000	402		
2230800	Q	49TH ST	278I (BQE WEST LEG)		A		2	S	4/16/2012	5.278	G	4,900	\$19,600,000	401		
2230890	Q	49TH ST	GCP		A		2	S	5/17/2012	4.444	F	6,350	\$25,400,000	401		
2243400	K	50TH ST	LIRR BAY RIDGE	N	O		2	S	9/1/2011	4.731	F	7,100	\$28,400,000	312		
1247280	Q	51 AVE PED BR (2247280)	LIRR MAIN LINE	L	O-PED		5	C	3/8/2012	3.018	F	700	\$2,800,000	402		
2243390	K	52ND ST	LIRR BAY RIDGE	N	O		1	S	9/28/2012	6.250	VG	3,293	\$13,172,000	312		
2247190	Q	55TH AVE PED BRDG	LIRR MAIN LINE	L	O-PED		3	C	4/3/2012	4.240	F	13,000	\$52,000,000	404		
2247450	Q	57TH AVE	CSX TRANSPORT	C	O		1	S	9/9/2011	6.073	VG	2,248	\$8,992,000	405		
2247650	Q	60TH RD PED BRDG	LIRR MAIN LINE	L	O-PED		3	C	3/7/2012	4.786	F	2,293	\$9,172,000	405	406	
2243350	K	60TH ST	LIRR BAY RIDGE	N	O		1	S	8/31/2011	6.133	VG	3,900	\$15,600,000	311		
2247540	Q	60TH ST	LIRR MONTAUK DIV	L	O		2	S	10/5/2011	5.208	G	5,340	\$21,360,000	405		
2230520	Q	65TH PLACE	278I (B.Q.E.)		A		2	S	2/7/2012	5.972	G	11,668	\$46,672,000	402		
2247160	Q	65TH PLACE	LIRR MAIN LINE	L	O		3	S	10/20/2011	6.441	VG	8,381	\$33,524,000	402		
2243730	K	65TH ST	BMT SEA BEACH	T	O		4	S	8/28/2012	5.132	G	12,000	\$48,000,000	311		
2247150	Q	65TH ST	LIRR MAIN LINE	L	O		3	S	10/17/2011	6.375	VG	6,344	\$25,376,000	402		
1247200	Q	67 AVE PED BR (2247200)	LIRR MAIN LINE	L	O-PED		3	C	4/3/2012	4.219	F	1,300	\$5,200,000	406		
2230550	Q	69TH ST	278I (B.Q.E.)		A		2	S	1/19/2012	5.263	G	12,600	\$50,400,000	402		
2065950	Q	69TH STREET	495I (L.I.E.)		A		2	S	7/27/2011	5.250	G	10,336	\$41,344,000	405		
2247490	Q	69TH STREET	CSX TRANSPORT	C	O		1	S	12/17/2012	4.979	F	6,175	\$24,700,000	405		
2230560	Q	70TH ST	278I (B.Q.E.)		A		2	S	11/20/2012	6.722	VG	8,580	\$34,320,000	402		
2248300	Q	71ST AVE	COOPER AVE		O	P	1	S	7/12/2011	4.373	F	2,800	\$11,200,000	405		
2246150	M	72 ST CROSS DR (TERRACE BRDG)	PED PATH TO FOUNTAIN		O	P	3	S	3/1/2012	5.786	G	7,300	\$29,200,000	164		
2246160	M	73 ST PED BRDG (BOW BRIDGE)	THE LAKE		WO-PED	P	1	C	5/25/2012	4.244	F	1,700	\$6,800,000	164		
2267717	M	79 ST PED PLAZA	79 ST BT BASIN GAR		A	P	10	S	5/3/2011	4.593	F	27,400	\$109,600,000	107		
226771B	M	79 ST RAMP TO GAR	79 ST BT BASIN GAR		AR	P	21	S	5/22/2012	4.452	F	8,989	\$35,956,000	107		
226771A	M	79 ST RAMP TO HHP	79 ST BT BASIN GAR		AR	P	4	S	5/9/2012	4.221	F	3,131	\$12,524,000	107		
2267718	M	79 ST TRAFFIC CIRC	79 ST PED PLAZA		A	P	34	S	5/11/2011	4.000	F	24,130	\$96,520,000	107		
2246440	M	79 TH ST PED BRDG	TRANSVERSE RD #2		O-PED	P	1	C	8/9/2012	3.926	F	5,900	\$23,600,000	164		

INVENTORY SORTED BY FEATURE CARRIED

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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2247220	Q	80TH ROAD	LIRR MAIN LINE	L	O		3	S	9/29/2011	4.857	F	4,100	\$16,400,000	409		
2247570	Q	80TH ST	77TH AVE - LIRR MT	L	O		5	S	11/27/2012	5.102	G	11,725	\$46,900,000	405		
2231250	K	81ST ST PED BRDG	BSHP		A-PED	P	5	C	3/23/2012	4.761	F	3,100	\$12,400,000	310		
2247230	Q	82ND AVE	LIRR MAIN LINE	L	O		3	S	9/21/2011	5.377	G	4,100	\$16,400,000	409		
2243570	K	86TH ST	BMT SEA BEACH	T	O		1	S	8/27/2012	5.953	G	12,167	\$48,668,000	313		
1247010	Q	91 PLACE (2247010)	LIRR PT WASH BR	L	O		1	S	11/3/2011	6.567	VG	2,760	\$11,040,000	404		
2231260	K	92ND ST PED BRDG	BSHP		A-PED	P	6	C	9/18/2012	3.475	F	3,000	\$12,000,000	310		
2247020	Q	94TH ST PED BRDG	LIRR PORT WASH BR	L	O-PED		5	C	4/9/2012	4.091	F	500	\$2,000,000	404		
2248250	Q	102ND ST	HAWTREE BASIN		WO		3	S	8/15/2011	5.941	G	4,900	\$19,600,000	410		
2231730	Q	130TH AVE	BLP N.B.		A		1	S	1/20/2012	5.267	G	4,400	\$17,600,000	413		
2231740	Q	130TH AVE	BLP S.B.		A		1	S	1/20/2012	4.833	F	4,400	\$17,600,000	413		
2231590	Q	130TH ST	BSOP		A		2	S	1/30/2012	4.659	F	6,800	\$27,200,000	410		
2240089	BM	145TH ST BRIDGE	HARLEM RIVER		WMO		8	S	9/23/2011	6.250	VG	56,700	\$226,800,000	110	204	201
2231980	Q	147TH ST	BCIP		A		2	S	3/8/2012	4.705	F	6,300	\$25,200,000	407		
2247070	Q	147TH ST	LIRR PORT WASH BR	L	O		1	S	9/13/2011	5.471	G	2,800	\$11,200,000	407		
2247090	Q	149TH PLACE	LIRR PORT WASH BR	L	O		2	S	9/13/2011	5.000	G	4,300	\$17,200,000	407		
2231960	Q	149TH ST	BCIP		A		2	S	2/8/2012	4.795	F	6,210	\$24,840,000	407		
2247080	Q	149TH ST	LIRR PORT WASH BR	L	O		1	S	12/10/2012	4.776	F	4,100	\$16,400,000	407		
2231950	Q	150TH ST	BCIP		A		2	S	2/8/2012	4.682	F	5,900	\$23,600,000	407		
2247100	Q	150TH ST	LIRR PORT WASH BR	L	O		2	S	9/13/2011	6.029	VG	7,830	\$31,320,000	407		
2231920	Q	160TH ST	BCIP		A		2	S	6/27/2011	5.750	G	5,550	\$22,200,000	407		
2240650	Q	163RD AVE PED BRDG	HAWTREE BASIN		WO-PED		13	C	9/19/2011	4.174	F	5,000	\$20,000,000	410		
7705510	Q	167TH ST PED BRDG	LIRR PORT WASH BR	L	O-PED		3	C	3/12/2012	3.902	F	600	\$2,400,000	407		
206672A	B	174TH ST-NTH PED BRDG	895I - SHERIDAN EXPWY		A-PED		4	C	6/6/2012	4.667	F	1,800	\$7,200,000	209		
206672B	B	174TH ST-STH PED BRDG	895I - SHERIDAN EXPWY		A-PED		4	C	6/6/2012	4.750	F	1,900	\$7,600,000	209		
2241259	B	204TH ST PED BRDG	METRO NORTH RR HAR	M	O-PED	P	1	C	2/2/2012	3.948	F	4,700	\$18,800,000	227	207	
7703720	Q	216TH ST PED BRDG	LIRR PORT WASH BR	L	O-PED		6	C	3/13/2012	3.889	F	400	\$1,600,000	411		
2247680	Q	221ST ST	LIRR PORT WASH BR	L	O		3	S	9/14/2011	5.926	G	6,050	\$24,200,000	411		
2231640	Q	225TH ST	BSOP		A		2	S	5/10/2012	4.614	F	7,000	\$28,000,000	413		
2229450	B	232ND ST	HHP		A		2	S	7/19/2011	5.026	G	4,900	\$19,600,000	208		
2229460	B	236TH ST PED BRDG	HHP		A-PED		3	C	6/12/2012	4.672	F	2,500	\$10,000,000	208		
2229470	B	239TH ST	HHP		A		2	S	4/29/2011	5.053	G	6,100	\$24,400,000	208		
2229490	B	246TH ST	HHP		A		2	S	4/29/2011	4.868	F	5,600	\$22,400,000	208		
2229500	B	252ND ST	HHP		A		2	S	1/20/2012	5.372	G	4,500	\$18,000,000	208		
224004J	M	25X	NYC GARAGE		OE		14	S	4/23/2012	4.829	F	22,058	\$88,232,000	108		
2266540	B	278I	BRUCKNER BLVD		A		2	S	7/8/2011	4.371	F	32,900	\$131,600,000	201		
2230679	Q	278I (B.Q.E.)	34TH AVE		A		1	S	6/7/2011	6.203	VG	7,793	\$31,172,000	402		
2230669	Q	278I (B.Q.E.)	35TH AVE		A		1	S	8/3/2011	6.390	VG	13,135	\$52,540,000	402		
2230470	K	278I (B.Q.E.)	JAY ST		A		1	S	2/3/2012	4.833	F	5,100	\$20,400,000	302		
2230510	K	278I (B.Q.E.)	NASSAU ST		A		6	S	6/11/2012	5.169	G	51,200	\$204,800,000	302		

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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2230680	Q	278I (B.Q.E.)	NORTHERN BLVD		A		1	S	12/4/2012	6.016	VG	27,011	\$108,044,000	402	401	
2230460	K	278I (B.Q.E.)	PEARL ST		A		1	S	2/2/2012	5.467	G	4,500	\$18,000,000	302		
2230480	K	278I (B.Q.E.)	PROSPECT ST		A		1	S	2/13/2012	5.056	G	8,400	\$33,600,000	302		
2230500	K	278I (B.Q.E.)	RAMP TO BQE EB		A		1	S	2/21/2012	4.967	F	1,300	\$5,200,000	302		
2230490	K	278I (B.Q.E.)	SANDS ST		A		1	S	2/22/2012	5.093	G	12,600	\$50,400,000	302		
2230430	K	278I (B.Q.E.) RAMP TO BKLN BRDG	PROSPECT ST		A		1	S	1/5/2012	5.000	G	1,100	\$4,400,000	302		
2230780	Q	278I (BQE EAST LEG)	30TH AVE		A		1	S	6/14/2011	6.206	VG	7,071	\$28,284,000	403	401	
2230770	Q	278I (BQE WEST LEG)	30TH AVE		A		1	S	6/15/2011	6.322	VG	6,199	\$24,796,000	401		
2268508	K	278I E.B. (B.Q.E.)	278I W.B. (B.Q.E.)		A		11	S	6/5/2011	4.103	F	20,529	\$82,116,000	302		
2268518	K	278I E.B. (B.Q.E.)	278I W.B. (B.Q.E.)		A		5	S	6/9/2011	4.119	F	9,275	\$37,100,000	302		
2268498	K	278I E.B. (B.Q.E.)	278I WB (BQE)		A		69	S	11/13/2011	3.965	F	133,708	\$534,832,000	302		
2230888	K	278I E.B. (B.Q.E.)	CADMAN PLAZA / 278I WB		A		2	S	6/29/2012	5.263	G	4,500	\$18,000,000	302		
2230450	K	278I EB (B.Q.E.)	ADAMS ST		A		1	S	1/10/2012	4.933	F	2,500	\$10,000,000	302		
2230858	K	278I EB (B.Q.E.)	JORALEMON ST / BQE WB		A		1	S	10/9/2011	4.619	F	5,900	\$23,600,000	302		
2230410	K	278I EB (B.Q.E.)	WASHINGTON ST		A		1	S	6/25/2012	4.500	F	2,500	\$10,000,000	302		
2230760	Q	278I NB (BQE EAST LEG)	31ST AVE		A		1	S	8/30/2012	6.610	VG	4,161	\$16,644,000	401		
2230700	Q	278I NB (BQE EAST LEG)	32ND AVE (TO BQE WEST LEG)		A		8	S	12/4/2012	6.465	VG	31,600	\$126,400,000	401	403	
2230690	Q	278I NB (BQE WEST LEG)	32ND AVE		A		1	S	6/22/2012	6.407	VG	4,080	\$16,320,000	401		
2230830	Q	278I NB (BQE WEST LEG)	GCP		A		2	S	5/17/2012	4.583	F	7,600	\$30,400,000	401		
2230720	Q	278I SB (BQE EAST LEG)	278I NB (BQE WEST LEG)		A		3	S	7/22/2011	6.182	VG	20,896	\$83,584,000	401		
2230710	Q	278I SB (BQE WEST LEG)	32ND AVE		A		1	S	8/2/2011	6.559	VG	5,240	\$20,960,000	401		
2230750	Q	278I SB (BQE EAST LEG)	31ST AVE		A		1	S	8/1/2011	6.508	VG	4,221	\$16,884,000	401	403	
2230740	Q	278I SB (BQE WEST LEG)	31ST AVE		A		1	S	8/1/2011	6.217	VG	5,246	\$20,984,000	401		
2230887	K	278I W.B. (B.Q.E.)	CADMAN PLAZA		A		2	S	6/29/2012	4.569	F	4,500	\$18,000,000	302		
2268497	K	278I W.B. (B.Q.E.)	FURMAN ST		A		45	S	8/6/2011	4.357	F	86,406	\$345,624,000	302		
2268517	K	278I W.B. (B.Q.E.)	FURMAN ST		A		7	S	6/28/2011	3.882	F	10,988	\$43,952,000	302		
2268507	K	278I W.B. (B.Q.E.)	YORK ST		A		6	S	6/8/2011	4.071	F	10,388	\$41,552,000	302		
2230440	K	278I WB (B.Q.E.)	ADAMS ST		A		1	S	1/10/2012	5.167	G	2,700	\$10,800,000	302		
2230857	K	278I WB (B.Q.E.)	JORALEMON ST		A		1	S	3/5/2012	5.000	G	2,100	\$8,400,000	302		
2230420	K	278I WB (B.Q.E.)	WASHINGTON ST		A		1	S	6/25/2012	5.047	G	2,500	\$10,000,000	302		
2066002	Q	495I (2066000)	WOODHAVEN BLVD		A		2	S	6/14/2011	5.592	G	25,200	\$100,800,000	406	404	
2266160	Q	678I SB TO BCIP EB	ACCESS RD FROM 678I		A		1	S	7/24/2012	3.734	F	2,300	\$9,200,000	407		
2246490	M	A.C. POWELL BLVD N.B.	A.C. POWELL BLVD		O		1	S	2/1/2012	4.367	F	3,000	\$12,000,000	110		
2249320	R	ALBEE AVE	SIRT SOUTH SHORE	S	O		3	S	10/4/2011	4.492	F	6,500	\$26,000,000	503		
2268920	R	AMBOY ROAD	LEMON CREEK		WO		1	S	2/15/2012	6.333	VG	1,310	\$5,240,000	503		
2247530	Q	ANDREWS AVE	LIRR MONTAUK DIV	L	O		1	S	9/22/2011	7.000	VG	1,765	\$7,060,000	405		
2249330	R	ANNADALE ROAD	SIRT SOUTH SHORE	S	O		1	S	8/17/2011	6.433	VG	3,540	\$14,160,000	503		
2249820	R	ARTHUR KILL ROAD	ARTHUR KILL STREAM		WO		1	S	5/5/2011	4.184	F	1,300	\$5,200,000	503		
2249240	R	ARTHUR KILL ROAD	SIRT SOUTH SHORE	S	O		1	S	10/22/2012	4.648	F	3,650	\$14,600,000	503		
2230810	Q	ASTORIA BLVD EB	278I (BQE WEST LEG)		A		4	S	3/28/2012	4.044	F	8,200	\$32,800,000	401		

INVENTORY SORTED BY FEATURE CARRIED



# INVENTORY SORTED BY FEATURE CARRIED

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2243569	K	ATLANTIC AVE	LIRR ATLANTIC AVE	L	O		75	S	5/25/2012	3.676	F	135,100	\$540,400,000	316	305	
2244170	K	ATLNTC AV SVC RD E.B.	EAST NEW YORK AVE		O		2	S	7/20/2011	5.474	G	3,192	\$12,768,000	305		
2244180	K	ATLNTC AV SVC RD W.B.	EAST NEW YORK AVE		O		2	S	7/20/2011	4.965	F	5,600	\$22,400,000	305		
2243530	K	AVENUE H	LIRR BAY RIDGE	N	O		2	S	9/9/2011	5.956	G	35,100	\$140,400,000	318		
2243750	K	AVENUE O	BMT SEA BEACH	T	O		1	S	9/1/2011	5.706	G	4,658	\$18,632,000	311		
2243760	K	AVENUE P	BMT SEA BEACH	T	O		1	S	8/31/2011	5.674	G	5,544	\$22,176,000	311		
2243790	K	AVENUE S	BMT SEA BEACH	T	O		1	S	9/15/2011	5.967	G	5,360	\$21,440,000	315		
2243800	K	AVENUE T	BMT SEA BEACH	T	O		1	S	9/15/2011	6.033	VG	5,360	\$21,440,000	311		
2243810	K	AVENUE U	BMT SEA BEACH	T	O		1	S	9/11/2012	5.294	G	5,880	\$23,520,000	315		
2249440	R	BANCROFT AVE	SIRT SOUTH SHORE	S	O		3	S	10/13/2011	5.328	G	5,900	\$23,600,000	502		
2241180	B	BARRETTO ST	AMTRAK - CSX	AC	O		1	S	10/8/2012	6.000	G	5,313	\$21,252,000	202		
2232000	M	BATTERY PLACE	FDR DRIVE		AT		2	S	12/21/2011	5.318	G	142,000	\$568,000,000	101		
2231290	K	BAY 8TH ST	BSHP		A		1	S	5/14/2011	5.952	G	4,950	\$19,800,000	311		
2243740	K	BAY PKWY	BMT SEA BEACH	T	O		4	S	8/28/2012	4.553	F	16,800	\$67,200,000	311		
2231760	Q	BCIP	DUTCH BROADWAY-115 AVE		A		1	S	3/6/2012	4.047	F	7,300	\$29,200,000	413		
2266770	Q	BCIP	LAURELTON PKWY		A		1	S	3/8/2012	4.972	F	9,508	\$38,032,000	413		
Q00002	Q	BCIP	PATH OPP. 88TH RD		A		1	C	6/8/2012	4.667	F	1,272	\$5,088,000	413		
2231900	Q	BCIP	TOTTEN AVE		A		1	S	6/1/2012	4.609	F	4,900	\$19,600,000	407		
2076109	B	BE NB SERVICE RD	HUTCHINSON RVR PKWY		A		2	S	9/1/2011	4.632	F	7,800	\$31,200,000	210		
2076129	B	BE SB SERVICE RD	HUTCHINSON RVR PKWY		A		2	S	1/19/2012	5.079	G	7,100	\$28,400,000	210		
2249400	R	BEACH AVE	SIRT SOUTH SHORE	S	O		2	S	8/4/2011	5.364	G	3,700	\$14,800,000	502		
2248230	Q	BEACH CHANNEL DR WB	BEACH CHANNEL DR EB		O		1	S	7/13/2011	4.400	F	3,600	\$14,400,000	484		
2243490	K	BEDFORD AVE	LIRR BAY RIDGE	N	O		6	S	9/24/2012	4.319	F	12,000	\$48,000,000	314		
2241840	B	BEDFORD PARK BLVD	METRO NORTH RR HAR	M	O		1	S	4/20/2012	4.844	F	6,400	\$25,600,000	227	207	
2241930	B	BEDFORD PARK BLVD	NYCTA IND YARDS	T	O		4	S	11/20/2012	5.403	G	46,300	\$185,200,000	207		
2249580	R	BELFIELD AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED		5	C	10/5/2012	3.902	F	400	\$1,600,000	503		
2247140	Q	BELL BLVD	LIRR PORT WASH BR	L	O		1	S	9/14/2011	5.780	G	4,320	\$17,280,000	411		
2231770	Q	BELMONT PARK RAMP	BCIP		A	P	1	S	2/3/2012	4.688	F	3,200	\$12,800,000	413		
2231790	Q	BELMONT PARK RAMP	BCIP		A	P	1	S	1/13/2012	4.563	F	3,400	\$13,600,000	413		
2249250	R	BETHEL AV PED BRDG	SIRT SOUTH SHORE	S	O-PED		12	C	7/20/2012	3.525	F	111	\$444,000	503		
2243100	K	BEVERLY ROAD	BMT SUBWAY, BRIGHTON	T	O		3	S	7/27/2012	3.982	F	4,200	\$16,800,000	314		
2243900	K	BLAKE AVE	LIRR BAY RIDGE LINE	N	O		3	S	9/25/2012	5.000	G	4,912	\$19,648,000	316		
2240410	Q	BORDEN AVE	DUTCH KILLS		WMO		2	S	7/26/2011	4.792	F	8,400	\$33,600,000	402		
2270180	R	BOROUGH PLACE - RAMP A	STATEN ISLAND RAILWAY	S	O	F	1	S	12/29/2005	4.938	F	1,250	\$5,000,000	501		
2229579	B	BOSTON POST ROAD	HUTCHINSON RIVER		WO		14	S	5/23/2012	4.194	F	95,700	\$382,800,000	212		
2242110	B	BOSTON ROAD	BRONX RIVER		WO		1	S	3/2/2012	4.227	F	6,200	\$24,800,000	227		
2242100	B	BOTANICAL GARDEN ROAD	TWIN LAKES		WO	P	1	S	3/1/2012	4.833	F	2,200	\$8,800,000	227		
2247050	Q	BOWNE AVE	LIRR PORT WASH BR	L	O		1	S	10/4/2012	5.333	G	4,974	\$19,896,000	407		
2231829	Q	BRADDOCK AVE	BCIP		A		2	S	3/23/2012	4.955	F	10,600	\$42,400,000	413		
2249730	R	BRIDGE OVER DAM	N.END CLOVE LAKE		WO-PED	P	1	C	8/1/2011	3.351	F	1,000	\$4,000,000	501		

INVENTORY SORTED BY FEATURE CARRIED

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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2230590	Q	BROADWAY	278I (B.Q.E.)		O		2	S	12/6/2012	5.789	G	16,000	\$64,000,000	402		
2240137	BM	BROADWAY BRIDGE	HARLEM RIVER	TM	WMO		3	S	12/7/2012	3.806	F	46,848	\$187,392,000	112	207	208
2242072	B	BRONX BLVD N.B.	BRONX RIVER		WO		1	S	3/19/2012	4.967	F	1,800	\$7,200,000	212		
2242082	B	BRONX BLVD N.B.	BRONX RIVER		WO		1	S	3/22/2012	4.467	F	2,800	\$11,200,000	212		
2242071	B	BRONX BLVD S.B.	BRONX RIVER		WO		1	S	3/19/2012	4.633	F	1,800	\$7,200,000	212		
2242081	B	BRONX BLVD S.B.	BRONX RIVER		WO		1	S	3/21/2012	4.467	F	2,800	\$11,200,000	212		
2229560	B	BRONX PELHAM PKWY	AMTRAK - CSX	AC	A		3	S	5/25/2012	4.542	F	24,591	\$98,364,000	211		
2075849	B	BRONX PELHAM PKWY	HUTCHINSON RVR PKWY		A		2	S	6/6/2012	3.763	F	17,600	\$70,400,000	210	211	
2065629	B	BRONX RIVER PKWY	BOSTON RD BX ZOO		A		1	S	8/22/2011	5.276	G	6,300	\$25,200,000	227		
2270250	B	BROOKE AVE	CSX TRANS - PT MORRIS		O		1	S	3/22/2012	3.800	F	21,035	\$84,140,000	201		
2243520	K	BROOKLYN AVE	LIRR BAY RIDGE	N	O		3	S	9/9/2011	6.236	VG	4,500	\$18,000,000	318		
2267860	K	BROOKLYN BR APPROACH	STORAGE (SANDS ST)		O		1	S	7/19/2012	4.411	F	6,490	\$25,960,000	302		
2240019	KM	BROOKLYN BRIDGE	EAST RIVER		WEO		75	S	11/12/2012	2.944	P	503,788	\$2,015,152,000	103	302	101
2268350	K	BROOKLYN PROMENADE	278I EB (BQE)		A-PED	P	35	C	5/31/2012	3.690	F	46,184	\$184,736,000	302		
2241099	B	BRUCKNER BLVD	CSX TRANS - PT MORRIS	C	O		1	S	8/7/2012	6.450	VG	6,700	\$26,800,000	201		
2076929	B	BRUCKNER EXPWY	CSX - HUNTS POINT	C	A		1	S	9/15/2011	4.700	F	3,800	\$15,200,000	202		
2075352	B	BRUCKNER EXPWY NB	AMTRAK - CSX	AC	A		1	S	11/19/2012	6.444	VG	10,900	\$43,600,000	202		
2066672	B	BRUCKNER EXPWY NB	BRONX RIVER		WMA		8	S	10/22/2011	4.269	F	22,300	\$89,200,000	202	209	
2075351	B	BRUCKNER EXPWY SB	AMTRAK - CSX	AC	A		1	S	11/19/2012	6.032	VG	11,600	\$46,400,000	202		
2066671	B	BRUCKNER EXPWY SB	BRONX RIVER		WMA		3	S	10/22/2011	5.278	G	12,400	\$49,600,000	202	209	
1066510	B	BRUCKNER EXPWY SVC RD	WESTCHESTER CREEK		WMA		17	S	10/8/2012	3.516	F	39,400	\$157,600,000	209		
2241210	B	BRYANT AVE	AMTRAK - CSX	AC	O		1	S	10/11/2012	3.051	F	5,300	\$21,200,000	202		
2231329	K	BSHP	26TH AVE		A		1	S	4/20/2012	4.600	F	6,700	\$26,800,000	313		
2231319	K	BSHP	BAY PKWY		A		1	S	6/2/2012	4.267	F	7,200	\$28,800,000	311		
2231249	K	BSHP	BAY RIDGE AVE		A		1	S	3/26/2012	3.625	F	4,900	\$19,600,000	310		
2231429	K	BSHP	BEDFORD AVE		A		3	S	4/20/2012	4.042	F	12,000	\$48,000,000	315		
2231509	K	BSHP	FRESH CREEK		WA		5	S	10/21/2012	6.915	VG	23,000	\$92,000,000	356		
2231450	K	BSHP	GERRITSEN INLET		WA		11	S	7/24/2012	3.463	F	52,000	\$208,000,000	356		
2231479	K	BSHP	MILL BASIN		WMA		14	S	10/10/2012	3.179	F	73,500	\$294,000,000	318		
2231439	K	BSHP	NOSTRAND AVE		A		3	S	4/20/2012	3.986	F	13,000	\$52,000,000	315		
2231419	K	BSHP	OCEAN AVE		A		3	S	4/12/2012	4.500	F	14,000	\$56,000,000	315		
2231360	K	BSHP	OCEAN PKWY		A		3	S	6/25/2012	6.299	VG	29,637	\$118,548,000	313		
2231489	K	BSHP	PAERDEGAT BASIN		WA		15	S	11/28/2012	3.340	F	58,300	\$233,200,000	318		
2231499	K	BSHP	ROCKAWAY PKWY		A		4	S	10/27/2012	6.644	VG	11,500	\$46,000,000	356		
2231409	K	BSHP	SHEEPSHEAD BAY ROAD		A		1	S	4/12/2012	4.672	F	6,500	\$26,000,000	315		
2230790	Q	BULOVA AVE	278I (BQE WEST LEG)		A		2	S	4/16/2012	5.278	G	3,300	\$13,200,000	401		
2269770	R	BUS STA ENTR RAMP	SIRT	S	O	F	19	S	11/26/2012	4.181	F	39,333	\$157,332,000	501		
2269790	R	BUS STATION EXIT RAMP	SIRT	S	O	F	7	S	10/22/2012	4.778	F	28,721	\$114,884,000	501		
2269740	R	BUS STATION NORTH	SIRT	S	O	F	12	S	10/26/2012	4.660	F	64,605	\$258,420,000	501		
2269750	R	BUS STATION SOUTH	SIRT	S	O	F	12	S	11/14/2012	5.360	G	154,688	\$618,752,000	501		

INVENTORY SORTED BY FEATURE CARRIED

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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2247460	Q	CALDWELL AVE	CSX TRANSPORT	C	O		1	S	12/17/2012	5.889	G	2,243	\$8,972,000	405		
2243290	K	CARLTON AVE	LIRR ATLANTIC AVE	L	O		7	S	3/7/2012	5.069	G	10,823	\$43,292,000	302		
2240260	K	CARROLL ST	GOWANUS CANAL		WMO		2	S	7/6/2012	4.634	F	3,000	\$12,000,000	306		
2243220	K	CARROLL ST PED BRDG	FRANKLIN SHUTTLE	T	O-PED		3	C	12/17/2012	5.099	G	600	\$2,400,000	309		
2243050	K	CATON AVE	BMT SUBWAY, BRIGHTON	T	O		4	S	8/10/2011	4.500	F	20,800	\$83,200,000	314		
2249390	R	CEDARVIEW AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED		5	C	7/26/2012	3.615	F	625	\$2,500,000	503		
2246050	M	CENTER DR (DRIPROCK ARCH)	PED OPP 63RD ST		O	P	1	S	1/11/2012	4.867	F	1,725	\$6,900,000	164		
2244050	K	CENTER DR (NETHERMEAD ARCHES)	PED PATH & STREAM		WO	P	3	S	5/9/2011	5.000	G	7,400	\$29,600,000	355		
2246070	M	CENTER DR (PLAYMATES ARCH)	PED PATH OPP 65TH ST		O	P	1	C	6/27/2012	4.367	F	1,129	\$4,516,000	164		
2246100	M	CENTER DRIVE	TRANSVERSE RD #1		O	P	1	S	2/3/2012	4.333	F	6,000	\$24,000,000	164		
2268480	M	CHAMBERS ST PED BRDG	RTE 9A - WEST ST		O-PED		10	C	5/24/2012	5.167	G	7,481	\$29,924,000	101		
2249280	R	CHAMP COURT PED BRDG	SIRT SOUTH SHORE	S	O-PED		7	C	7/20/2012	4.036	F	595	\$2,380,000	503		
2249880	R	CHELSEA ROAD	SAWMILL CREEK		WO		1	S	5/6/2011	6.816	VG	2,205	\$8,820,000	502		
2243080	K	CHURCH AVE	BMT SUBWAY, BRIGHTON	T	O		4	S	8/10/2011	4.545	F	18,200	\$72,800,000	314		
2240210	B	CITY ISLAND ROAD	EASTCHESTER BAY		WO		7	S	10/19/2012	3.389	F	19,915	\$79,660,000	228		
2241710	B	CLAREMONT PKWY	METRO NORTH RR HAR	M	O		1	S	4/16/2012	4.426	F	6,300	\$25,200,000	203		
2231940	Q	CLINTONVILLE ST	BCIP		A		2	S	2/3/2012	4.705	F	7,400	\$29,600,000	407		
2249490	R	CLOVE ROAD	SIRT SOUTH SHORE	S	O		3	S	10/25/2012	5.917	G	5,104	\$20,416,000	502		
2231570	Q	COHANCY ST	BSOP		A		2	S	4/24/2012	4.395	F	6,400	\$25,600,000	410		
2230870	K	COLUMBIA HEIGHTS	278I (B.Q.E.)		A		1	S	7/9/2012	4.383	F	16,500	\$66,000,000	302		
2241590	B	CONCOURSE VILL AVE	METRO NORTH RR HAR	M	O		1	S	4/20/2012	3.969	F	12,077	\$48,308,000	204		
2244460	K	CONDUIT BLVD NB	ATLANTIC AVE EB		O		1	S	10/8/2012	4.833	F	3,800	\$15,200,000	305		
2231380	K	CONEY ISLAND AVE	BSHP		A		4	S	9/20/2011	5.986	G	19,866	\$79,464,000	313		
2243440	K	CONEY ISLAND AVE	LIRR BAY RIDGE	N	O		1	S	9/26/2012	5.106	G	3,231	\$12,924,000	312		
2230390	K	CONGRESS ST	278I (B.Q.E.)		A		2	S	3/26/2012	6.029	VG	5,000	\$20,000,000	306		
2246510	M	CORBIN PL OVERPASS	CORBIN PLACE		O	P	1	S	1/9/2012	5.000	G	2,223	\$8,892,000	112		
2232029	M	CORLEARS PARK ROAD	FDR DRIVE		A	P	4	S	3/28/2012	3.938	F	4,100	\$16,400,000	103		
2247130	Q	CORPORAL KENNEDY ST	LIRR PORT WASH BR	L	O		1	S	11/3/2011	6.235	VG	3,379	\$13,516,000	411		
2243110	K	CORTELYOU ROAD	BMT SUBWAY, BRIGHTON	T	O		3	S	8/25/2011	6.139	VG	4,810	\$19,240,000	314		
2231880	Q	CROCHERON PK PED	BCIP		A-PED	P	9	C	6/23/2011	4.188	F	2,300	\$9,200,000	411		
2243040	K	CROOKE AVE	BMT SUBWAY, BRIGHTON	T	O		4	S	10/8/2012	4.211	F	6,000	\$24,000,000	314		
2231340	K	CROPSEY AVE	BSHP		A		2	S	6/13/2012	4.722	F	13,100	\$52,400,000	313		
2240301	K	CROPSEY AVE	CONEY ISLAND CREEK		WO		3	S	6/10/2011	5.225	G	9,400	\$37,600,000	313		
2240302	K	CROPSEY AVE	CONEY ISLAND CREEK		WO		3	S	10/2/2012	4.718	F	9,400	\$37,600,000	313		
2231559	Q	CROSS BAY BLVD	BSHP		A		4	S	6/1/2012	5.139	G	23,205	\$92,820,000	410		
2248039	Q	CROSS BAY BLVD	NASSAU EXPWY - RTE 27		O		2	S	6/23/2011	6.347	VG	16,544	\$66,176,000	410		
2242030	B	CROTONA AVE	BRONX PELHAM PKWY		O		2	S	1/18/2012	5.447	G	7,600	\$30,400,000	206		
2243230	K	CROWN ST	FRANKLIN SHUTTLE	T	O		3	S	10/11/2011	5.097	G	4,060	\$16,240,000	309		
2230040	Q	CYPRESS HILLS ST	JACKIE ROBINSON PKWY		A		1	S	4/5/2012	4.722	F	5,000	\$20,000,000	405		
2249160	R	DE HART AVE	B&O RR (ABANDONED)	O	O		4	S	4/27/2011	6.389	VG	6,700	\$26,800,000	501		

# INVENTORY SORTED BY FEATURE CARRIED

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2232030	M	DELANCEY ST PED BRDG	FDR DRIVE		A-PED	P	12	C	5/2/2012	4.443	F	2,900	\$11,600,000	103		
2076640	B	DEPOT PLACE	METRO NORTH RR HUD	CM	O		11	S	6/8/2012	4.944	F	26,566	\$106,264,000	204		
2243130	K	DITMAS AVE	BMT SUBWAY, BRIGHTON	T	O		1	S	10/4/2011	5.723	G	5,150	\$20,600,000	314		
2243120	K	DORCHESTER ROAD	BMT SUBWAY, BRIGHTON	T	O		1	S	12/3/2012	5.863	G	4,825	\$19,300,000	314		
2266139	Q	DOUGLASTON PKWY	BCIP NB		A		1	S	3/20/2012	4.673	F	6,400	\$25,600,000	411		
2266129	Q	DOUGLASTON PKWY	BCIP SB		A		1	S	3/19/2012	4.592	F	4,400	\$17,600,000	411		
2247170	Q	DOUGLASTON PKWY	LIRR PORT WASH BR	L	O		3	S	10/19/2012	4.746	F	6,300	\$25,200,000	411		
2243420	K	E 3RD ST	LIRR BAY RIDGE	N	O		1	S	9/1/2011	6.517	VG	1,840	\$7,360,000	312		
2232050	M	E 6TH ST PED BRDG	FDR DRIVE		A-PED	P	19	C	3/22/2012	4.233	F	2,200	\$8,800,000	103		
2233020	M	E 10TH ST PED BRDG	FDR DRIVE		A-PED	P	21	C	3/20/2012	4.193	F	2,754	\$11,016,000	103		
2231390	K	E 12TH ST	BSHP		A		4	S	6/13/2012	4.542	F	17,200	\$68,800,000	315		
2233080	K	E 14 ST PED BRDG	BSHP		A-PED		14	C	7/16/2012	3.836	F	4,700	\$18,800,000	315		
2243450	K	E 14TH ST	LIRR BAY RIDGE	N	O		1	S	9/26/2012	4.809	F	1,775	\$7,100,000	314		
2243460	K	E 15TH ST PED BRDG	LIRR BAY RIDGE	N	O-PED		3	C	3/8/2012	5.592	G	900	\$3,600,000	314		
2232070	M	E 25TH ST PED BRDG	FDR DRIVE		A-PED		3	C	3/16/2012	4.627	F	1,700	\$6,800,000	106		
2246540	M	E 34TH ST	PARK AVE TUNNEL		OT		1	S	9/13/2012	4.117	F	36,200	\$144,800,000	105	106	
2246570	M	E42ND ST - E47TH ST	FIRST AVE TUNNEL		OT		2	S	5/22/2012	4.882	F	95,000	\$380,000,000	106		
2232100	M	E 51ST ST PED BRDG	FDR DRIVE		A-PED	P	6	C	3/23/2012	4.567	F	2,800	\$11,200,000	106		
2233040	M	E 60TH ST	FDR DRIVE		A		17	S	7/3/2012	5.000	G	24,480	\$97,920,000	108		
2246030	M	E 62 ST PED BRDG (GAPSTOW BRDG)	THE POND		O-PED	P	1	C	5/25/2012	3.897	F	1,400	\$5,600,000	164		
2232110	M	E 64TH ST PED BRDG	FDR DRIVE		A-PED	P	11	U	11/23/2011	4.912	F	2,100	\$8,400,000	108		
2232120	M	E 71ST ST PED BRDG	FDR DRIVE		A-PED	P	19	C	9/7/2012	5.000	G	340	\$1,360,000	108		
2232140	M	E 78TH ST PED BRDG	FDR DRIVE		A-PED	P	9	C	4/17/2012	6.944	VG	3,120	\$12,480,000	108		
2246450	M	E77 ST PED (GLADE ARCH)	PED PATH OPP E77 ST		O-PED	P	1	C	1/24/2012	4.138	F	5,000	\$20,000,000	164		
2269820	M	E 81 ST PED BRDG	FDR DRIVE N.B.		A-PED	P	3	C	5/15/2012	3.341	F	900	\$3,600,000	108		
2246390	M	E86 ST PED (SE RESERVOIR BRDG)	BRIDLE PATH		O-PED	P	3	C	10/31/2011	4.509	F	1,100	\$4,400,000	164		
2245319	M	E 97TH ST	METRO NORTH MAIN LN	M	O		1	S	12/7/2012	4.647	F	3,200	\$12,800,000	111		
2232180	M	E 103RD ST PED BRDG	FDR DRIVE		A-PED		18	C	9/8/2012	4.395	F	4,800	\$19,200,000	111		
2232190	M	E 111TH ST PED BRDG	FDR DRIVE		A-PED	P	9	C	9/20/2012	4.128	F	4,200	\$16,800,000	111		
2232200	M	E 120TH ST PED BRDG	FDR DRIVE		A-PED	P	18	C	9/18/2012	3.914	F	3,978	\$15,912,000	111		
2246990	M	E 129TH ST PED BRDG	3RD AVE BRDG RAMP		O-PED		5	C	10/5/2012	4.095	F	1,046	\$4,184,000	111		
2241550	B	E 144TH ST	METRO NORTH RR HAR	M	O		2	S	7/11/2011	6.264	VG	8,290	\$33,160,000	201		
2241129	B	E 149TH ST	AMTRAK - CSX	AC	O		2	S	10/8/2012	4.620	F	18,258	\$73,032,000	201	202	
2241560	B	E 149TH ST	METRO NORTH RR HAR	M	O		8	S	5/8/2012	4.819	F	27,900	\$111,600,000	201	204	
2241050	B	E 149TH ST/JACKSON AVE	CSX TRANS - PT MORRIS	C	O		1	S	6/7/2012	4.850	F	65,000	\$260,000,000	201		
2270030	B	E 156TH ST	ACCESS TO HOUSING		O	ED	16	S	12/14/2012	3.493	F	49,696	\$198,784,000	204		
2241010	B	E 156TH STREET	CSX TRANS - PT MORRIS	C	O		1	S	6/18/2012	4.612	F	2,400	\$9,600,000	201		
2241600	B	E 158TH ST	METRO NORTH RR HAR	M	O		1	S	7/12/2011	5.200	G	3,400	\$13,600,000	204		
2241610	B	E 161ST ST	METRO NORTH RR HAR	M	O		1	S	10/12/2011	5.017	G	6,600	\$26,400,000	204	203	
2241020	B	E 161ST STREET	CSX TRANS - PT MORRIS	C	O		1	S	3/21/2012	6.700	VG	12,800	\$51,200,000	203		

INVENTORY SORTED BY FEATURE CARRIED

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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2241620	B	E 162ND ST	METRO NORTH RR HAR	M	O		1	S	4/20/2012	4.859	F	4,700	\$18,800,000	203		
2241030	B	E 163RD STREET	CSX TRANS - PT MORRIS	C	O		1	S	3/1/2012	4.611	F	3,200	\$12,800,000	203		
2241630	B	E 165TH ST	METRO NORTH RR HAR	M	O		1	S	4/20/2012	4.300	F	16,400	\$65,600,000	203		
2241650	B	E 167TH ST	METRO NORTH RR HAR	M	O		1	S	4/17/2012	5.510	G	3,363	\$13,452,000	203		
2241660	B	E 168TH ST	METRO NORTH RR HAR	M	O		1	S	4/18/2012	4.641	F	4,800	\$19,200,000	203		
2241670	B	E 169TH ST	METRO NORTH RR HAR	M	O		1	S	4/18/2012	4.250	F	3,300	\$13,200,000	203		
2241680	B	E 170TH ST	METRO NORTH RR HAR	M	O		1	S	4/16/2012	6.333	VG	3,150	\$12,600,000	203		
2241720	B	E 173RD ST	METRO NORTH RR HAR	M	O		1	S	4/16/2012	4.875	F	3,000	\$12,000,000	203		
2066720	B	E 174TH ST	SHERIDAN EXPWY/AMTRAK	A	A		13	S	8/20/2012	4.153	F	35,573	\$142,292,000	209	203	
2241740	B	E 175TH ST	METRO NORTH RR HAR	M	O		1	S	4/16/2012	3.938	F	3,600	\$14,400,000	206		
2241269	B	E 177TH ST	AMTRAK - CSX	AC	O		3	S	8/27/2012	5.403	G	16,606	\$66,424,000	206		
2241770	B	E 178TH ST PED BRDG	METRO NORTH RR HAR	M	O-PED		1	C	2/6/2012	4.918	F	700	\$2,800,000	206		
2241780	B	E 179TH ST PED BRDG	METRO NORTH RR HAR	M	O-PED		6	C	2/3/2012	5.763	G	700	\$2,800,000	206		
2242400	B	E 180TH ST	BRONX RIVER		WO		1	S	8/28/2012	4.810	F	4,500	\$18,000,000	206	227	
2241790	B	E 180TH ST	METRO NORTH RR HAR	M	O		1	S	4/11/2012	3.906	F	5,000	\$20,000,000	206		
2241800	B	E 183TH ST	METRO NORTH RR HAR	M	O		1	S	4/11/2012	4.109	F	4,080	\$16,320,000	206		
2241820	B	E 187TH ST	METRO NORTH RR HAR	M	O		1	S	4/11/2012	4.344	F	3,800	\$15,200,000	206		
2241810	B	E 188TH ST	METRO NORTH RR HAR	M	O		1	S	4/11/2012	4.063	F	5,300	\$21,200,000	206		
2241839	B	E 189TH ST	METRO NORTH RR HAR	M	O		1	S	7/6/2011	6.333	VG	43,157	\$172,628,000	206	207	
2242459	B	E 233RD ST	BRONX RIVER		WO		1	S	2/22/2012	4.233	F	7,000	\$28,000,000	212		
2242460	B	E 233RD ST	ENTR RD BNX RVR PKWY		O		1	S	1/10/2012	4.867	F	5,300	\$21,200,000	212		
2241870	B	E 233RD ST	METRO NORTH RR HAR	M	O		1	S	4/30/2012	4.902	F	7,664	\$30,656,000	212	207	
2241890	B	E 241ST ST	BRP, METRO NORTH HAR	M	WO		28	S	10/5/2011	4.306	F	49,500	\$198,000,000	212		
2241270	B	E TREMONT AVE	AMTRAK - CSX	AC	O		2	S	8/27/2012	5.153	G	22,300	\$89,200,000	209	211	
2242149	B	E TREMONT AVE	BRONX RIVER		WO		2	S	5/30/2012	4.500	F	12,900	\$51,600,000	206		
2075820	B	E TREMONT AVE	HUTCHINSON RVR PKWY		A		2	S	11/21/2011	4.444	F	10,200	\$40,800,000	210		
2241760	B	E TREMONT AVE	METRO NORTH RR HAR	M	O		1	S	7/6/2011	6.450	VG	8,424	\$33,696,000	206		
2242260	B	EAGLE AVE	E 161ST ST		O		1	S	2/10/2012	5.017	G	2,800	\$11,200,000	201	203	
2244040	K	EAST DR (EAST WOOD ARCH)	PED PATH NR CENTER DR		O	P	1	C	6/27/2012	4.067	F	1,066	\$4,262,400	355		
2244010	K	EAST DR (ENDALE ARCH)	PED PATH NR GRND ARMY PLZ		O	P	1	C	5/15/2012	4.833	F	1,533	\$6,132,000	355		
2246069	M	EAST DR (GREEN GAP ARCH)	PED BET E 63ST & E 64ST		O	P	1	S	1/18/2012	4.433	F	2,075	\$8,300,000	164		
2246350	M	EAST DR (GREYWACKE ARCH)	PED PATH OPP E 80TH ST		O	P	1	C	5/4/2012	3.733	F	1,266	\$5,064,000	164		
2246470	M	EAST DR (HUDDLESTONE ARCH)	THE LOCH		WO	P	1	S	1/26/2012	4.500	F	1,100	\$4,400,000	164		
2246040	M	EAST DR (INSOPE ARCH)	PED PATH OPP E 62 ST		O	P	1	C	4/4/2012	4.400	F	1,515	\$6,060,000	164		
2246170	M	EAST DR (TREFOIL ARCH)	PED PATH OPP E 73RD ST		O	P	1	S	1/30/2012	5.130	G	1,900	\$7,600,000	164		
2246130	M	EAST DR (WILLOWDELL ARCH)	PED PATH OPP E 67TH ST		O	P	1	C	4/25/2012	3.395	F	666	\$2,665,600	164		
2244030	K	EAST DRIVE	BRIDLE PATH NR ZOO		O	P	1	S	4/27/2011	4.878	F	2,000	\$8,000,000	355		
2246110	M	EAST DRIVE	TRANSVERSE RD #1		O	P	1	S	3/23/2012	4.667	F	6,000	\$24,000,000	164		
2246230	M	EAST DRIVE	TRANSVERSE RD #2		O	P	1	S	3/21/2012	4.600	F	5,080	\$20,320,000	164		
2246250	M	EAST DRIVE	TRANSVERSE RD #3		O	P	1	S	1/18/2012	4.433	F	4,500	\$18,000,000	164		

INVENTORY SORTED BY FEATURE CARRIED



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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2246270	M	EAST DRIVE	TRANSVERSE RD #4		O	P	1	S	3/23/2012	4.100	F	7,000	\$28,000,000	164		
2249720	R	EAST FOOTBRIDGE	CLOVE LAKE		WO-PED	P	2	C	8/2/2011	4.229	F	900	\$3,600,000	501		
2242010	B	EAST FORDHAM RD	BRONX RIVER		WA		1	S	3/5/2012	5.207	G	9,200	\$36,800,000	227		
2242350	B	EAST FORDHAM RD	GRAND CONCOURSE		O		1	S	2/17/2012	4.567	F	10,300	\$41,200,000	205	207	
2241900	B	EASTCHESTER ROAD	NYCTA-DYRE AVE LN	T	O		3	S	11/19/2012	4.486	F	13,500	\$54,000,000	212		
2243279	K	EASTERN PKWY	FRANKLIN SHUTTLE	T	O		1	S	9/6/2012	4.861	F	7,700	\$30,800,000	309	308	
2247470	Q	ELIOT AVE	CSX TRANSPORT	C	O		1	S	10/4/2011	5.083	G	2,960	\$11,840,000	405		
2247550	Q	ELIOT AVE	LIRR MONTAUK DIV	L	O		2	S	9/19/2011	5.712	G	9,550	\$38,200,000	405		
2248160	Q	ELLIOT AVE	QUEENS BLVD		O		2	S	8/7/2012	4.804	F	13,785	\$55,140,000	406		
2269600	K	ERSKINE ST	BSHP		A		1	S	8/20/2012	5.938	G	8,258	\$33,032,000	305		
2241200	B	FAILE ST	AMTRAK - CSX	AC	O		1	S	10/12/2012	5.578	G	6,208	\$24,832,000	202		
2231620	Q	FARMERS BLVD	BSOP		A		2	S	5/10/2012	4.477	F	6,400	\$25,600,000	413		
2249790	R	FB S OF FOREST AV	STREAM IN PARK		WO-PED	P	3	C	10/5/2012	4.651	F	700	\$2,800,000	501		
223201A	M	FDR DR N.B. OFF RMP	FDR DR & SOUTH ST		AR		17	S	4/24/2012	3.925	F	23,373	\$93,492,000	101		
223201C	M	FDR DR S.B. OFF RMP	SOUTH ST		AR		8	S	2/9/2012	4.821	F	36,700	\$146,800,000	103		
2233038	M	FDR DRIVE SB	FDR NB / E 62ND ST		AT		34	S	12/5/2012	6.563	VG	58,700	\$234,800,000	106	108	
2268650	M	FDR NB E42ND TO E49TH ST	EAST RIVER		A		119	S	10/28/2011	3.660	F	30,767	\$123,068,000	106		
223204A	M	FDR NB RAMP TO HOUSTON ST	RELIEF		AR		4	S	1/20/2012	4.706	F	6,150	\$24,600,000	103		
2229520	B	FIELDSTON ROAD	HHP		A		1	S	7/21/2011	5.033	G	6,600	\$26,400,000	208		
2249480	R	FINGERBOARD ROAD	SIRT SOUTH SHORE	S	O		2	S	10/5/2011	6.486	VG	5,100	\$20,400,000	502		
2231460	K	FLATBUSH AVE	BSHP		A		2	S	9/22/2011	6.250	VG	14,058	\$56,232,000	356		
2243260	K	FLATBUSH AVE	FRANKLIN SHUTTLE	T	O		2	S	7/23/2012	4.922	F	11,300	\$45,200,000	309		
2243510	K	FLATBUSH AVE	LIRR BAY RIDGE	N	O		2	S	10/5/2012	4.730	F	5,900	\$23,600,000	318		
2248090	Q	FLSHG MDW PK PED	COLLEGE POINT BLVD		O-PED	P	3	C	2/23/2012	4.694	F	8,400	\$33,600,000	407		
2248240	Q	FLUSHING AV SERVICE RD	FLUSHING AVE		O		1	S	7/12/2011	5.250	G	2,940	\$11,760,000	405		
2248379	Q	FLUSHING MDW PARK RD	AQUACADE LAKE		WO	P	5	S	8/19/2011	4.296	F	6,300	\$25,200,000	481		
2248260	Q	FLUSHING MDW PARK RD	MEADOW LAKE		WO	P	5	S	5/22/2012	4.458	F	4,200	\$16,800,000	481		
2248130	Q	FLUSHING MEADOW PK PED	WILLOW LK&76TH RD		WO-PED	P	4	C	4/20/2002	1.000	C	1,891	\$7,564,000	481		
2248140	Q	FLUSHING MEADW PK RD	STREAM N OF LIE		WO	P	5	S	8/19/2011	4.481	F	4,100	\$16,400,000	481		
2249780	R	FOOTBRIDGE	BROOKS LAKE DAM		WO-PED	P	1	C	5/24/2012	3.433	F	800	\$3,200,000	501		
2249800	R	FOREST AVE	CLOVE LAKES PK STREAM		WO	P	1	S	10/7/2011	4.567	F	1,600	\$6,400,000	501		
2248340	Q	FOREST PARK DR	MYRTLE AVE		O	P	3	S	6/13/2011	4.984	F	5,100	\$20,400,000	409		
2247660	Q	FOREST PARK DRIVE	ABANDONED LIRR		O	P	6	S	2/23/2012	4.524	F	10,000	\$40,000,000	409		
2247590	Q	FOREST PARK DRIVE	LIRR MONTAUK DIV	L	O	P	5	S	10/1/2012	5.158	G	6,000	\$24,000,000	409		
2243620	K	FORT HAMILTON PKWY	LIRR & SEA BEACH	NT	O		3	S	9/19/2012	4.729	F	14,800	\$59,200,000	310		
2246500	M	FORT TRYON PLACE	ENTR FROM RIVERSIDE DR		O	P	1	S	2/8/2012	4.200	F	3,280	\$13,120,000	112		
2243150	K	FOSTER AVE	BMT SUBWAY, BRIGHTON	T	O		1	S	7/25/2012	4.383	F	3,000	\$12,000,000	314		
2231930	Q	FRANCIS LEWIS BLVD	BCIP		A		3	S	2/3/2012	4.682	F	9,100	\$36,400,000	407		
2231690	Q	FRANCIS LEWIS BLVD	BLP E.B.		A		1	S	3/29/2012	5.167	G	6,000	\$24,000,000	413		
2231700	Q	FRANCIS LEWIS BLVD	BLP W.B.		A		1	S	3/29/2012	4.700	F	6,000	\$24,000,000	413		

INVENTORY SORTED BY FEATURE CARRIED

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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2267199	Q	FRANCIS LEWIS BLVD	CUNNINGHAM PK RD		O		1	S	5/27/2011	5.033	G	7,085	\$28,340,000	408		
2249450	R	FREMONT AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED		3	C	7/27/2012	3.618	F	800	\$3,200,000	502		
224006A	B	FROM BRUCKNER BLVD	RELIEF		OR		5	S	9/28/2011	6.761	VG	14,037	\$56,148,000	201		
224005A	M	FROM FDR DRIVE	HARLEM RIVER DR		OR		11	S	11/29/2012	7.000	VG	28,233	\$112,932,000	111		
2242120	B	FTBG N OF RTE 1	BRONX RIVER		WO-PED	P	1	C	7/13/2012	3.583	F	1,900	\$7,600,000	227		
226771C	M	GAR RAMP TO 79 ST	79 ST BT BASIN GAR		AR	P	21	S	5/22/2012	4.435	F	9,095	\$36,380,000	107		
2241420	B	GERARD AVE	METRO NORTH RR HUD	M	O		1	S	5/16/2012	5.797	G	5,063	\$20,252,000	204		
2249360	R	GIFFORDS LANE	SIRT SOUTH SHORE	S	O		1	S	10/23/2012	5.531	G	3,042	\$12,168,000	503		
2243860	K	GLENMORE AVE	LIRR BAY RIDGE	N	O		2	S	9/25/2012	6.559	VG	5,616	\$22,464,000	316		
2065940	Q	GRAND AVE	495I (L.I.E.)		A		2	S	12/6/2012	4.861	F	12,850	\$51,400,000	405		
2247440	Q	GRAND AVE	CSX TRANSPORT	C	O		1	S	9/9/2011	6.183	VG	3,280	\$13,120,000	405		
2247180	Q	GRAND AVE	LIRR MAIN LINE	L	O		3	S	10/24/2012	4.396	F	7,415	\$29,660,000	404		
2242370	B	GRAND CONCOURSE	BEDFORD PARK BLVD		O		1	S	2/16/2012	4.137	F	8,418	\$33,672,000	207		
2242360	B	GRAND CONCOURSE	BURNSIDE AVE		O		2	S	8/2/2012	4.441	F	8,400	\$33,600,000	205		
2242299	B	GRAND CONCOURSE	E 138TH ST		O		1	S	5/25/2011	4.467	F	9,500	\$38,000,000	201		
2242259	B	GRAND CONCOURSE	E 161ST ST		O		1	S	7/31/2012	6.333	VG	27,017	\$108,068,000	204		
2242280	B	GRAND CONCOURSE	E 167TH ST		O		2	S	7/20/2012	4.754	F	42,900	\$171,600,000	204		
2242300	B	GRAND CONCOURSE	E 170TH ST		O		2	S	2/23/2012	4.789	F	39,300	\$157,200,000	204		
2242319	B	GRAND CONCOURSE	E 174TH ST	T	O		1	S	2/24/2012	4.067	F	14,900	\$59,600,000	204		
2242329	B	GRAND CONCOURSE	E 175TH ST	T	O		1	S	7/17/2012	4.833	F	11,900	\$47,600,000	205		
2242380	B	GRAND CONCOURSE	E 204TH ST		O		1	S	9/26/2011	5.484	G	9,272	\$37,088,000	207		
2242330	B	GRAND CONCOURSE	E TREMONT AVE		O		1	S	9/28/2011	5.983	G	11,700	\$46,800,000	205		
2242340	B	GRAND CONCOURSE	EAST KINGSBRIDGE		O		2	S	7/24/2012	4.714	F	18,285	\$73,140,000	207		
2241409	B	GRAND CONCOURSE	METRO NORTH RR HUD	MT	O		1	S	5/16/2012	3.797	F	14,300	\$57,200,000	204		
2240390	KQ	GRAND ST BRIDGE	NEWTOWN CREEK		WMO		2	S	10/7/2012	4.042	F	5,100	\$20,400,000	301	405	
2249100	R	GRANITE AVE	B&O RR (ABANDONED)	O	O		4	S	3/13/2012	6.034	VG	7,300	\$29,200,000	501		
2249370	R	GREAVES AVE	SIRT SOUTH SHORE	S	O		1	S	8/16/2011	6.550	VG	2,650	\$10,600,000	503		
2240370	KQ	GREENPOINT AVE BRIDGE	NEWTOWN CREEK	L	WMO		12	S	7/8/2011	5.222	G	76,106	\$304,424,000	301	402	
2231370	K	GUIDER AV RAMP TO BSHP	BSHP		A		4	S	9/14/2012	6.944	VG	10,548	\$42,192,000	313		
2241860	B	GUN HILL RD	METRO NORTH RR HAR	M	O		1	S	5/1/2012	6.531	VG	9,128	\$36,512,000	212		
2242430	B	GUN HILL ROAD	BRONX BLVD		O		4	S	2/15/2012	5.018	G	9,400	\$37,600,000	212		
2242440	B	GUN HILL ROAD	BRONX RIVER		WO		1	S	2/13/2012	5.300	G	8,700	\$34,800,000	212		
2241910	B	GUN HILL ROAD	NYCTA-DYRE AVE LN	T	O		1	S	11/19/2012	5.750	G	7,500	\$30,000,000	211	212	
2231610	Q	GUY R. BREWER BLVD	BSOP		A		4	S	6/2/2011	6.222	VG	12,342	\$49,368,000	413		
2249380	R	GUYON AVE	SIRT SOUTH SHORE	S	O		3	S	9/9/2011	4.377	F	6,900	\$27,600,000	503		
2240232	K	HAMILTON AVE BRIDGE	GOWANUS CANAL		WMO		3	S	9/7/2011	5.306	G	7,300	\$29,200,000	306		
2240231	K	HAMILTON AVE BRIDGE	GOWANUS CANAL		WMO		3	S	9/13/2012	5.472	G	7,300	\$29,200,000	307	306	
2065930	Q	HAMILTON PLACE	495I (L.I.E.)		A		2	S	3/5/2012	5.611	G	11,111	\$44,444,000	405		
2249520	R	HANNAH ST	SIRT SOUTH SHORE	S	O		10	S	9/22/2011	4.898	F	10,020	\$40,080,000	501		
2249180	R	HARBOR ROAD	B&O RR (ABANDONED)	O	O		4	S	8/20/2011	6.220	VG	5,778	\$23,112,000	501		

INVENTORY SORTED BY FEATURE CARRIED

# INVENTORY SORTED BY FEATURE CARRIED

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2233059	M	HARLEM RIVER DRIVE	RAMP TO & FROM HRD N.B.		A		11	S	7/12/2012	3.507	F	51,000	\$204,000,000	111		
2231780	Q	HEMPSTEAD AVE	BCIP		A		2	S	2/3/2012	4.065	F	14,200	\$56,800,000	413		
2266149	Q	HEMPSTEAD AVE	BCIP RAMP NB		A		2	S	3/15/2012	3.937	F	9,500	\$38,000,000	413		
2267250	M	HHP	AMTRAK - W96TH ST	A	A		55	S	12/5/2012	3.548	F	40,000	\$160,000,000	107		
2229530	B	HHP	BROADWAY		A		1	S	7/22/2011	4.574	F	7,500	\$30,000,000	208		
2229440	B	HHP	KAPOCK ST		A		1	S	7/18/2011	4.931	F	3,900	\$15,600,000	208		
2266229	M	HHP	PED UNDERPASS @ 148 ST		A		1	S	2/2/2012	5.000	G	1,840	\$7,360,000	109		
2229309	M	HHP	RIVERSIDE PARK		A		1	S	1/5/2012	5.133	G	2,172	\$8,688,000	107		
2229349	M	HHP	W 158 ST	A	A		44	S	12/17/2012	4.155	F	140,000	\$560,000,000	109	112	
2266230	M	HHP NB	PED UNDERPASS INWD PK		A		1	S	1/6/2012	5.000	G	800	\$3,200,000	112		
2229322	M	HHP NB	RAMP FROM 96 ST		A		1	S	2/6/2012	5.300	G	2,000	\$8,000,000	107		
2229312	M	HHP NB	RAMP TO 96 ST		A		1	S	2/1/2012	4.182	F	2,000	\$8,000,000	107		
M00004	M	HHP ON/OFF RMP-79TH ST NO. SIDE	PED PATH NO. OF 79TH ST		A		1	C	6/27/2012	5.000	G	900	\$3,600,000	107		
M00003	M	HHP ON/OFF RMP-79TH ST SO. SIDE	PED PATH SO. OF 79TH ST		A		1	C	6/6/2012	3.667	F	900	\$3,600,000	107		
2266240	M	HHP SB	PED UNDERPASS INWD PK		A		1	S	1/6/2012	5.526	G	1,100	\$4,400,000	112		
2229321	M	HHP SB	RAMP FROM 96 ST		A		1	S	2/6/2012	5.133	G	2,000	\$8,000,000	107		
2229311	M	HHP SB	RAMP TO 96 ST		A		1	S	2/1/2012	4.455	F	2,000	\$8,000,000	107		
2229289	M	HHP VIADUCT	AMTRAK - W72 ST - W79 ST	A	A		145	S	10/22/2012	3.597	F	236,100	\$944,400,000	107		
2246580	BM	HIGH BRIDGE PDOVP	I87 - HARLEM RIVER	M	WA-PED	P	11	P	8/12/2002	3.759	F	34,100	\$136,400,000	112	204	
2230000	K	HIGHLAND BLVD E.B.	JACKIE ROBINSON PKWY		A		1	S	3/14/2012	4.724	F	4,900	\$19,600,000	305		
2230220	K	HIGHLAND BLVD NB	VERMONT AVE		A		1	S	5/18/2011	5.857	G	3,995	\$15,980,000	305		
2230010	K	HIGHLAND BLVD W.B.	JACKIE ROBINSON PKWY		A		1	S	3/14/2012	4.767	F	3,500	\$14,000,000	305		
2230020	K	HIGHLAND BLVD W.B.	JACKIE ROBINSON PKWY		A		2	S	3/14/2012	4.974	F	4,700	\$18,800,000	305		
2248280	Q	HIGHLAND PK PED.	PEDESTRIAN PATH		O-PED	P	1	C	10/1/2012	3.667	F	1,900	\$7,600,000	405		
2243780	K	HIGHLAWN AVE	BMT SEA BEACH	T	O		1	S	9/13/2011	6.400	VG	6,960	\$27,840,000	311		
2244060	K	HILL DR (LEFT RIDGE SPAN)	PED PATH SO OF BOATHOUSE		O	P	1	C	5/2/2012	4.433	F	750	\$3,000,000	355		
2244120	K	HILL DR (TERRACE BRDG)	PROSPECT PK LAKE		WO	P	3	S	8/22/2012	3.364	F	7,800	\$31,200,000	355		
2231840	Q	HILLSIDE AVE	BCIP		A		2	S	3/30/2012	4.026	F	9,672	\$38,688,000	413		
2247320	Q	HONEYWELL ST	AMTRAK & LIRR YARD	AL	O		22	S	11/4/2011	5.903	G	99,036	\$396,144,000	402	401	
2232040	M	HOUSTON ST	FDR DRIVE		A		2	S	4/30/2012	3.773	F	11,010	\$44,040,000	103		
223204B	M	HOUSTON ST RAMP TO FDR NB	RELIEF		AR		4	S	1/23/2012	4.792	F	7,125	\$28,500,000	103		
2267240	M	HRD RAMP TO GWB	HARLEM RIVER DR SB		A		55	S	10/15/2012	3.014	F	122,900	\$491,600,000	112		
2249300	R	HUGUENOT AVE	SIRT SOUTH SHORE	S	O		2	S	10/3/2011	4.788	F	4,900	\$19,600,000	503		
2240450	Q	HUNTERS PT AVE	DUTCH KILLS		WMO		4	S	7/3/2012	5.083	G	12,168	\$48,672,000	402		
2241190	B	HUNTS POINT AVE	AMTRAK - CSX	AC	O		1	S	10/12/2012	4.828	F	10,049	\$40,196,000	202		
2241959	B	HUTCHINSON RVR PKWY	AMTRAK - CSX	AC	O		1	S	5/25/2012	5.780	G	15,444	\$61,776,000	210	211	
2075859	B	HUTCHINSON RVR PKWY	HUTCHINSON RIVER		WMA		7	S	10/16/2012	4.703	F	60,500	\$242,000,000	210	228	
2249810	R	HYLAN BLVD	LEMON CREEK		WO		1	S	2/15/2012	6.313	VG	11,400	\$45,600,000	503		
2245300	M	INWOOD HILL PK FTBR	AMTRAK 30 ST BRANCH	A	O-PED	P	6	C	2/9/2012	4.100	F	700	\$2,800,000	112		
2246700	M	ISHAM PK PED BRDG	HARLEM RV INLET		WO-PED	P	1	C	1/6/2012	3.552	F	300	\$1,200,000	112		

INVENTORY SORTED BY FEATURE CARRIED

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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2246690	M	ISHAM PK VEHICULR	HARLEM RIVER INLET		O	P	1	S	5/4/2012	6.261	VG	911	\$3,644,000	112		
2248299	Q	J.R. PKWY-UNION TPKE	AUSTIN ST		O		1	S	5/30/2012	4.806	F	5,900	\$23,600,000	409	406	
2230099	Q	JACKIE ROBINSON PKWY	CYPRESS HILLS CEMETRY		A		1	S	1/5/2012	5.444	G	4,200	\$16,800,000	405		
2230179	Q	JACKIE ROBINSON PKWY	METROPOLITAN AVE		A		2	S	5/4/2012	5.286	G	8,673	\$34,692,000	482		
2247260	Q	JACKSON AVE	LIRR MONTAUK DIV	L	O		1	S	10/22/2012	6.117	VG	4,517	\$18,068,000	402		
2231819	Q	JAMAICA AVE	BCIP		A		2	S	3/23/2012	4.773	F	11,500	\$46,000,000	413		
2230287	B	JEROME AVE	MOSHOLU PARKWAY	T	A		3	S	4/22/2011	4.816	F	11,800	\$47,200,000	207		
2249070	R	JOHN ST	B&O RR (ABANDONED)	O	O-PED		2	C	8/30/2012	5.620	G	1,050	\$4,200,000	501		
2247480	Q	JUNIPER BLVD SO	CSX TRANSPORT	C	O		1	S	10/5/2011	5.000	G	9,000	\$36,000,000	405		
2230380	K	KANE ST	278I (B.Q.E.)		A		2	S	3/26/2012	4.208	F	5,000	\$20,000,000	306		
2243770	K	KINGS HIGHWAY	BMT SEA BEACH	T	O		1	S	9/13/2011	6.767	VG	5,032	\$20,128,000	311		
2231449	K	KNAPP ST	BSHP		A		1	S	4/20/2012	4.406	F	9,500	\$38,000,000	315		
2241169	B	LAFAYETTE AVE	AMTRAK - CSX	AC	O		1	S	10/5/2012	5.651	G	12,000	\$48,000,000	202		
2249110	R	LAKE AVE	B&O RR (ABANDONED)	O	O		3	S	5/1/2012	5.333	G	5,900	\$23,600,000	501		
2247240	Q	LEFFERTS BLVD	LIRR MAIN LINE	L	O		3	S	9/29/2011	5.806	G	5,460	\$21,840,000	409		
2241139	B	LEGGETT AVE	AMTRAK - CSX	AC	O		3	S	10/8/2012	4.620	F	41,551	\$166,204,000	202		
2243850	K	LIBERTY AVE	LIRR BAY RIDGE	N	O		3	S	9/25/2012	6.294	VG	6,659	\$26,636,000	316		
2249460	R	LINCOLN AVE	SIRT SOUTH SHORE	S	O		1	S	11/18/2011	5.172	G	4,500	\$18,000,000	502		
2243190	K	LINCOLN PLACE	FRANKLIN SHUTTLE	T	O		1	S	9/6/2012	6.797	VG	2,460	\$9,840,000	308		
2243010	K	LINCOLN ROAD	BMT SUBWAY, BRIGHTON	T	O		1	S	7/24/2012	6.685	VG	6,016	\$24,064,000	355		
2231750	Q	LINDEN BLVD	BCIP		A		2	S	3/2/2012	4.250	F	6,700	\$26,800,000	413		
2243910	K	LIVONIA AVE PED BRDG	LIRR BAY RIDGE LINE	N	O-PED		6	C	4/16/2012	4.833	F	2,500	\$10,000,000	316		
2241159	B	LONGWOOD AVE	AMTRAK - CSX	AC	O		2	S	10/10/2012	5.236	G	10,625	\$42,500,000	202		
1240090	BM	MACOMBS DAM BRIDGE	HARLEM RIVER	M	WMO		52	S	11/30/2011	3.930	F	220,000	\$880,000,000	110	204	
2240079	BM	MADISON AVE BRIDGE	HARLEM RIVER		WMO		21	S	9/20/2012	4.944	F	80,000	\$320,000,000	111	201	
2242210	B	MAGNOLIA WAY	BRONX RIVER		WO		3	S	5/31/2012	4.763	F	6,200	\$24,800,000	227		
2249210	R	MAIN ST PED BRDG	SIRT SOUTH SHORE	S	O-PED		9	C	7/24/2012	4.123	F	400	\$1,600,000	503		
2240027	KM	MANHATTAN BRIDGE(LL)	EAST RIVER	T	WEO		23	S	11/19/2012	4.653	F	616,390	\$2,465,560,000	103	302	
2240028	KM	MANHATTAN BRIDGE(UL)	NYCTA TRACKS-BMT	T	WEO		43	S	11/19/2012	3.757	F	587,424	\$2,349,696,000	103	302	
2229480	B	MANHATTAN COLL PKWY	HHP		A		3	S	4/29/2011	5.053	G	6,200	\$24,800,000	208		
2245040	M	MARGARET CORBIN DR	PED PATH NEAR CAFÉ		O	P	1	C	6/29/2012	4.933	F	598	\$2,392,000	112		
2245050	M	MARGARET CORBIN DR	PED PATH NR NO ENTR		O	P	1	C	6/29/2012	4.333	F	889	\$3,556,000	112		
2230190	Q	MARKWOOD ROAD	JACKIE ROBINSON PKWY		A		1	S	2/1/2012	5.167	G	4,400	\$17,600,000	482	406	
2249760	R	MARTLINGS AVE	RICHMOND LAKE DAM		WO		2	S	6/9/2011	4.600	F	7,000	\$28,000,000	501		
2269030	B	MATTHEWSON ROAD	MAC CRACKEN AVE		O		15	S	12/7/2012	4.316	F	14,880	\$59,520,000	205		
2243410	K	MCDONALD AVE	LIRR BAY RIDGE	N	O		1	S	9/27/2012	5.047	G	2,760	\$11,040,000	312		
2241110	B	MELROSE AVE	CSX TRANS - PT MORRIS	C	O		8	S	8/3/2011	5.611	G	37,854	\$151,416,000	203		
2231710	Q	MERRICK BLVD	BLP N.B.		A		1	S	2/22/2012	4.467	F	6,000	\$24,000,000	413		
2231720	Q	MERRICK BLVD	BLP S.B.		A		1	S	2/15/2012	4.200	F	6,000	\$24,000,000	413		
2247500	Q	METROPOLITAN AVE	CSX TRANSPORT	C	O		1	S	10/5/2011	4.233	F	18,650	\$74,600,000	405		

INVENTORY SORTED BY FEATURE CARRIED

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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2240290	K	METROPOLITAN AVE	ENGLISH KILLS		WMO		5	S	6/28/2011	6.000	G	10,550	\$42,200,000	301		
1247560	Q	METROPOLITAN AVE	LIRR -NY&ATL	LN	O		2	S	10/3/2012	3.603	F	20,900	\$83,600,000	405		
2249470	R	MIDLAND AVE	SIRT SOUTH SHORE	S	O		1	S	11/22/2011	5.466	G	3,000	\$12,000,000	502		
2257569	M	MILLER HIGHWAY	TERRAIN		A		64	S	10/22/2012	4.352	F	272,475	\$1,089,900,000	104	107	
2249530	R	MINTHORNE ST PED BRDG	SIRT SOUTH SHORE	S	O-PED		26	C	10/4/2012	4.453	F	6,000	\$24,000,000	501		
2243240	K	MONTGOMERY ST	FRANKLIN SHUTTLE	T	O		1	S	8/11/2011	5.961	G	2,240	\$8,960,000	309		
2249090	R	MORNINGSTAR ROAD	B&O RR (ABANDONED)	O	O		4	S	5/3/2012	4.864	F	7,900	\$31,600,000	501		
2268930	M	MORRIS ST PED BRDG	BKLN-BATTERY TUNN PLZ		A-PED		3	C	6/4/2012	3.764	F	1,200	\$4,800,000	101		
2230250	B	MOSHOLU PARKWAY	BRONX RIVER		WA		5	S	1/12/2012	4.211	F	16,300	\$65,200,000	227		
2230300	B	MOSHOLU PARKWAY	CONRAIL (ABANDONED)	C	A		1	S	8/31/2012	4.271	F	4,600	\$18,400,000	226		
2230290	B	MOSHOLU PARKWAY	EQUESTRIAN PATH		A		1	S	1/20/2012	4.310	F	4,300	\$17,200,000	226		
2230260	B	MOSHOLU PARKWAY	METRO NORTH	M	A		1	S	4/21/2012	5.516	G	8,880	\$35,520,000	227	207	
2230310	B	MOSHOLU PARKWAY	SB RAMP TO HHP		A		2	S	9/26/2011	4.919	F	7,400	\$29,600,000	226		
2230270	B	MOSHOLU PARKWAY	WEBSTER AVE		A		1	S	5/13/2011	5.328	G	8,480	\$33,920,000	207		
2248100	Q	MOTOR PKWY (PED)	73RD AVE		O-PED	P	3	C	2/2/2012	4.541	F	2,600	\$10,400,000	408		
2248110	Q	MOTOR PKWY (PED)	ALLEY PK PED WALK		O-PED	P	1	C	6/7/2012	3.983	F	1,000	\$4,000,000	413		
2248060	Q	MOTOR PKWY (PED)	BELL BLVD		O-PED	P	2	C	6/22/2012	4.208	F	2,650	\$10,600,000	411		
2248059	Q	MOTOR PKWY (PED)	FRANCIS LEWIS BLVD		O-PED	P	2	C	6/14/2012	4.194	F	2,800	\$11,200,000	408		
2248080	Q	MOTOR PKWY (PED)	HOLLIS COURT BLVD		O-PED	P	3	C	11/21/2012	4.612	F	2,700	\$10,800,000	408		
2248070	Q	MOTOR PKWY (PED)	SPRINGFIELD BLVD		O-PED	P	3	C	6/5/2012	3.582	F	2,900	\$11,600,000	411		
2247110	Q	MURRAY ST	LIRR PORT WASH BR	L	O		1	S	9/15/2011	5.370	G	4,000	\$16,000,000	407		
2247620	Q	MYRTLE AVE	ABANDONED LIRR		O		3	S	1/6/2012	5.028	G	6,725	\$26,900,000	482	406	
2230120	Q	MYRTLE AVE	JACKIE ROBINSON PKWY		A		1	S	4/26/2012	5.250	G	6,400	\$25,600,000	405	482	
2231670	Q	N CONDUIT AVE WB	BLP E.B.		A		1	S	1/25/2012	4.917	F	4,000	\$16,000,000	413		
2231680	Q	N CONDUIT AVE WB	BLP W.B.		A		2	S	1/25/2012	4.932	F	6,500	\$26,000,000	413		
205580A	Q	N.BLVD WB TO 678I SB	VACANT LAND		AR		16	S	6/19/2012	5.619	G	8,600	\$34,400,000	407		
2249350	R	NELSON AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED		3	C	7/25/2012	4.115	F	300	\$1,200,000	503		
1067150	B	NEREID AVE (E. 240TH ST)	BRONX RIVER PKWY	M	O		10	S	10/6/2011	4.474	F	57,750	\$231,000,000	212		
2249430	R	NEW DORP LANE	SIRT SOUTH SHORE	S	O		2	S	10/14/2011	4.847	F	7,600	\$30,400,000	502		
2243660	K	NEW UTRECHT AVE	LIRR BAY RIDGE	N	O		1	S	11/13/2012	6.083	VG	2,350	\$9,400,000	311		
2243140	K	NEWKIRK AVE	BMT SUBWAY, BRIGHTON	T	O		3	S	9/14/2012	4.662	F	4,100	\$16,400,000	314		
2240240	K	NINTH ST BRIDGE	GOWANUS CANAL		WMO		3	S	5/27/2011	6.581	VG	5,772	\$23,088,000	306		
2269760	R	NORTH RAMP	SIRT	S	O	F	9	S	11/30/2012	6.278	VG	17,589	\$70,356,000	501		
2240440	Q	NORTHERN BLVD	ALLEY CREEK		WO		2	S	8/9/2012	4.681	F	8,300	\$33,200,000	411		
2231870	Q	NORTHERN BLVD	BCIP		A		2	S	8/28/2012	5.875	G	9,400	\$37,600,000	411		
2055802	Q	NORTHERN BLVD EB	FLUSHING RIVER		WO		40	S	11/21/2012	4.324	F	78,894	\$315,576,000	407		
2055801	Q	NORTHERN BLVD WB	FLUSHING RIVER		WO		40	S	11/21/2012	4.338	F	71,900	\$287,600,000	407		
2243500	K	NOSTRAND AVE	LIRR BAY RIDGE	N	O		2	S	9/26/2012	4.831	F	4,320	\$17,280,000	314		
2240138	BM	NYCTA IRT	HARLEM RVR/BROADWAY	TM	WMO		3	S	11/21/2011	4.720	F	19,520	\$78,080,000	112	207	208
2243480	K	OCEAN AVE	LIRR BAY RIDGE	N	O		2	S	9/25/2012	4.825	F	5,000	\$20,000,000	314		

INVENTORY SORTED BY FEATURE CARRIED



# INVENTORY SORTED BY FEATURE CARRIED

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2240320	K	OCEAN AVE PED BRDG	SHEEPSHEAD BAY		WO-PED		30	C	9/15/2011	4.571	F	4,450	\$17,800,000	315		
2243439	K	OCEAN PKWY	LIRR BAY RIDGE	N	O		1	S	9/27/2012	4.927	F	7,000	\$28,000,000	312		
2249269	R	PAGE AVE	SIRT SOUTH SHORE	S	O		4	S	8/25/2011	5.889	G	30,710	\$122,840,000	503		
2245470	M	PARK AVE N.B	E 45TH ST		O		1	S	5/30/2012	4.865	F	2,400	\$9,600,000	105		
2245460	M	PARK AVE S.B.	E 45TH ST		O		1	S	5/25/2012	4.514	F	2,400	\$9,600,000	105		
2246550	M	PARK AVE VIADUCT	E 42ND ST		O		10	S	12/14/2012	4.478	F	22,150	\$88,600,000	105		
2247600	Q	PARK LANE SOUTH	LIRR MONTAUK DIV	L	O		1	S	10/18/2012	6.983	VG	3,024	\$12,096,000	409	482	
2242099	B	PARK ROAD (204TH ST)	BRONX RIVER		WO		1	S	6/4/2012	4.655	F	4,700	\$18,800,000	212		
224001A	M	PARK ROW TO BKLN	WILLIAM ST N.B.		OE		4	S	4/24/2012	4.500	F	10,167	\$40,668,000	101		
2269780	R	PARKING ENTR RAMP	SIRT	S	O	F	3	S	11/12/2012	5.944	G	8,589	\$34,356,000	501		
2269730	R	PARKING EXIT RAMP	SIRT	S	O	F	10	S	11/30/2012	6.097	VG	20,727	\$82,908,000	501		
2243020	K	PARKSIDE AVE	BMT SUBWAY, BRIGHTON	T	O		6	S	9/14/2012	3.826	F	48,700	\$194,800,000	314		
2247060	Q	PARSONS BLVD	LIRR PORT WASH BR	L	O		1	S	10/5/2012	4.824	F	4,200	\$16,800,000	407		
224001C	M	PEARL ST TO BKLN	LAND ADJ TO BRDG		OE		9	S	3/14/2012	3.814	F	6,365	\$25,460,000	101		
224001F	M	PEARL ST TO FDR DR	LAND ADJ TO BRDG		OE		3	S	4/2/2012	5.282	G	5,200	\$20,800,000	103		
222928C	M	PED BR AT 73RD ST	HHP - AMTRAK	A	A-PED	P	5	C	2/14/2012	3.359	F	3,480	\$13,920,000	107		
2246090	M	PED BRDG OPP 65 ST	TRANSVERSE RD #1		O-PED	P	1	C	7/17/2012	4.655	F	2,300	\$9,200,000	164		
2247630	Q	PED BRG NEAR UNION TPK	ABANDONED LIRR		O-PED		8	C	8/30/2012	5.077	G	1,449	\$5,796,000	406		
2244130	K	PED NR BOATHSE (LULLWATER BRDG)	PROSPECT PK LAKE		WO-PED	P	1	C	9/16/2011	4.898	F	1,000	\$4,000,000	355		
2246400	M	PED PATH OPP E79 ST	TRANSVERSE RD #2		O-PED	P	1	C	8/15/2012	4.233	F	3,700	\$14,800,000	164		
2241380	B	PELHAM BAY PK EQUES	AMTRAK - CSX	AC	O-PED	P	1	C	1/7/2012	3.775	F	4,223	\$16,892,000	228		
2231519	K	PENNSYLVANIA AVE	BSHP		A		2	S	5/20/2011	5.694	G	6,640	\$26,560,000	356		
2243870	K	PITKIN AVE	LIRR BAY RIDGE	N	O		2	S	9/25/2012	6.515	VG	5,328	\$21,312,000	316		
2243210	K	PRESIDENT ST	FRANKLIN SHUTTLE	T	O		2	S	9/5/2012	5.157	G	2,500	\$10,000,000	309		
2232167	M	PROMENADE OVER FDR	FDR - E81ST ST - E90TH ST		A-PED	P	53	S	7/6/2011	3.143	F	93,000	\$372,000,000	108		
2268760	M	PS-5 PED BRDG	TENTH AVE		O-PED		5	C	11/29/2012	4.816	F	1,285	\$5,140,000	112		
2240639	KQ	PULASKI BRIDGE	NEWTOWN CREEK		WMO		44	S	5/11/2012	4.662	F	205,770	\$823,080,000	301	402	
2230530	Q	QUEENS BLVD	278I (B.Q.E.)		A		2	S	11/20/2012	6.417	VG	25,543	\$102,172,000	402		
2230869	Q	QUEENS BLVD	ACCESS RD BQE S.B.		A		1	S	10/17/2012	5.909	G	7,900	\$31,600,000	402		
2247310	Q	QUEENS BLVD	AMTRAK & LIRR YARD	AL	O		19	S	12/6/2012	6.268	VG	92,400	\$369,600,000	402	401	
2230209	Q	QUEENS BLVD	JACKIE ROBINSON PKWY	T	A		5	S	7/9/2012	4.968	F	37,700	\$150,800,000	409		
2240047	MQ	QUEENSBORO BRIDGE (LL)	EAST RIVER	AL	WEO		53	S	12/5/2012	4.264	F	626,900	\$2,507,600,000	108	402	401
2240048	MQ	QUEENSBORO BRIDGE (UL)	EAST RIVER - LL		WEO		37	S	10/26/2012	4.189	F	322,300	\$1,289,200,000	108	402	401
2248040	Q	RAMP TO LINDEN BLVD	SO. CONDUIT AVE		O		1	S	5/30/2012	5.200	G	3,352	\$13,408,000	410		
223201D	M	RAMP TO N.B. FDR DRIVE	FDR & SOUTH ST.		AR		22	S	2/10/2012	4.967	F	15,825	\$63,300,000	101	103	
222934A	M	RAMP TO N.B. HHP	AMTRAK WEST SIDE	A	AR		26	S	8/13/2012	3.875	F	10,800	\$43,200,000	112		
2240350	R	RICHMOND AVE	RICHMOND CREEK		WO		3	S	6/8/2011	5.472	G	32,589	\$130,356,000	502		
2249270	R	RICHMOND VALLY ROAD	SIRT SOUTH SHORE	S	O		4	S	8/23/2011	5.284	G	9,440	\$37,760,000	503		
2244150	K	RIDGE BLVD	SHORE RD DRIVE		O		1	S	5/24/2011	6.667	VG	4,350	\$17,400,000	310		
2240660	Q	RIKERS ISLAND BRIDGE	RIKERS ISL CHANNEL		WO		56	S	12/18/2012	4.380	F	183,100	\$732,400,000	401	480	

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2241430	B	RIVER AVE	METRO NORTH RR HUD	M	O		1	S	7/13/2011	6.156	VG	5,040	\$20,160,000	204		
2229510	B	RIVERDALE AVE	HHP		A		2	S	7/20/2011	5.079	G	5,200	\$20,800,000	208		
2246980	M	RIVERSIDE DRIVE	W 138TH ST		O		1	S	1/19/2012	4.900	F	6,700	\$26,800,000	109		
2267130	M	RIVERSIDE DRIVE	W 145TH ST		O		1	S	5/12/2011	4.867	F	5,800	\$23,200,000	109		
2246720	M	RIVERSIDE DRIVE	W 158TH ST - AMTRAK	A	O		77	S	12/14/2011	3.472	F	185,658	\$742,632,000	109	112	
2246970	M	RIVERSIDE DRIVE	W 96TH ST		O		3	S	5/18/2011	5.471	G	10,600	\$42,400,000	107		
2269240	M	RIVERSIDE DRIVE	W. 155TH ST		O		1	S	5/10/2011	4.640	F	2,780	\$11,120,000	109	112	
2246660	M	RIVERSIDE DRIVE	W125TH ST - W134TH ST		O		27	S	7/15/2011	4.306	F	148,300	\$593,200,000	109		
2269200	M	RIVERSIDE DRIVE SOUTH	AMTRAK	A	O		11	S	11/17/2011	6.069	VG	69,040	276,160,000.00	107		
2300130	Q	ROCKAWAY BLVD	HOOK CREEK		WO		3	S	8/17/2011	6.271	VG	18,302	\$73,208,000	413		
2248369	Q	ROCKAWAY BLVD	THURSTON BASIN		WO		2	S	8/17/2011	5.474	G	6,000	\$24,000,000	483	413	
2230587	Q	ROOSEVELT AVE	278I (B.Q.E.)		A		2	S	10/28/2011	5.889	G	11,022	\$44,088,000	402		
2240507	Q	ROOSEVELT AVE	678I - FLUSHING RIVER		WA		27	S	11/30/2012	3.465	F	84,424	\$337,696,000	407	481	
2247380	Q	ROOSEVELT AVE	CSX - HELLGATE	C	O		2	S	8/30/2011	6.333	VG	7,380	\$29,520,000	402	403	404
2267160	Q	ROOSEVELT AVE	FLUSHING MDW PK ROAD		O		4	S	8/10/2011	4.746	F	7,280	\$29,120,000	408		
2240640	MQ	ROOSEVELT ISLAND BRDG	E. RIVER E. CHANNEL		WMO		8	S	11/19/2012	5.611	G	36,500	\$146,000,000	108	401	
2249420	R	ROSE AVE	SIRT SOUTH SHORE	S	O		2	S	8/8/2011	5.409	G	3,800	\$15,200,000	502		
2249410	R	ROSS AVE	SIRT SOUTH SHORE	S	O		2	S	8/5/2011	5.379	G	3,800	\$15,200,000	502		
2248200	Q	RUST ST	FLUSHING AVE		O		1	S	7/13/2011	5.000	G	2,940	\$11,760,000	405		
2231560	Q	S CONDUIT BLVD	BSOP		A		2	S	7/12/2012	5.296	G	15,776	\$63,104,000	410		
2249770	R	S OF BROOKS LAKE	STREAM IN PARK		WO-PED	P	3	C	12/3/2012	4.946	F	700	\$2,800,000	501		
2230370	K	SACKETT ST	278I (B.Q.E.)		A		2	S	3/14/2012	4.500	F	5,000	\$20,000,000	306		
226771D	M	SB HHP RAMP TO 79 ST	79 ST BT BASIN GAR		AR	P	4	S	5/9/2012	4.516	F	2,601	\$10,404,000	107		
2244470	K	SEELEY ST	PROSPECT AVE		O		1	S	5/4/2012	4.033	F	8,482	\$33,928,000	307		
2249290	R	SEGUINE AVE	SIRT SOUTH SHORE	S	O		1	S	9/26/2011	6.016	VG	3,250	\$13,000,000	503		
2248220	Q	SERVICE RD TURNAROUND	FLUSHING AVE		O		1	S	7/13/2011	5.078	G	2,940	\$11,760,000	405		
2241390	B	SHORE RD CIRCLE	AMTRAK - CSX	AC	O		1	S	7/3/2012	7.000	VG	8,067	\$32,268,000	228		
2240200	B	SHORE ROAD	HUTCHINSON RIVER		WMO		7	S	6/15/2012	4.537	F	43,576	\$174,304,000	228		
2270170	R	SI FERRY PED BRDG	PARKING LOT EXIT RDWY		O-PED	F	5	C	6/17/2010	3.163	F	2,917	\$11,668,000	501		
2249120	R	SIMONSON AVE	B&O RR (ABANDONED)	O	O		3	S	4/26/2011	5.963	G	5,819	\$23,276,000	501		
2249860	R	SLATER BLVD	NEW CREEK		WO		1	S	5/4/2011	5.510	G	2,037	\$8,148,000	502		
2242220	B	SNUFF MILL ROAD	BRONX RIVER		WO		2	S	1/13/2012	4.395	F	4,800	\$19,200,000	227		
2249200	R	SOUTH AVE	B&O RR (ABANDONED)	O	O		3	S	8/20/2011	6.709	VG	8,322	\$33,288,000	501		
2244440	K	SOUTH OF TILLARY ST	NAVY ST		O-PED		1	C	8/7/2012	3.958	F	6,200	\$24,800,000	302		
2241080	B	SOUTHERN BLVD	CSX TRANS - PT MORRIS	C	O		1	S	8/8/2012	4.093	F	3,900	\$15,600,000	201		
2242029	B	SOUTHERN BLVD	EAST FORDHAM ROAD		O		2	S	1/18/2012	4.605	F	12,900	\$51,600,000	227		
2231630	Q	SPRINGFIELD BLVD	BSOP		A		2	S	5/10/2012	4.591	F	8,500	\$34,000,000	413		
2268770	Q	SPRINGFIELD BLVD	EQUES. PATH (ABAND.)		O		1	S	6/3/2011	4.667	F	1,470	\$5,880,000	413		
2243180	K	ST JOHNS PLACE	FRANKLIN SHUTTLE	T	O		1	S	8/24/2011	6.781	VG	2,300	\$9,200,000	308		
2241700	B	ST PAULS PL PED BRDG	METRO NORTH RR HAR	M	O-PED		2	C	2/7/2012	4.884	F	600	\$2,400,000	203		

INVENTORY SORTED BY FEATURE CARRIED

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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2241060	B	ST. MARYS & CONCORD	CSX TRANS - PT MORRIS	C	O		1	S	8/15/2012	5.370	G	4,500	\$18,000,000	201		
2230610	Q	STEINWAY ST	278I EB (BQE)		A		1	S	9/13/2012	6.349	VG	5,146	\$20,584,000	401		
2230600	Q	STEINWAY ST	278I WB (BQE)		A		1	S	9/12/2012	6.349	VG	5,229	\$20,916,000	401		
2243170	K	STERLING PLACE	FRANKLIN SHUTTLE	T	O		1	S	8/24/2011	6.500	VG	2,300	\$9,200,000	308		
223201B	M	STH ST RMP TO FDR S.B.	SOUTH ST		AR		10	S	2/17/2012	3.791	F	13,388	\$53,552,000	101		
2240540	K	STILLWELL AVE	CONEY ISLAND CRK		WO		2	S	5/27/2011	6.292	VG	17,000	\$68,000,000	313		
2230350	K	SUMMIT ST PED BRDG	278I (B.Q.E.)		A-PED		2	S	3/19/2012	4.614	F	1,400	\$5,600,000	306		
2231650	Q	SUNRISE HWY W.B.	BLP E.B.		A		1	S	4/2/2012	4.393	F	4,100	\$16,400,000	413		
2231660	Q	SUNRISE HWY W.B.	BLP W.B.		A		2	S	3/6/2012	4.565	F	5,350	\$21,400,000	413		
2231800	Q	SUPERIOR ROAD	BCIP		A		2	S	4/12/2012	4.659	F	7,000	\$28,000,000	413		
2243890	K	SUTTER AVE	LIRR BAY RIDGE	N	O		3	S	9/25/2012	6.542	VG	5,497	\$21,988,000	316		
2241040	B	THIRD AVE	CSX TRANS - PT MORRIS	C	O		1	S	7/25/2012	4.563	F	2,700	\$10,800,000	201	203	
2240310	K	THIRD AVE	GOWANUS CANAL		WO		1	S	5/18/2011	6.900	VG	3,200	\$12,800,000	306		
2240069	BM	THIRD AVE BRIDGE	HARLEM RIVER		WMO		14	S	9/20/2012	5.845	G	100,232	\$400,928,000	111	201	
2240250	K	THIRD ST	GOWANUS CANAL		WMO		5	S	5/19/2011	4.903	F	4,900	\$19,600,000	306		
2247300	Q	THOMPSON AVE	AMTRAK & LIRR YARD	AL	O		14	S	12/6/2012	5.042	G	61,280	\$245,120,000	402		
2241170	B	TIFFANY ST	AMTRAK - CSX	AC	O		1	S	11/1/2011	5.627	G	7,267	\$29,068,000	202		
224004H	Q	TO 21ST ST FROM NY	22ND ST		OE		43	S	12/18/2012	4.437	F	48,100	\$192,400,000	402		
224001B	M	TO BKN FRM FDR	FRANKFORT & PEARL ST		OE		31	S	8/20/2012	4.333	F	51,400	\$205,600,000	101	103	
224005B	B	TO BRUCKNER BLVD	RELIEF		OR		5	S	10/24/2011	6.746	VG	12,100	\$48,400,000	201		
224004A	M	TO E 60TH ST FROM QNS	FIRST AVE		OE		13	S	4/20/2012	5.338	G	14,800	\$59,200,000	108		
224004C	M	TO E 62ND ST FROM QNS	E 60TH - E 61ST ST		OE		10	S	8/30/2012	4.985	F	16,720	\$66,880,000	108		
224001D	M	TO FDR DR N.B.	PEARL STREET		OE		30	S	7/15/2011	4.868	F	49,600	\$198,400,000	101	103	
2245480	M	TO GWB OPP W 171ST ST	RIVERSIDE DRIVE		O		1	S	2/8/2012	4.524	F	10,773	\$43,092,000	112		
224007A	M	TO MADISON AVENUE	E 138TH ST		OR		7	S	2/9/2012	5.028	G	19,880	\$79,520,000	111		
224004E	Q	TO NY FR THOMSON AVE	JACKSON AVE	L	OE		94	S	12/12/2012	4.604	F	104,600	\$418,400,000	402		
224004G	Q	TO NY FROM 11TH ST	TERRAIN (CHAMBER)		OE		36	S	8/14/2012	5.268	G	8,360	\$33,440,000	401	402	
224004F	Q	TO NY FROM 21ST ST	21ST ST		OE		63	S	12/19/2012	4.712	F	63,310	\$253,240,000	402	401	
224001G	M	TO PARK ROW	ROSE ST		OE		11	S	3/27/2012	4.408	F	16,551	\$66,204,000	101		
224001E	M	TO PEARL ST	LAND ADJ TO BRDG		OE		3	S	6/28/2011	5.141	G	5,300	\$21,200,000	101		
224004B	M	TO QNS FRM E 59TH ST	FIRST AVE		OE		13	S	4/20/2012	5.653	G	14,800	\$59,200,000	108		
224004D	M	TO QNS FROM E 58TH ST	E 59TH ST		OE		12	S	6/28/2012	4.245	F	10,858	\$43,432,000	106	108	
224004I	Q	TO THOMSON AVE FROM NY	JACKSON AVE	L	OE		39	S	12/18/2012	4.951	F	59,100	\$236,400,000	402		
2249040	R	TOMPKINS AVE	B&O RR (ABANDONED)		O		1	S	5/9/2012	5.953	G	5,096	\$20,384,000	501		
2249840	R	TOMPKINS AVE	GREENFIELD AVE		O		1	S	3/2/2012	5.021	G	2,690	\$10,760,000	501		
2249510	R	TOMPKINS AVE	WILLOW AVE, SIRT	S	O		2	S	10/24/2012	5.358	G	5,378	\$21,512,000	501		
2249230	R	TRACY AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED		9	C	7/19/2012	3.553	F	635	\$2,540,000	503		
2245380	M	TRANSVERSE RD #1 WB	PED PATH OPP E 66TH ST		O	P	1	S	1/6/2012	5.000	G	1,500	\$6,000,000	164		
2249870	R	TRAVIS AVE	MAIN CREEK		WO		1	S	9/26/2011	5.483	G	1,700	\$6,800,000	502		
2246410	M	TRNSVRS RD 1 EB (DENESMOUTH ARCH)	PED PATH OPP E 65TH ST		O	P	1	S	1/30/2012	4.636	F	1,739	\$6,956,000	164		

INVENTORY SORTED BY FEATURE CARRIED

# INVENTORY SORTED BY FEATURE CARRIED

BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2246560	M	TUDOR CITY PLACE	E 42ND ST		O		1	S	1/25/2012	5.133	G	6,600	\$26,400,000	106		
2249170	R	UNION AVE	B&O RR (ABANDONED)	O	O		4	S	4/29/2011	5.167	G	6,500	\$26,000,000	501		
2230360	K	UNION ST	278I (B.Q.E.)		A		2	S	3/19/2012	4.375	F	5,000	\$20,000,000	306		
2243200	K	UNION ST	FRANKLIN SHUTTLE	T	O		2	S	9/5/2012	5.000	G	4,100	\$16,400,000	309		
2240270	K	UNION ST	GOWANUS CANAL		WMO		5	S	8/10/2012	4.000	F	4,900	\$19,600,000	306		
2247040	Q	UNION ST	LIRR PORT WASH BR	L	O		1	S	9/12/2011	6.234	VG	3,313	\$13,252,000	407		
2231850	Q	UNION TPKE	BCIP		A		2	S	3/28/2012	4.409	F	13,600	\$54,400,000	413		
2248129	Q	UNION TPKE	CREEDMOORE HOSP RD		O		1	S	6/24/2011	4.867	F	3,500	\$14,000,000	413		
2230180	Q	UNION TPKE	JACKIE ROBINSON PKWY		A		1	S	2/1/2012	5.672	G	5,359	\$21,436,000	482		
2241330	B	UNIONPORT ROAD	AMTRAK - CSX	AC	O		1	S	10/9/2012	4.781	F	7,631	\$30,524,000	211		
2231910	Q	UTOPIA PKWY	BCIP		A		2	S	3/15/2012	5.114	G	7,200	\$28,800,000	407		
2229550	B	VAN CRTLDT EQUES	HHP		A-PED	P	2	C	8/8/2012	4.556	F	2,100	\$8,400,000	226		
2229540	B	VAN CRTLDT PARK	HHP		A-PED	P	2	C	8/8/2012	4.759	F	3,900	\$15,600,000	226		
2249130	R	VAN NAME AVE	B&O RR (ABANDONED)	O	O		3	S	7/3/2012	5.186	G	5,474	\$21,896,000	501		
2249140	R	VAN PELT AVE	B&O RR (ABANDONED)	O	O		3	S	4/28/2011	5.576	G	5,000	\$20,000,000	501		
226672A	M	W 31ST ST	AMTRAK LAYUP TRACKS	A	O		9	S	12/28/2012	3.619	F	8,800	\$35,200,000	104		
224501B	M	W 33RD ST	AMTRAK 30 ST BRANCH	A	O		8	S	3/13/2012	4.458	F	16,500	\$66,000,000	104		
224501C	M	W 33RD ST	LAND ADJ TO AMTRAK	A	O		2	S	6/14/2011	4.472	F	2,360	\$9,440,000	104		
224501D	M	W 34TH ST	AMTRAK 30 ST BRANCH	A	O		4	S	6/6/2011	4.597	F	11,800	\$47,200,000	104		
224501E	M	W 35TH ST	AMTRAK 30 ST BRANCH	A	O		3	S	11/16/2012	4.181	F	6,500	\$26,000,000	104		
224501F	M	W 36TH ST	AMTRAK 30 ST BRANCH	A	O		7	S	11/16/2012	3.985	F	16,400	\$65,600,000	104		
2245060	M	W 37TH ST	AMTRAK 30 ST BRANCH	A	O		3	S	12/8/2011	6.190	VG	7,505	\$30,020,000	104		
2245070	M	W 38TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	6/15/2012	4.135	F	6,200	\$24,800,000	104		
2245080	M	W 39TH ST	AMTRAK 30 ST BRANCH	A	O		3	S	6/15/2012	4.173	F	6,300	\$25,200,000	104		
2245440	M	W 40TH ST	AMTRAK 30 ST BRANCH	A	O		4	S	6/18/2012	4.162	F	9,400	\$37,600,000	104		
2245330	M	W 41ST ST	AMTRAK 30 ST BRANCH	A	O		3	S	6/12/2012	4.508	F	6,200	\$24,800,000	104		
2245210	M	W 42ND ST	AMTRAK 30 ST BRANCH	A	O		4	S	7/2/2012	4.651	F	10,300	\$41,200,000	104		
2245090	M	W 43RD ST	AMTRAK 30 ST BRANCH	A	O		2	S	4/16/2012	4.662	F	4,140	\$16,560,000	104		
2245100	M	W 44TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	4/16/2012	4.662	F	4,300	\$17,200,000	104		
2245110	M	W 45TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	4/16/2012	5.397	G	4,100	\$16,400,000	104		
2245120	M	W 46TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/4/2012	4.500	F	4,100	\$16,400,000	104		
2245130	M	W 47TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/4/2012	4.721	F	4,100	\$16,400,000	104		
2245140	M	W 48TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/7/2012	4.618	F	4,100	\$16,400,000	104		
2245150	M	W 49TH ST	AMTRAK 30 ST BRANCH	A	O		3	S	5/7/2012	4.426	F	4,100	\$16,400,000	104		
2245340	M	W 50TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/11/2012	4.471	F	4,100	\$16,400,000	104		
2245160	M	W 51ST ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/11/2012	4.912	F	4,300	\$17,200,000	104		
2245170	M	W 52ND ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/29/2012	5.265	G	4,300	\$17,200,000	104		
2245180	M	W 53RD ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/29/2012	5.221	G	5,100	\$20,400,000	104		
2245350	M	W 54TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/22/2012	5.476	G	4,700	\$18,800,000	104		
2245360	M	W 55TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/22/2012	5.529	G	4,300	\$17,200,000	104		

INVENTORY SORTED BY FEATURE CARRIED

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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2245370	M	W 56TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	6/4/2012	5.706	G	4,400	\$17,600,000	104		
2245220	M	W 57TH ST	AMTRAK 30 ST BRANCH	A	O		3	S	5/25/2012	4.853	F	9,100	\$36,400,000	104		
2245190	M	W 58TH ST	AMTRAK 30 ST BRANCH	A	O		2	S	5/25/2012	4.765	F	4,100	\$16,400,000	104		
2246010	M	W 62 ST PED BRDG (PINEBANK ARCH)	BRIDLE PATH		O-PED	P	1	C	7/27/2012	4.262	F	1,000	\$4,000,000	164		
2245420	M	W 65TH ST ENTR EB	BRIDLE PATH W END		O	P	1	S	1/17/2012	5.100	G	1,300	\$5,200,000	164		
2269210	M	W 68TH ST	AMTRAK	A	O		3	S	12/12/2011	6.576	VG	5,382	\$21,528,000	107		
2269190	M	W 70TH ST	AMTRAK	A	O		3	S	12/9/2011	5.597	G	17,258	\$69,032,000	107		
2246140	M	W 72 ST ENTR (RIFTSTONE ARCH)	BRIDLE PATH		O	P	1	S	1/9/2012	4.600	F	3,600	\$14,400,000	164		
2229290	M	W 79 ST	AMTRAK	A	A		1	S	6/7/2012	4.492	F	4,500	\$18,000,000	107		
2246620	M	W 128TH ST PED BRDG	3RD AVE BRDG APPR		O-PED		18	C	8/11/2011	3.791	F	2,300	\$9,200,000	111		
2246670	M	W 134 ST	TERRAIN		O		4	S	7/13/2011	4.833	F	7,500	\$30,000,000	109		
2245230	M	W 148TH ST PED BRDG	AMTRAK 30 ST BRANCH	A	O-PED	P	3	C	4/17/2012	4.200	F	1,100	\$4,400,000	109		
2246710	M	W 153 ST	A.C. POWELL BLVD		O		1	S	2/1/2012	4.611	F	3,082	\$12,328,000	110		
2245290	M	W 155TH ST PED BRDG	AMTRAK 30 ST BRANCH	A	O-PED		3	C	1/27/2012	3.862	F	800	\$3,200,000	109	112	
2245250	M	W 158TH ST	AMTRAK 30 ST BRANCH	A	O		7	S	12/7/2011	6.125	VG	29,170	\$116,680,000	112		
2245260	M	W 173RD ST PED BRDG	AMTRAK 30 ST BRANCH	A	O-PED	P	2	C	4/13/2012	4.533	F	1,500	\$6,000,000	112		
2246600	M	W 176TH ST PED BRDG	APPROACH TO G.W.B.		O-PED		1	C	3/30/2012	4.172	F	1,200	\$4,800,000	112		
2246489	M	W 181 ST	RAMP TO WASH BR		O		1	S	2/7/2012	5.333	G	8,200	\$32,800,000	112		
2229400	M	W 181ST ST PED BRDG	HHP N.B.		A-PED	P	7	C	2/15/2012	4.477	F	1,500	\$6,000,000	112		
2241940	B	W 205TH ST	NYCTA IND YARDS	T	O		4	S	11/20/2012	5.514	G	32,508	\$130,032,000	207		
2240120	BM	W 207TH/W FORDHAM RD	HARLEM RIVER		WMO		5	S	9/5/2012	5.056	G	31,784	\$127,136,000	112	207	
2241489	B	W 225TH ST	CSX TRASP - PUTNAM	C	O		2	S	6/9/2012	5.328	G	10,900	\$43,600,000	207	208	
2241490	B	W 230TH ST	CONRAIL (ABANDONED) PUTNAM		O		1	S	4/8/2011	5.563	G	5,600	\$22,400,000	208		
2241509	B	W 231ST ST	CONRAIL (ABANDONED) PUTNAM		O		1	S	7/26/2012	4.745	F	4,723	\$18,892,000	208		
2241510	B	W 233RD ST	CONRAIL (ABANDONED) PUTNAM		O		1	S	4/7/2011	5.275	G	3,760	\$15,040,000	208		
2241520	B	W 234TH ST	CONRAIL (ABANDONED) PUTNAM		O		1	S	4/7/2011	5.176	G	3,770	\$15,080,000	208		
2231860	Q	W ALLEY ROAD	BCIP		A		2	S	7/20/2011	5.474	G	7,200	\$28,800,000	411		
2241470	B	W FORDHAM RD	METRO NORTH RR HUD	M	O		4	S	7/14/2011	5.694	G	16,052	\$64,208,000	207		
2241460	B	W TREMONT AVE	METRO NORTH RR HUD	M	O		8	S	6/7/2012	3.955	F	12,900	\$51,600,000	205		
2269260	K	W. 8TH ST PED BRDG	SURF AVE.		O-PED	P	39	C	3/22/2012	3.629	F	14,742	\$58,968,000	313		
2246430	M	W110 ST ENTR (MOUNTCLIFF ARCH)	PED PATH OPP W109 ST		O	P	1	S	2/13/2012	4.383	F	1,200	\$4,800,000	164		
M00001	M	W191ST ST PED TNL	BROADWAY - IRT #1 SUBWAY		O-PED		1	C	12/10/2012	4.545	F	2,000	\$8,000,000	112		
2246460	M	W77 ST ENTR (EAGLEVALE ARCH)	PED PATH OPP W77 ST		O	P	2	S	1/10/2012	4.263	F	3,066	\$12,264,000	164		
2246340	M	W77 ST PED (LADIES POND BRDG)	STREAM TO THE LAKE		WO-PED	P	3	C	12/3/2012	4.355	F	500	\$2,000,000	164		
2246320	M	W77 ST PED (OAK BRDG)	THE LAKE		WO-PED	P	3	C	12/20/2011	6.684	VG	919	\$3,676,000	164		
2246380	M	W86 ST PED (SW RESERVOIR BRDG)	BRIDLE PATH		O-PED	P	1	C	11/30/2012	4.852	F	700	\$2,800,000	164		
2241070	B	WALES AVE	CSX TRANS - PT MORRIS	C	O		1	S	8/8/2012	6.467	VG	2,535	\$10,140,000	201		
2241410	B	WALTON AVE	METRO NORTH RR HUD	M	O		1	S	5/16/2012	4.953	F	3,600	\$14,400,000	204		
2240620	M	WARDS ISLAND PED BRDG	HARLEM RIVER		WMO-PED		10	C	4/15/2011	4.097	F	12,600	\$50,400,000	111		
2243250	K	WASHINGTON AVE	FRANKLIN SHUTTLE	T	O		1	S	9/4/2012	6.000	G	3,657	\$14,628,000	309	355	

INVENTORY SORTED BY FEATURE CARRIED



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BIN	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPAN S	RT NG SR C	Inspection Date	Condition Rating	VR BL RT NG	DECK AREA	REPLACEMENT COST	CD	CD2	CD3
2066919	BM	WASHINGTON BRIDGE	HARLEM RIVER	M	WO		9	S	11/29/2012	4.642	F	128,339	\$513,356,000	112	205	204
2246330	M	WEST DR (BALCONY BRDG)	STREAM TO THE LAKE		WO	P	1	S	1/16/2012	5.000	G	1,817	\$7,268,000	164		
2246080	M	WEST DR (DALEHEAD ARCH)	BRIDLE OPP W 64TH ST		O	P	1	S	1/5/2012	4.667	F	2,000	\$8,000,000	164		
2246000	M	WEST DR (GREYSHOT ARCH)	PED BET 61ST & 62ST		O	P	1	S	1/10/2012	5.400	G	2,500	\$10,000,000	164		
2244020	K	WEST DR (MEADOWPORT ARCH)	PED PATH NR GRND ARMY PLZ		O	P	1	S	4/26/2011	5.321	G	2,500	\$10,000,000	355		
2246360	M	WEST DR (WINTERDALE ARCH)	PED PATH OPP W 82 ST		O	P	1	S	1/17/2012	5.273	G	2,502	\$10,000,000	164		
2246120	M	WEST DRIVE	TRANSVERSE RD #1		O	P	1	S	3/28/2012	4.967	F	7,900	\$31,600,000	164		
2246240	M	WEST DRIVE	TRANSVERSE RD #2		O	P	1	S	3/22/2012	4.167	F	7,200	\$28,800,000	164		
2246260	M	WEST DRIVE	TRANSVERSE RD #3		O	P	1	S	3/22/2012	4.933	F	5,100	\$20,400,000	164		
2246280	M	WEST DRIVE	TRANSVERSE RD #4		O	P	1	S	3/26/2012	4.300	F	4,700	\$18,800,000	164		
2249710	R	WEST FOOTBRIDGE	CLOVE LAKE		WO-PED	P	2	C	8/1/2011	4.086	F	900	\$3,600,000	501		
2244100	K	WEST FOOTBRIDGE	PROSPECT PK STREAM		WO-PED	P	1	C	12/19/2011	4.875	F	3,200	\$12,800,000	355		
2267380	M	WEST STREET	RECTOR ST		AT		1	S	11/15/2011	5.033	G	25,760	\$103,040,000	101		
2241230	B	WESTCHESTER AVE	AMTRAK - CSX	AC	O		3	S	11/26/2012	5.944	G	15,600	\$62,400,000	202	209	
2240180	B	WESTCHESTER AVE	BRONX RIVER		WO		1	S	9/16/2011	4.608	F	5,476	\$21,904,000	202	209	
2241000	B	WESTCHESTER AVE	CSX TRANS - PT MORRIS	C	O		1	S	6/11/2012	4.660	F	1,740	\$6,960,000	201		
2075837	B	WESTCHESTER AVE	HUTCHINSON RVR PKWY		A		2	S	2/1/2012	4.083	F	15,858	\$63,432,000	210	211	
2241329	B	WHITE PLAINS ROAD	AMTRAK - CSX	AC	O		1	S	10/9/2012	4.781	F	6,900	\$27,600,000	211		
2248020	Q	WHELEW PED BRDG	CONDUIT AVE		O-PED		7	C	9/28/2012	4.775	F	5,500	\$22,000,000	410		
1065210	Q	WHITESTONE EXP NB	BCIP (2065210)		A		1	S	7/24/2012	4.603	F	2,500	\$10,000,000	407		
2241369	B	WILLIAMSBRIDGE RD	AMTRAK - CSX	AC	O		2	S	8/27/2012	4.836	F	6,510	\$26,040,000	211		
2240039	KM	WILLIAMSBURG BRIDGE	EAST RIVER	T	WEO		53	S	10/27/2012	4.431	F	824,000	\$3,296,000,000	103	301	
2240059	BM	WILLIS AVENUE	HARLEM RIVER		WMO		15	S	12/17/2012	6.833	VG	171,105	\$684,420,000	111	201	
2248019	Q	WOODHAVEN BLVD	ATLANTIC AVE		O		3	S	4/5/2012	4.236	F	19,400	\$77,600,000	409		
2248159	Q	WOODHAVEN BLVD	QUEENS BLVD		O		2	S	8/7/2012	4.275	F	11,500	\$46,000,000	404		
2230540	Q	WOODSIDE AVE	278I (B.Q.E.)		A		1	S	2/3/2012	5.672	G	7,529	\$30,116,000	402		
2247400	Q	WOODSIDE AVE	CSX TRANSPORT	C	O		1	S	9/8/2011	5.033	G	8,200	\$32,800,000	402	404	
2247120	Q	WOODSIDE AVE	LIRR MAIN LINE	L	O		3	S	10/16/2012	4.444	F	14,900	\$59,600,000	402		
787 OPEN BRIDGES		OPEN SPANS 4,398									OPEN SF	14,533,529	\$ 57,470,064,000	ALL		

R00004	R	DICKIE AVE	NEAR COLUMBUS PLACE		O	1	CITY
R00005	R	BIDWELL AVE	COLUMBUS PLACE		O	1	CITY
R00010	R	GALLOWAY AVE	MARIANNE ST		O	1	CITY
R00011	R	FOREST AVE	CRYSTAL AVE		O	1	CITY
R00013	R	NAUGHTON AVE	PATTERSON AVE		O	3	CITY
R00015	R	OLYMPIA BLVD	SLATER AVE		O	1	CITY
R00016	R	GRAHAM BLVD	JAY ST		O	2	CITY
R00021	R	HUNTER AVE	IDLEASE PLACE		O	1	CITY
R00022	R	IDLEASE PLACE	HUNTER AVE		O	1	CITY
R00023	R	MIDLAND AVE	HYLAN BLVD		O	1	CITY
R00024	R	LINCOLN AVE	SANILAC ST		O	1	CITY
R00025	R	GREELEY AVE	SANILAC ST		O	1	CITY
R00027	R	ELEANOR ST	ROCKLAND AVE		O	1	CITY
R00031	R	TARLTON ST	GREAT KILLS LANE		O	1	CITY
R00032	R	SEGUINE AVE	PURDY PLACE		O	1	CITY
R00034	R	ROCKLAND AVE	BRIELLE AVE		O	1	CITY
R00035	R	BRADLEY AVE	WILLOWBROOK ROAD		O	1	CITY
R00036	R	AMBOY ROAD	ARBUTUS AVE		O	1	CITY
R00038	R	MAGUIRE AVE	DEPEW PLACE		O	1	CITY
R00040	R	113 MAGUIRE AVE	DEPEW PLACE		O	1	CITY
R00041	R	93 FOSTER ROAD	AMBOY ROAD		O	1	CITY
R00042	R	LEDYARD PLACE	LACONIA AVE		O	1	CITY
R00046	R	RICHMOND TERRACE	SNUG HARBOR		O	2	CITY
R00051	R	HARBOR ROAD	DUBLIN PLACE		O	1	CITY
R00055	R	TRAVIS AVE	VICTORY BLVD		O	1	CITY
R00059	R	WESTERN AVE	RR BRIDGE	WO		1	CITY
R00060	R	SIGNS ROAD	VICTORY BLVD		O	1	CITY
R00062	R	KISSEL AVE	SNUG HARBOR ROAD		O	1	CITY
R00065	R	HENDERSON AVE	WESTBURY AVE		O	1	CITY
R00068	R	FOREST AVE	RANDALL AVE		O	1	CITY
R00069	R	GREGG PLACE	RANDALL AVE		O	1	CITY
R00076	R	ROOSEVELT AVE	HAROLD ST		O	1	CITY
R00077	R	BUCHANAN AVE	HAROLD ST		O	1	CITY
R00084	R	ARTHUR KILL ROAD	MULDOON AVE		O	1	CITY
R00085	R	ARTHUR KILL ROAD	150' N.W. ELLIS ROAD		O	1	CITY
R00086	R	ARTHUR KILL ROAD	ENGLEWOOD ST		O	1	CITY
R00095	R	MEISNER AVE	ROCKLAND AVE		O	1	CITY
R00096	R	ROCKLAND AVE	MANOR ROAD		O	1	CITY
R00097	R	RICHMOND HILL ROAD	RICHMOND ROAD		O	1	CITY
R00101	R	ST ANDREWS ROAD	LIGHTHOUSE AVE		O	1	CITY
R00103	R	AULTMAN AVE	ST GEORGE ROAD		O	2	CITY
R00105	R	ARTHUR KILL ROAD	CLARKE AVENUE		O	1	CITY
R00106	R	ARTHUR KILL ROAD	RICHMONDTOWN ROAD		O	1	CITY
R00114	R	SWEET BROOK ROAD	RIDGEWOOD ROAD		O	1	CITY
R00115	R	VICTORY BLVD	CLOVES LAKE PARK		O	3	CITY
R00122	R	ARTHUR KILL ROAD	RIDGEWOOD AVE		O	1	CITY
R00133	R	ARDEN AVE	HALPIN AVE		O	1	CITY
R00135	R	HYLAN BLVD	CORNELIA AVE		O	1	CITY
R00136	R	SNUG HARBOR ROAD	KISSEL AVE		O	1	CITY
R00137	R	RICHMOND TERRACE	WESTERN AVE		O	2	CITY
R00138	R	HOLLAND AVE	BENJAMIN PLACE		O	1	CITY
R00139	R	DE PEW PL	MAGUIRE AVE		O	1	CITY
R00141	R	ALTER AVE	STORM&GRND FED STREAM		O	1	CITY



R00013 Naughton Avenue over Patterson Avenue. R00015 Olympia Boulevard over Slater Avenue. R00032 Seguin Avenue over Purdy Place.

Revised 2/26/13

## ***GLOSSARY***

A glossary of the terms most commonly used in bridge design, construction and maintenance is presented below. Cross-references are indicated through the use of BLOCK LETTERING.

### **AASHTO (AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS)**

A nonprofit, nonpartisan association representing highway and transportation departments in the fifty states, the District of Columbia, and Puerto Rico, representing all five transportation modes air — highways, public transportation, rail, and water.

### **ABUTMENT**

Walls of reinforced concrete or masonry. Abutments support a bridge's SUPERSTRUCTURE and APPROACHES, as well as retain the embankments that are positioned at the extreme ends of a multi-span bridge.



Hamilton Avenue Bridge and Battery Place Underpass Abutments. City Island Bridge Beginning and Ending Abutment. (Credit: NYSDOT)

### **ADA (AMERICANS WITH DISABILITIES ACT)**

The Americans with Disabilities Act gives civil rights protections to individuals with disabilities, similar to those rights provided to individuals on the basis of race, color, sex, national origin, age, and religion. It guarantees equal opportunity for individuals with disabilities in public accommodations, employment, transportation, state and local government services, and telecommunications.

### **ADMIXTURE**

Material, other than water, AGGREGATE, and hydraulic cement, used as an ingredient of concrete, mortar, grout, or plaster and added to the batch immediately before or during mixing.

### **AGGREGATE**

Inert material such as sand or stone that is mixed with cement, lime and water to produce grout or mortar.

### **ALIGNMENT**

The relative horizontal and vertical positioning between the bridge and APPROACHES.

### **ANCHORAGE**

A solid mass, usually comprised of concrete, that encases a grillage of heavy steel bars into which the ends of a SUSPENSION BRIDGE'S main CABLES are anchored. Anchorages are designed to resist the pull of the cables.



Inspecting the Exterior of the Manhattan Bridge Anchorage. (Credit: NYSDOT)

### **APPROACH**

Roadway at each end of a bridge, beyond the ABUTMENT, providing access to the bridge.



Carroll Street Bridge Approach. (Credit: NYSDOT) Belt Parkway Bridge over 26<sup>th</sup> Avenue Approach. (Credit: Artemio Angeles)

### **ARTERIAL BRIDGE**

Any bridge upon which an arterial highway runs as it crosses streets, water, railroads, etc.

### **AS-BUILT DRAWINGS**

Drawings that are prepared from measurements taken on-site to accurately depict the actual sizes and location of elements of the construction project. The as-built drawings indicate variations from the construction documents that occurred during construction.

### **ASPHALT**

Black bituminous surface material made from AGGREGATE and processed petroleum.



Hamilton Avenue Asphalt Plant Silo. (Credit: Sheena Diaz)

### **BACKFILL**

Material used to refill an excavated area.

### **BASCULE BRIDGES**

Bascule bridges are movable bridges, typically referred to as "draw bridges" which rotate the superstructure vertically. The movable leaf of the structure - known as a *bascule* - is counterbalanced by weights of such size that minimal power is required for operation - just enough to overcome inertia, frictional resistance, wind and snow loads. Such bridges are relatively speedy to operate and provide unlimited vertical clearance. Examples of bascule bridges currently under the jurisdiction of the New York City Department of Transportation include the **Unionport**, **Shore Road (Pelham)**, **Hamilton Avenue**, Third Street, Union Street, and **Greenpoint Avenue** Bridges.



Unionport Bridge. (Credit: NYSDOT) Hamilton Avenue Bridge. (Credit: NYSDOT) Union Street Bridge. Greenpoint Avenue Bridge. (Greenpoint Credit: Michele N. Vulcan) Shore Road Bridge in July 2011. (Credit: Sergey Parayev)

### **BASE COURSE**

The layer of compacted ASPHALT directly under the WEARING SURFACE.

### **BEAM**

A linear structural member designed to span from one support to another.

### **BEARINGS**

Designed to transmit the load from the SUPERSTRUCTURE to the SUBSTRUCTURE. Divided into two types, expansion and fixed, bearings are needed to ensure that certain elements are not forced to take more load than that for which they were designed and that the bridge can move slightly under load and temperature changes as needed.



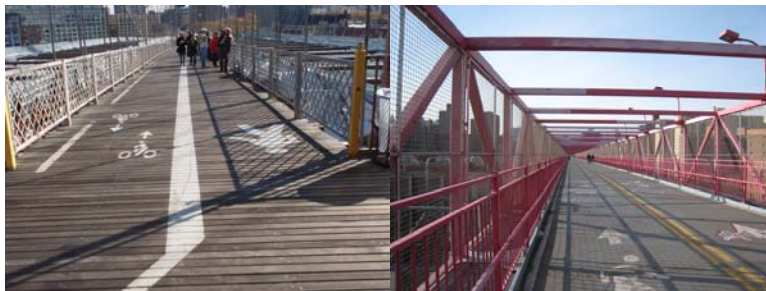
Truss Bearing on Manhattan Bridge.  
(Credit: NYSDOT)

### **BICYCLE LANE**

A portion of the roadway that has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicycles. (New York State Vehicle and Traffic Law, Title 1, Article 1, §102-a)

### **BICYCLE PATH**

A path physically separated from motorized vehicle traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way and which is intended for the use of bicycles. (New York State Vehicle and Traffic Law, Title 1, Article 1, § 102-b)



Brooklyn Bridge and Williamsburg Bridge Bicycle/Pedestrian Paths in 2010.  
(Williamsburg Credit: Russell Holcomb)

### **BID**

A contractor's formal proposal, including prices, to perform the work set out in the project SPECIFICATIONS.

### **BMP (BEST MANAGEMENT PRACTICES)**

Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage, or leaks, sludge or waste disposal, or drainage from raw material storage.

### **BORING**

A soil exploration technique of drilling into the ground at various locations in an attempt to construct an accurate subsurface profile.





Conducting Soil Borings in 2008 as Part of the Seismic Retrofit Design of the Manhattan Bridge. Drilling to a Depth of Approximately 210 Feet to Obtain an 8-foot Long Hard Rock Sample. A 2 1/2 –Foot Long Hard Rock Sample Taken From a Depth of Between 202 and 204 ½ Feet.

**BOX BEAM**

A hollow structural beam with a square, rectangular, or trapezoidal cross-section.

**BRIDGE**

A structure connecting two points, greater than 20 feet in distance, which carries vehicular and/or pedestrian traffic over water, a descending slope, or another road.

**BULKHEAD**

A RETAINING WALL-like structure commonly composed of driven piles supporting a wall or a barrier of wooden timbers or reinforced concrete members.

**CABLE**

A steel rope, composed of parallel or twisted wires, used to support the road deck of SUSPENSION BRIDGES or CABLE STAYED BRIDGES.



Inspector on Manhattan Bridge Cable.  
(Credit: NYSDOT)

**CABLE STAYED BRIDGES**

Bridges in which the superstructure is directly supported by cables, or stays, passing over or attached to towers located at the main piers.



East 64<sup>th</sup> Street Pedestrian Bridge over FDR Drive.

**CAISSON**

A rectangular or cylindrical chamber for keeping water or soft ground from flowing into an excavation.

### **CAMELBACK TRUSS**

A TRUSS having a curved top chord and straight bottom chord meeting at each end. There is a camelback truss on the Macombs Dam Bridge.



Macombs Dam Camelback Truss.

### **CANTILEVER BRIDGES**

A cantilever is a BEAM that is supported only on one end. In a cantilever bridge, the tree branch-like beams project toward each other, forming a span of the bridge when connected in the center. Bridges of this type are economical to build because they require less material in construction and less condemnation of property is necessary for the narrow piers which are sufficient for support. Typically, no falsework is required during construction and the bridge does not exceed 1,800 feet in length. NYCDOT's **Ed Koch Queensboro Bridge** is a notable example of this type of structure.



Ed Koch Queensboro Bridge.  
(Credit: Russell Holcomb)

### **CAST-IN-PLACE**

Concrete that is poured and cured in its final position at the project site.

### **CATCH BASIN**

A receptacle, commonly box shaped and fitted with a grided inlet and a pipe outlet drain, designed to collect the rain water and floating debris from the roadway surface and retain the solid material so that it may be periodically removed.

### **CATWALK**

A narrow walkway for access to some part of a structure.



Ed Koch Queensboro Bridge Lower Level Flooring System Catwalk under Lower Level Queens Approach. Manhattan Bridge Brooklyn Tower Catwalk.  
(Credit: NYSDOT)

## CHANGE ORDER

An approved modification of the SPECIFICATIONS or the costs in a construction contract.

## CHIPPING HAMMER

A welder's compressed-air tool for cleaning steel after welding. It is also used by bridge inspectors.

## CLADDING

Non-load-bearing stone or brick veneer used as the facing material in exterior bridge wall construction.



East Approach Cladding on the East 174<sup>th</sup> Street Bridge. Abutment Wingwall Cladding on the West 173<sup>rd</sup> Street Bridge. Hutchinson River Parkway Bridge.

## CLEARANCE

The unobstructed vertical and horizontal space provided between two objects.



United Nations – 1<sup>st</sup> Avenue Tunnel Vertical Clearance Posting. (Credit: NYSDOT) Measuring Vertical Clearance at the 129<sup>th</sup> Street Pedestrian Bridge in April 2012. (Credit: Artemio Angeles) Retro-reflective Material Improves Visibility of These Low Vertical Clearance Bridges: East 60<sup>th</sup> Street Bridge Over FDR Drive and Westchester Avenue Bridge over Hutchinson River Parkway.

## COFFERDAM

A temporary dam-like structure constructed around an excavation to exclude water.



April 2010: Cofferdam With Filter Fabric and Gravel Placed Prior to Pile Driving During the Emergency Repair Project on the Borden Avenue Bridge over Dutch Kills.

## COLONNADE

A series of regularly spaced columns.





Manhattan Bridge Colonnade.  
(Credit: Peter Basich)

### ***COMPRESSION***

The stress resulting from a pushing force on a structure.

### ***CONDITION RATING***

A judgment of a structure's condition in comparison to its original as-built condition.

### ***COPING***

The material forming the top layer of a masonry unit which protects the MASONRY below from penetrating water.

### ***CORE***

A cylindrical sample of concrete removed from a bridge component for the purpose of destructive testing.



Removing a Core From 252<sup>nd</sup> Street Bridge over Henry Hudson Parkway in January 2009.  
(Credit: Masroor Mahmood)

### ***CORROSION***

The general disintegration of surface metal through oxidation.

### ***COUNTERWEIGHT***

A weight which is used to balance the weight of a movable member; in bridge applications counterweights are used to balance a movable span so that it rotates or lifts with minimum resistance.

### ***CRITICAL PATH***

The set of activities that must be completed on time for the contract completion date to be met. Activities on the critical path have no slack time.

### ***CULVERT***

Any structure under the roadway with a clear opening of twenty feet or less, measured along the center of the roadway.



Idlease Place Culvert. Sweet Brook Road Culvert.

### ***CURING***

Process of maintaining freshly placed concrete mortar, grout, or plaster moist and at a favorable temperature for a suitable period of time during its early stages so that the desired properties of the material can develop. Curing assures satisfactory hydration and hardening of the cementitious materials.

### ***DEAD LOAD***

The weight of the bridge itself without any traffic or external loads.

### ***DECK***

The supporting slab and wearing surface of a bridge.



Hamilton Avenue Bridge, and West 8<sup>th</sup> Street and Chambers Street Pedestrian Bridge Decks.  
(Hamilton Credit: NYSDOT)

### ***DELAMINATION***

The subsurface separation of concrete into layers.

### ***DESIGN-BUILD CONTRACTS***

A delivery procedure where one company is retained to perform both design and construction, thus expediting the capital bridge rehabilitation program.

### ***DOLPHIN***

A group of PILES driven close together and placed to protect portions of a bridge or other structure exposed to possible damage by collision with marine traffic.



Greenpoint Avenue Dolphin & Fender System.  
(Credit: Peter Basich) Hunters Point Avenue Dolphins.  
(Credit: Michele N. Vulcan)

### ***DRAINAGE SYSTEM***

A collection of surface and/or subsurface drains and pumps that are used to remove surface or ground water.



### **EFFLORESCENCE**

White salts that water movement brings to the surface of porous construction materials.



Moderate Efflorescence on the Brooklyn Bridge Brooklyn Tower North Gothic Arch in 2004. (Credit: NYSDOT)  
Efflorescence on the Underside of the Masonry Stones on the End Abutment of the Margaret Corbin Drive Bridge over Pedestrian Path Near Café.

### **ELECTRICAL MAINTENANCE**

Preventive maintenance to electrical systems on the East River bridges (e.g., travelers, lighting systems) and the movable bridges (e.g., contacts, relays, switches, controls, limit switches, and lighting systems).

### **EXPANSION JOINTS**

Located throughout a bridge, expansion joints are located in the deck, directly above the BEARINGS. Expansion joints allow parts of the structure to expand independently and therefore relieve stresses that may otherwise cause damage.

### **EYEBARS**

Steel bars with each end shaped like the eyes of giant needles. They provide total anchorage of the suspension cable and are buried deep within the ANCHORAGE structure.

### **FACE**

The outer, exposed surface of a MASONRY unit.

### **FATIGUE**

Cause of structural deficiencies (such as metal fracture) due to repetitive (or cyclic) loading over time.

### **FENDER**

A structure that acts as a buffer to protect the portions of a bridge exposed to floating debris and water-borne traffic from collision damage.



Rikers Island Dolphin & Fender System. (Credit: NYSDOT)

### **FINGER DAM**

EXPANSION JOINT in which the opening is spanned by meshing steel fingers or teeth.



Manhattan Bridge Finger Dam.  
(Credit: Jagtar Khinda)

### **FIRE HAZARD**

Accumulation of debris, where the debris is of sufficient quantity, in a location where, if it caught fire, it would compromise the structural integrity of the bridge.

### **FIXED PRICE CONTRACT**

A contract with an overall predetermined price for the project work.

### **FLAG CONDITIONS**

A “Flag” is a hazardous or potentially hazardous condition on a bridge. A “Flag” is classified as either Red, Yellow, or Safety. A “Red Flag” requires prompt evaluation and, possibly, corrective action. A “Yellow Flag” is used to report a potentially hazardous structural condition, which if left unresolved will most likely become a danger to the soundness of the bridge and a hazard to the public. In the case of a “Safety Flag,” there is no danger of partial or complete structural failure of the bridge; however, if left unattended, those conditions can present a vehicular or pedestrian hazard.

### **FLOORBEAMS**

Horizontal members placed crosswise to the bridge's major BEAMS, girders, or TRUSSES to support the deck.



South Transit Floorbeams, Stringers, and Bracing Members on the  
Manhattan Bridge. Ed Koch Queensboro Bridge North Outer Roadway  
Floorbeam. (Credit: NYSDOT)

### **FOOTINGS**

Part of the substructure known as the bridge foundation, they are masses of reinforced concrete which can be found beneath the ABUTMENTS and PIER and which spread the load to allow the soil to support the structure above.

### **FORMS**

The temporary molds that hold concrete in place while it is hardening; also known as form work.

### **FULL STEEL PAINTING**

A bridge painting technique that involves cleaning of steel surfaces using approved environmentally safe paint removal techniques (blasting, power tools, or hand tools). A full primer, intermediate and finish coat are applied using combinations of brush, roller, or (if necessary) spray painting.

### **FUNCTIONALLY OBSOLETE**

A status used to describe a bridge that, because of its geometry, is no longer functionally adequate for its task. Reasons for this status include that the bridge doesn't have enough lanes to accommodate the traffic

flow, it may be a drawbridge on a congested highway, or it may not have space for emergency shoulders. "Functionally Obsolete" does not communicate anything of a structural nature. A functionally obsolete bridge may be perfectly safe and structurally sound, but may be the source of traffic jams or may not have a high enough CLEARANCE to allow an oversized vehicle.

### **GENERAL CONTRACTOR**

has overall responsibility for a construction project. The general contractor may break down the project into smaller pieces to be handled by subcontractors.

### **GEOMETRIC IMPROVEMENT**

Roadway improvements other than a surface treatment, such as shoulder and lane widening, curb and gutter, or roadway alignment.

### **GIRDER SPAN BRIDGES**

are primarily employed in bridging short distances, and may be classified as either simple or continuous. The steel girders carry the roadway and roadway load to end supports. The Midtown Highway, **Hook Creek**, Little Neck and **Brooklyn Third Avenue Bridges** are of this type.



Hook Creek Bridge and Brooklyn's Third Avenue Bridge. (Credit: NYSDOT)

### **GRADE**

The degree of inclination of the ground surface.

### **GRID FLOORING**

A steel floor system comprising a lattice pattern which may or may not be filled with concrete.



Installation of Full Width Grid Deck Panels on the Manhattan Bridge Lower Roadway in 2006. Pouring the Concrete.

### **GRIZZLY**

A coarse screen used to remove oversize pieces from ASPHALT or earth.



New Grizzly Under Fabrication for the Agency Hamilton Asphalt Plant. (Credit: Russell Holcomb)

### ***GUTTER***

A paved drain commonly constructed in conjunction with the curbs of the roadway.

### ***JACKING***

The mechanical lifting or sliding of an element.



Ed Koch Queensboro Bridge Bent  
Column Ready for Jacking in 2005.

### ***JERSEY BARRIER***

A low, gradually narrowing, reinforced concrete wall used as a highway divider and as a means of preventing a vehicle from crossing a median or leaving the roadway. These barriers were first used on the New Jersey Turnpike.

### ***LIVE LOAD***

The weight of the traffic crossing a bridge and of other external loads applied to the structure (excluding the weight of the bridge itself.)

### ***LOAD RATING***

A value that indicates the LIVE LOAD capacity of a bridge.

### ***LUBRICATION MAINTENANCE***

Lubrication of mechanical parts of the East River bridges (e.g., travelers, cables, solid rod suspenders, and EYEBARS), and the movable bridges (e.g., bearings, brakes, limit switches, and gates).

### ***MAINTENANCE AND PROTECTION OF TRAFFIC***

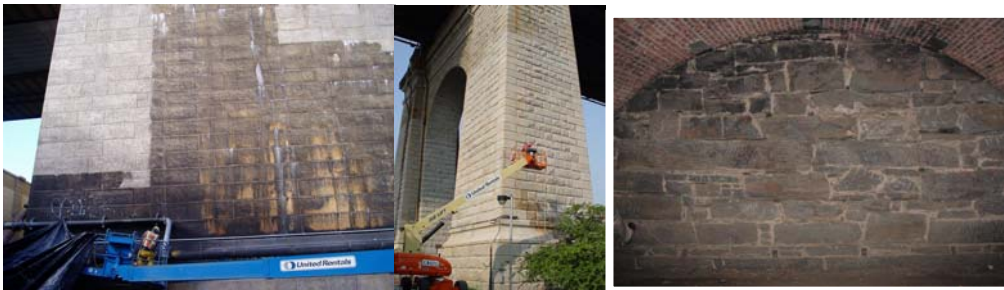
The control plan for traffic around and through a construction site.

### ***MARINE BORERS***

Mollusks and crustaceans which live in water and destroy wood by digesting it.

### ***MASONRY***

Construction materials made of concrete, brick, tile, or stone.



Cleaning the Masonry of the North Face of the Manhattan Bridge's Brooklyn Anchorage and  
of the North and East Faces of the Roosevelt Island Pier of the Ed Koch Queensboro Bridge.  
Masonry of the East Drive Bridge Over Eastwood Arch.

### ***MORTAR***

Mixture of cementitious materials, fine AGGREGATE, and water, which may contain ADMIXTURES, and is usually used to bond MASONRY units.



### MOVABLE BRIDGE

A type of bridge which carries vehicular or pedestrian traffic over a navigable waterway, and which opens to permit the passage of a ship, barge or boat. The 25 movable bridges currently under the jurisdiction of the New York City Department of Transportation include the Harlem River group (Broadway, West 207<sup>th</sup>/West Fordham Road, Macombs Dam, 145<sup>th</sup> Street, Madison Avenue, Third Avenue, Willis Avenue, and **Wards Island**); the Bronx group (Bruckner Expressway/Bronx River, Hutchinson River Parkway, **Shore Road**, and Bruckner Expressway/Westchester Creek); the Queens group (Borden Avenue, Grand Street, Greenpoint Avenue, Hunterspoint Avenue, **Pulaski Avenue**, and **Roosevelt Island**); and the Brooklyn group (Hamilton Avenue, Ninth Street, Third Street, Carroll Street, Union Street, Metropolitan Avenue, and Mill Basin.)



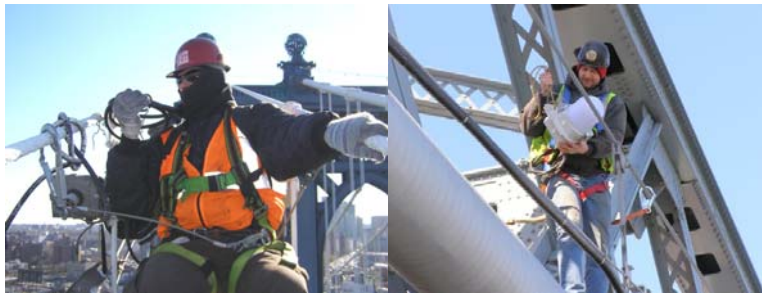
Roosevelt Island Bridge in 2010. Shore Road Bridge in 2009. (Shore Road Credit: George Kern) Wards Island Pedestrian Bridge in 2009. (Credit: Duane Bailey-Castro) Pulaski Bridge in 2010. (Credit: Sergey Parayev)

### MOVING LOAD

A LIVE LOAD that is moving, for example, vehicular traffic.

### NECKLACE LIGHTS

The necklace lights are those lights on the main cables of suspension bridges which, when illuminated at night, resemble a necklace.



Repairing a Manhattan Bridge Necklace Light. Bridge Repairer and Riveter Neil Dalton Installing a New Light on the Williamsburg Bridge in 2012. (Credit: Hany Soliman)

### NONDESTRUCTIVE TESTING

A method of checking the structural quality of materials that does not damage them.

### NOTICE TO PROCEED

The formal document authorizing the contractor to commence work under its contract.

### OPERATOR'S HOUSE

The building containing the power plant and operating machinery and devices required for the operator's (bridge tender's) work in executing the complete cycle of opening and closing a MOVABLE BRIDGE span.



Metropolitan Avenue Bridge over English Kills Operator House.



### **PANEL POINT**

The point at which two members of a TRUSS cross.

### **PARAPET**

A low wall along the outmost edge of the roadway of a bridge to protect vehicles and pedestrians.

### **PEDESTRIAN BRIDGES**

Bridges designed and constructed to provide means of crossing for pedestrian traffic only.



Morris Street, West 8<sup>th</sup> Street, PS-5, Carroll Street over Franklin Shuttle, and Chambers Street Pedestrian Bridges.

### **PIER**

Part of a bridge's substructure, piers are the intermediate supports or columns which support a multi-span bridge. Piers may be composed of steel or reinforced concrete, and can appear as columns or solid walls.



Pier 1 of Hamilton Avenue Bridge. Pier 17 of Rikers Island Bridge. Pier 1 of Hunters Point Avenue Bridge. Ed Koch Queensboro Bridge Pier. Pier 35 of Macombs Dam Bridge. (Credit: NYSDOT)

### **PILES**

A concrete, steel or timber column located beneath the FOOTINGS of a bridge and embedded in the soil. Piles are employed in bridges only if the soil directly below the footing is not firm enough to support the bridge loads.

### **PLAZA**

An area designated for use by pedestrians, which may vary in size and shape; which may abut a sidewalk and is located fully within the bed of a roadway; may be at the same level as the roadway or raised above the level of the roadway; may be physically separated from the roadway by curbing, bollards, or other separators; may be treated with special markings and materials; and may contain benches, tables, or other facilities for pedestrian use.



Manhattan Bridge Brooklyn Plaza. Evening View of the Plaza Looking Southeast With Benches, Lights, and Granite Pavers in Foreground. Aerial View of the Plaza. Looking South From the Pedestrian Entrance.

### **PLUMB BOB**

A weight hanging on a string (plumb line), used by bridge inspectors to show the direction of the vertical distance.

### **POINTING**

The compacting of the mortar in the outermost portion of a joint and the troweling of its exposed surface to secure water tightness or desired architectural effect.



Pointing Joints on the East Face of the Brooklyn Anchorage of the Manhattan Bridge.

### **PORTLAND CEMENT CONCRETE**

The most common concrete used in construction. It was patented in England in 1820, and is so named because when hard, it resembles Portland stones from Dorset.

### **POSTED**

An announcement or sign limiting dimension, speed, or loading, indicating that larger dimensions and higher speeds and loads cannot be safely taken by the bridge.



Roosevelt Island Bridge Vertical Clearance Restriction and Posted Weight Signs.  
(Credit: NYSDOT)

### **POTHOLE**

A hole in a roadway or pavement, usually caused by heavy vehicular traffic or weathering.

### **PRECAST CONCRETE**

Concrete members that are cast and cured before being placed into their final positions on the construction site.

### **PREVENTIVE MAINTENANCE**

Preventive maintenance involves cleaning, protecting, and performing minor repairs of bridge components to prevent deterioration from becoming so extensive that major REHABILITATION or RECONSTRUCTION is needed. Specified interval maintenance, such as cleaning DRAINAGE SYSTEMS and lubrication, are done on a scheduled basis. Other maintenance is carried out when inspectors point out the need for it, such as resealing an EXPANSION JOINT or replacing the wearing surface. Preventive maintenance tasks on the bridges include: the cleaning of drainage systems, gratings, and expansion joints; the washing of the deck area and salt splash zones; full-steel, salt splash, and spot painting; the patching of sidewalks; the maintenance of electrical devices; and the oiling of mechanical components.



Power Washing the Corrosive Deicing Solvents Within the Range of the Roadway Splash Zone on The Manhattan Bridge in October 2007. Particular Attention is Directed to Cleaning the Gusset Plate. (Credit: Albert Hong)

Performing Wear and Tear Resurfacing Work on the Roosevelt Avenue Bridges in April 2010: Assistant City Highway Repairer Victor Magagna, Supervisor Highway Repairer Joseph Palemine, Assistant City Highway Repairer Jonathan Adorno (Obscured), Assistant City Highway Repairer Anthony Montalbano, and Area Supervisor Highway Maintenance Edward Pedersen. Assistant City Highway Repairers Jonathan Adorno and Victor Magagna. (Credit: Joseph Flood)

### **PRIMER**

The first layer of paint used to cover the unsealed surface. This is followed by at least one more coat of paint.

### **PUNCH LIST**

A catalogue of minor items still outstanding at the end of a construction project.

### **QUALITY ASSURANCE**

An independent evaluation of a service (i.e., an inspection) to establish that a pre-described level of quality has been met.

### **RAILING**

A fence-like construction built at the outermost edge of the roadway or the sidewalk portion of a bridge to protect pedestrians and vehicles.



Manhattan Bridge Railing. (Credit: Russell Holcomb) Greywacke Arch Railing.

### **RAILROAD FORCE ACCOUNTS**

Railroad force accounts are contracts between the Agency and railroads by which the railroads supply flag personnel so the Division can perform repair work on bridges that cross over railroad tracks.

### **REHABILITATION**

Extending the useful life of a bridge by painting, repairing or replacing the DECK or selected elements of the SUBSTRUCTURE or SUPERSTRUCTURE. This type of work is performed primarily on those structures not classified as deficient, but which contain specific components that have low condition ratings.

### **RETAINING WALL**

A structure designed to restrain and hold back a mass of earth.





Kappock Street Retaining Wall in Riverdale, Before and After Repairs. The Existing 300-Foot Long Parallel Concrete Roadway Retaining Walls on Both Sides of Kappock Street Were Deteriorated and Leaning, and Were Replaced with New Modular Retaining Walls in the Summer of 2009.

### **RETARDING AGENT**

A chemical added to mortar to slow down the set.

### **RETRACTILE BRIDGES**

Retractable bridges are movable bridges that are mounted on tracks that are positioned to one side of a navigational channel. To open, the bridge is withdrawn or "retracted" to shore. Although fascinating to observe and efficient to operate, retractile bridges are considered obsolete because of the expansive land areas that must be condemned in order to accommodate their tracks. The New York City Department of Transportation currently possesses two retractile bridges - the **Borden Avenue** and **Carroll Street** bridges, rare examples of the bridge builders' art.



Borden Avenue Bridge. (Credit: Peter Basich) Carroll Street Bridge. (1<sup>st</sup> Credit: NYSDOT, 2<sup>nd</sup>: Russell Holcomb)

### **RETROFIT**

Upgrading parts of an existing structure to meet current standards.

### **RIGHT-OF-WAY**

A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

### **RIPRAP**

Irregularly broken, random-sized pieces of rock used for a foundation or to prevent soil erosion.



Eroded Riprap Pier Protection at Pier 11 of Old Willis Avenue Bridge in 2008.  
(Credit: NYSDOT)

### ***ROADWAY***

The portion of the road intended for the use of vehicular traffic.

### ***ROCKER BEARING***

A bridge support that accommodates expansion and contraction of the superstructure through a rocking action.

### ***SADDLE***

A special curved casting atop a SUSPENSION BRIDGE tower into which the cables are placed to avoid sharp bends in directional changes of the cable.



Manhattan Bridge Saddle.  
(Credit: Jagtar Khinda)

### ***SALT SPLASH ZONE PAINTING***

A bridge painting process that involves preparation of the area to be painted by power wash, using clean water or steam. After power washing, hand and power tools are used in areas which have started to show deterioration from accumulated de-icing agents. Solvent cleaning is done in locations where oil and grease need to be removed from the steel surface. A spot PRIMER coat and finish coat are then applied by brush or roller. Occasionally, when there is no danger of overspray, spray painting may be performed.

### ***SCOUR***

The washing away of stream bed material around or underneath the bridge abutments or piers that is caused by water channel flow.



Scour on Pier 2 End Face of Mosholu Parkway Bridge Over Bronx River in 2008. (Credit: NYSDOT)



### ***SCREED***

A long section of metal or wood which is dragged across freshly placed concrete to both smooth the surface and consolidate the concrete.



Screed at East 8<sup>th</sup> Street Ramp in 2011.

### ***SCUPPER***

An opening in the floor portion of a bridge to provide means for rain or other water accumulated upon the roadway surface to drain through it into the space beneath the structure.



Scuppers on the Pulaski, Madison Avenue, and Brooklyn Bridges. (Credit: NYSDOT)

### ***SET***

When the consistency of mortar changes from plastic to hard.

### ***SHORING***

Temporary bracing to support a structure.



2010: Shoring of Stringers at Ramp D East Abutment (Staten Island Ferry Ramps) for Steel Repair Work. Installation of Shoring Towers at the Shore Road Circle Bridge.

### ***SHOTCRETE***

MORTAR or small-AGGREGATE concrete that is conveyed by compressed air through a hose and applied at high velocity to a surface. Also known as gunite and sprayed concrete.

### ***SOFFIT***

The underside of a structural component, such as a beam or arch.

### ***SOUNDING***

A method of checking for voids or DELAMINATIONS in concrete by striking a hammer against the structure and listening for a hollow sound.

### **SPALLING**

The flaking or breaking out of concrete parallel to the main surface, caused by a blow, or by the action of weather or pressure.



Spalled Section of Curb on the East 8<sup>th</sup> Street Bridge in 2006. (Credit: NYSDOT) Spalling With Exposed Rebar on the Beginning Abutment Joint Header of the Westchester Avenue Bridge over the Bronx River in 2011.

### **SPAN**

The distance between consecutive supports of a bridge.

### **SPECIFICATIONS OR SPECS**

A detailed listing of required construction materials and methods to be used in the project. This information is a supplement to the blue prints and working drawings.

### **SPLAY CASTING**

A steel or cast-iron collar fitted around a bridge suspension CABLE at the location where it spreads out (splays) into separate bundles of wires which are then attached to the ANCHORAGE EYEBARS. It is used to control the degree and location of the splay. These castings are usually located at the entry point of the cable into the anchorage chamber.

### **SPOT PAINTING**

When the surface to be painted is contaminated with de-icing salts, sea salt, bird excrement, or other corrosive agents, the area is prepared by power washing, using clean water or steam. When grease or oil is present, it is removed by solvents. Mechanical cleaning with hand and/or power tools is performed in the areas containing deteriorated paint. A spot PRIMER coat and a single finish coat are applied by brush or roller. Occasionally, when there is no danger of overspray, spray painting may be performed.

### **STAGED CONSTRUCTION**

Construction done so that traffic may be maintained on a portion of an existing bridge structure while a longitudinal section of a new structure is constructed. Traffic is then shifted over to that portion of the new structure while the existing structure is removed and the new structure is completed.

### **STEEL ARCH BRIDGES**

Steel arch bridges consist of either a single arch or a series of arches fashioned from steel or concrete. Aesthetically one of the more attractive bridge types. Arch structures can prove economical to construct if the bridge spans between high ABUTMENTS. At present, there is only one bridge of this kind in steel under the guardianship of the NYCDOT; the twin-arched **Washington Bridge**, positioned over the Harlem River at 181<sup>st</sup> Street. This bridge opened to traffic in December 1888 and, with its approaches, is 2,375 feet long.



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

### **STEM**

The vertical part of a retaining wall, usually made of concrete or masonry.



East Face of Brooklyn Bridge North Stem Wall.  
(Credit: NYSDOT) West 176<sup>th</sup> Street Pedestrian  
Bridge Beginning Abutment Stem Wall.

**STOPPING SIGHT DISTANCE**

The distance required for a vehicle to stop before hitting a stationary object in its path. It is equal to the distance required for the driver to react and apply the brakes plus the distance required for the vehicle to stop once the brakes are applied.

**STRAIN GAUGE TESTING**

Small strips of material (imagine a small band-aid) are glued onto part of a structure to measure the stress in the material under load. Inside the small "band-aid" are tiny electrical wires. When a structure is under load it stretches (tension) or contracts (compression). When this happens, the resistance in the tiny wires in the strain gauge changes, resulting in a change in the wire's current. What is actually being measured are changes in the electrical current in the tiny wires. Knowing the physical properties of the structural member that the gauge is attached to, (such as steel), a calculation is can then be made to convert these changes in current to changes in stress. The readings are taken with special instruments that record the information over the desired period of time or loading sequences.



June 2012 - Metropolitan Avenue Bridge. Summer College Intern Nikita Gupta Unsealing the Wire for Strain Gauge Testing. July 2012 – Unionport Bridge. Summer College Intern Kevin Hillery Setting up Inclinometer Calibration. August 2012 – Hunters Point Avenue Bridge. Kevin Hillery Checking Strain Gauge Connections With a Millimeter. (Credit: Vera Ovetskaya)

**STRAND**

Comprised of hundreds of thin wires laid parallel to form a bundle, strands comprise the base element in the CABLES, or main cables, on a SUSPENSION BRIDGE or cable stayed bridge.

**STRINGER**

A part of a bridge's SUPERSTRUCTURE, a stringer is essentially a BEAM parallel to the span used to support the road DECK.



Stringers on the Manhattan Bridge. (Credit: NYSDOT) Bridge Repairer and Riveter Joseph Antony Repairing a Red-Flagged Stringer on the Bridge.  
(Credit: Hany Soliman)



### **STRUCTURAL DEFICIENCY**

An engineering term-of-art used by the Federal government to indicate that there are elements of the bridge that need to be monitored and/or repaired. It covers a wide range of conditions and does not reflect the fundamental integrity of a structure. Any city bridge deemed unsafe would be shut to the public.

### **STRUCTURAL HEALTH MONITORING**

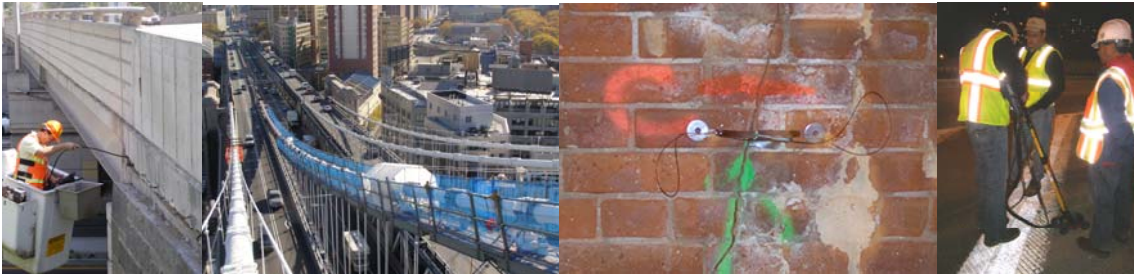
The continuous or regular monitoring of the condition of a structure or system using built-in or autonomous sensory systems, and any resultant intervention to preserve structural integrity.

**Borescope Investigations:** The borescope is a high-tech device combining fiber-optic technology with digitized computer memory. It allows scanning and photographing of otherwise inaccessible locations.

**Corrosion Sensors:** Corrosion sensors were developed for the first time under a FHWA contract specifically for New York City's suspension bridges.

**Fiber Optic Sensors:** Fiber optic sensors can measure very small displacements as well as strain gauges, but are more resilient and insensitive to temperature changes. The information is readily transmitted online and lends itself to real-time monitoring.

**Ground Penetrating Radar:** Ground penetrating radar uses the propagation and retraction of high frequency waves through materials such as concrete to detect the presence of voids.



Director of Bridge Management Kevin McNulty Inspecting the Bridge Carrying the Belt Parkway over Ocean Parkway, Utilizing the Unit's Borescope. Experimental Corrosion Sensors Installed for a Test on Cable D of the Manhattan Bridge in 2011 (Left Corner). A Fiber Optic Sensor Monitoring a Crack in the Masonry of the Brooklyn Bridge's Manhattan Approach. A Ground Penetrating Radar Inspection of the Belt Parkway Bridge over Ocean Parkway. (Credit: Bojidar Yanev)

### **SUBSTRUCTURE**

The name given to those elements below a bridge's road deck system, namely the ABUTMENTS, ANCHORAGES, BEARINGS, and PIERS.

### **SUPERSTRUCTURE**

The superstructure is all that part of a structure above the bearings of simple and continuous spans, skewbacks of arches and top of footings of rigid frames; excluding backwalls, WINGWALLS and wing protection railings.

### **SUSPENDER**

A wire rope or a short vertical rod that enables the forces of the roadway of a SUSPENSION BRIDGE to be translated into an axial force in the supporting CABLES.



Manhattan Bridge Suspenders. (Credit: NYSDOT and Jagtar Khinda)

### **SUSPENSION BRIDGES**

Suspension bridges are high level bridges with spans that usually exceed 1,500 feet in length. Supported by large wire CABLES that are anchored to masses of concrete and which pass over the tops of towers, the

road DECK is suspended at regular intervals by smaller cables called suspenders. While the main cables carry the entire live and dead load, stiffening TRUSSES are required to distribute the LIVE LOAD and prevent excessive deflection at any point. The Brooklyn, **Manhattan** and **Williamsburg** Bridges are noted New York City examples of this type.



Manhattan Bridge. (Credit: Bernard Ente) Williamsburg Bridge. (Credit: Peter Basich)

### SWING BRIDGES

Swing bridges are movable bridges that are supported on a center PIER in the center of a waterway, and are opened by rotating the SUPERSTRUCTURE horizontally on wheels riding on a circular track. Two channels are provided on either side of the bridge for navigational ease when the bridge is in the open position. Because swing bridges are slow to operate and restrict channel width, they are rarely constructed today. Examples of swing bridges in New York City include the **Third Avenue**, **Madison Avenue**, **145<sup>th</sup> Street**, **University Heights**, **Grand Street** and **Macombs Dam** Bridges.



Third Avenue University Heights Bridge. (Credit: Michele N. Vulcan) Grand Street Bridge.  
(Credit: NYSDOT) Macombs Dam Bridge. (Credit: Michele N. Vulcan)

### TEMPORARY BRIDGE

A pedestrian and/or vehicular bridge built to carry traffic around an active construction site in lieu of STAGE CONSTRUCTION. The structure is removed after the new bridge is open to traffic.



2005: Pontoon Bridge Used During the Emergency Reconstruction of the Ocean Avenue Pedestrian Bridge over Sheepshead Bay. (Credit: Russell Holcomb)

### THERMAL EXPANSION

Temperature-induced changes in the lengths of steel and other materials used to construct bridges. Thermal expansion governs the design of joints and can, in extreme cases, impact the operation of movable bridges.

### TORSION

Twisting force usually caused by unbalanced or asymmetrical loading.



## TOWER

Often the most majestic element in a SUSPENSION or cable stayed bridge, the **tower** serves as a support for the structure's main CABLES.



Inspectors on Manhattan Bridge Tower. (Inspector Credit: NYSDOT) Manhattan Bridge Tower. (Credit: Michele N. Vulcan) Manhattan Bridge Tower Detail. (Credit: Russell Holcomb) Brooklyn Bridge Brooklyn Side Tower Detail. (Credit: Jagtar Khinda)

## TRAVELER MAINTENANCE

The maintenance of a traveler (movable underdeck platform) that runs under the East River Bridges so maintenance, inspections and repairs can be performed to the underside of the bridge.



Manhattan Bridge Traveler. (Credit: NYSDOT)

## TRUSS

A rigid framework built of interconnecting steel beams, creating a large "girder" to support the floor system and transfer loads to the substructure over a longer span.



Brooklyn Bridge Franklin Square Truss. (Credit: Andy Hoang). General view of Manhattan Bridge Trusses B and C From the Lower Roadway on the Main Span. (Credit: NYSDOT) Chambers Street Pedestrian Bridge Truss. Madison Avenue Bridge Truss Swinging. (Credit: NYSDOT)

## TRUSS BRIDGES

Truss bridges possess road decks that are supported by Steel TRUSSES that rest on PIERS and ABUTMENTS, and which span short distances. The 174th Street Bridge in the Bronx is an example of a truss bridge.



East 174<sup>th</sup> Street Truss Bridge over Sheridan Expressway. (Credit: NYSDOT)

### VERTICAL LIFT BRIDGES

Vertical lift bridges are movable bridges which have road DECKS that operate in much the same fashion as an elevator. Comprised of supporting end CABLES that are attached at one end to the road DECK and at the other to rotating drums, these bridges are raised and lowered to allow for the safe passage of marine traffic. The **103rd Street - Wards Island Pedestrian Bridge**, **Ninth Street Bridge**, and **Broadway Bridge** are examples of this type of bridge.



Wards Island Pedestrian Bridge. Ninth Street Bridge. (Credit: Bojidar Yanev) Broadway Bridge. (Credit: Bernard Ente)

### VIADUCT BRIDGES

Viaduct bridges are multi-span bridges containing two end spans and any number of intermediate SPANS. The end spans are supported by an ABUTMENT on one end and a PIER on the other. The intermediate spans held aloft by piers.



Park Avenue Viaduct Bridge. Experiencing the Viaduct in a Whole New Way During Summer Streets 2012.

### WEARING SURFACE

The topmost layer of material applied on the DECK or roadway that receives the traffic loads; also known as wearing course.



Brooklyn Bridge Wearing Surface. Manhattan Bridge Wearing Surface and Safety-Shaped Barriers. (Credit: NYSDOT)

### WATERPROOFING MEMBRANE

A protective sheet placed between a WEARING SURFACE and concrete DECK to shield the concrete deck from water and corrosive chemicals which could cause DELAMINATION and SPALLING.

### WELD

To fasten together metals by bonding with molten metal.

### ***WINGWALL***

Walls of reinforced concrete or stone that prevent the soil behind the ABUTMENT from eroding away and leaving a void beneath the APPROACHES of the bridge. Also known as a retaining wall.



Broadway Bridge, Bay Ridge Avenue Bridge, Ed Koch Queensboro Bridge, and Center Drive (Playmates Arch) Wingwalls. (First Three Credit: NYSDOT)

### ***WINTER INSPECTION***

Inspection of a site known to have a greater hazard potential during winter. This may be due to low ambient temperatures, accidental or deliberately set fires.



Timber Shoring Supporting a Failing Steel Beam – a Potential Winter Hazard.

(Credit: Bojidar Yanev)



## ***COMPONENTS OF THE PREVENTIVE MAINTENANCE PROGRAM***

### **Bridge Protection through Dirt and Water Control**

**Cleaning of Abutment and Pier Tops** Removal of debris, dirt and vegetation from abutment and pier tops; cleaning and lubrication of bridge bearings.

#### **Pier Top Cleaning of Bridges Over Water (including Pigeon Waste Removal)**

This work consists of removing all debris, including pigeon waste, from bridge abutments and pier tops. Workers pull the material from the edges into the center of the pier with a broom or shovel while supervisors monitor the work to ensure that, to the maximum extent practicable, material is not pushed from the pier during the cleaning process. Using hand tools, debris is collected and removed for disposal. When removing pigeon waste, a 3.5 gallon manual spray canister is used to apply a bleach/water solution to the waste and to the area to be cleaned. The solution is sprayed at a low height to limit aeration and prevent material from falling into the waterway. Once the waste has been sufficiently treated, it is removed for proper disposal.

#### **Cleaning and Lubrication of Bearings of Bridges Over Water**

This work consists of cleaning bearings, as well as removing old and applying new lubricant where required. For bearings on flat, solid surfaces, located 12 inches or more from the edge of the structure, no containment/bulkhead will be used. A containment/bulkhead will be used when cleaning or lubrication bearings located less than 12 inches from the edge of the structure. Dirt and old lubricant are collected and disposed of properly.

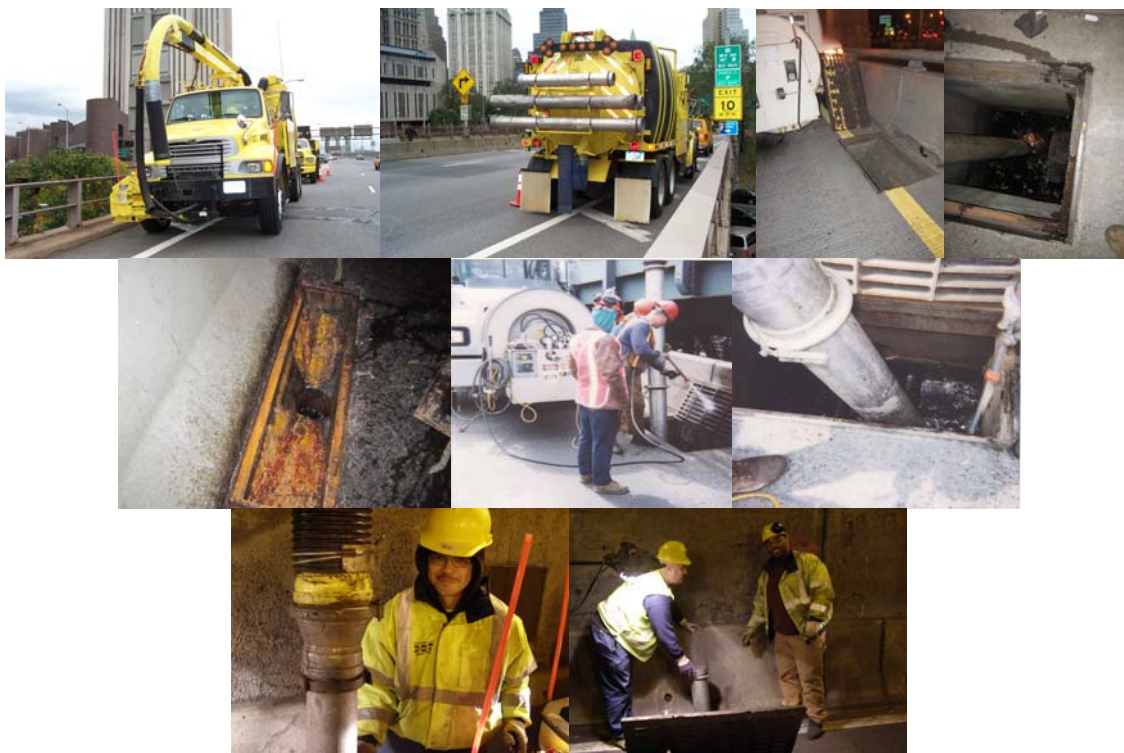
**Debris Removal** Removal of spilled trash; removal of rocks, wood, plastic or metal objects, tires, mufflers, wheel covers, and other traffic droppings; removal of paper products, bottles, cans, accumulated dirt and other trash. Debris removal is also required for walkways and plazas. For movable bridges and bridges over water, the protective fender systems need to be cleared of debris. The removal of debris from bridges is an important and critical component of maintenance. Debris can cause safety and hazard conditions. In addition, debris traps moisture and salts on the structure and prevents proper drainage.



Manhattan Bridge Tower After Debris Removal. (Credit: Peter Basich) 161<sup>st</sup> Street Pedestrian Bridge Over Major Deegan Expressway. Assistant City Highway Repairer Lashawn Elam and Highway Repairer Anita Ramos Removing Vegetation and Other Debris.

**Cleaning of Drainage System** Removal of debris, dirt and vegetation from drainage systems, including gutter gratings, gutters and leaders, scuppers, down spouts and scupper piping systems. The cleaning of surface gratings and gutters requires hand tools, brooms and brushes. In some cases, an air compressor might be needed to blow out some gutters. Cleaning the scuppers and scupper piping systems requires specialized equipment.

## COMPONENTS OF THE PREVENTIVE MAINTENANCE PROGRAM



Drain Truck on Brooklyn Bridge Ramp. (Credit: Peter Basich) Drain Cleaning on the Williamsburg Bridge in September 2011. (Credit: Shaikh Islam) Cleaning Catch Basins on the Manhattan Bridge. Drain Crew: Highway Repairer Anthony Irizarry, Supervisor Highway repairer Michael Parise, and Assistant City Highway Repairer Giavonni Caballero. (Crew Credit: James Campbell)

### Cleaning of Expansion Joints

Removal of debris and dirt from the troughs using compressed air or water; and cleaning and resealing of the joints. Performed on all bridges. Expansion joints are located at the surface level where they are subjected to impact and vibration and are exposed not only to the elements such as water, dust, grit, ultra-violet rays and ozone, but also to the effect of chemicals such as salt solutions, cement alkalis and petroleum derivatives. In addition to regular lubrication of moving parts, penetration of water, silt and grit must be effectively prevented or provision made for their removal.



Manhattan Bridge Expansion Joint Cleaning in 2008: Supervisor Highway Repairer Thomas Cruz, Assistant City Highway Repairer Antonio Asaro, Highway Repairer Louie Dumeng, and Oiler Stanley Karolewicz. Assistant City Highway Repairers Jonathan Adorno and Antonio Asaro, Oilers Stanley Karolewicz and Ronald Grady. (Credit: Thomas Whitehouse)



Expansion Joint Cleaning on the Williamsburg Bridge in September 2011. (Credit: Shaikh Islam)



## COMPONENTS OF THE PREVENTIVE MAINTENANCE PROGRAM

### Cleaning of Open Grating Decks

Removal of debris and dirt from open-grating decks and washing with high-pressure water jets.

Removal of debris and dirt from open-grating decks and washing with high-pressure water jets.

### Sweeping

Sweeping each bridge with a mechanical sweeper along each curb.

Sweeping each bridge with a mechanical sweeper along each curb.



Mechanical Sweeper – Side and Rear Views. (Credit: Peter Basich)

### Washing of Decks and Salt Splash Zones

Washing of decks and salt splash zones to remove remnants of de-icing salts; use of compressed air and water jets to clean tight corners.

Washing of decks and salt splash zones to remove remnants of de-icing salts; use of compressed air and water jets to clean tight corners.



Washing the Williamsburg Bridge in July 2011 and the Ed Koch Queensboro Bridge in August 2011.

## Roadway Surface Maintenance

### Crack Sealing in Pavement and Curbline Sealing

Cleaning of cracks and filling them with sealant; sealing with mastic material along the curb line to prevent water leakage onto bridge components. This maintenance function is sensitive to weather conditions.

Cleaning of cracks and filling them with sealant; sealing with mastic material along the curb line to prevent water leakage onto bridge components. This maintenance function is sensitive to weather conditions.

### Repair of Sidewalks and Curbs

Sidewalk repair to restore sidewalk to original condition. Curb repair to be undertaken along with this task.

Sidewalk repair to restore sidewalk to original condition. Curb repair to be undertaken along with this task.

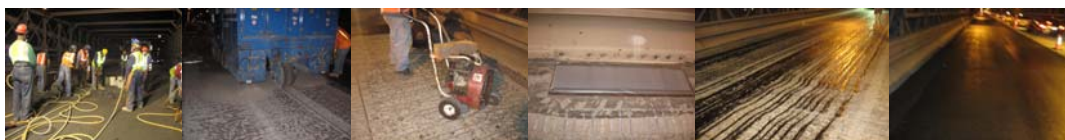


Sidewalk Repairs in August 2010 at Houston Street Bridge over the FDR Drive: Tractor Operator Robert Noordzy (in Tractor), Bricklayer Vincent Sciulla, Cement Masons Frank Finizio and Victor Porowski, and Bricklayer Luigi Cuffari. Bridge Repairer and Riveter Brook Budd and Bricklayer Luigi Cuffari. Tractor Operator Noordzy (in Tractor), Cement Masons Frank Finizio (Foreground) and Victor Porowski (Background), and Bricklayer Vincent Sciulla. Bricklayer Vincent Sciulla, Bridge Repairer and Riveters James Philip and Brook Budd, Bricklayer Luigi Cuffari, Tractor Operator Robert Noordzy, Supervisor Bricklayer Edward Alfano, and Cement Masons Frank Finizio and Victor Porowski. (Credit: Russell Holcomb)

## COMPONENTS OF THE PREVENTIVE MAINTENANCE PROGRAM

### Replacement of Wearing Surfaces

Removal of old wearing surface; preparation of exposed concrete slab or steel plate; installation of new wearing surface. The wearing surface is a two-inch course of bituminous concrete. Also includes minor deck repair, cleaning and waterproofing of deck.



Removing the Old Micro-Surfacing on the In-Bound Brooklyn Bridge. Shot Blasting for Surface Preparation. Cleaning the Roadway Surface. (Credit: Fouad Althaibani, Emad Shaker, and Sunil Desai) 2008: Covering all the Drainage Systems Before Applying the Micro-Surfacing on the In-Bound Brooklyn Bridge. Applying the Tack Coat for the Micro-Surfacing. Applying the New Micro-Surfacing Materials. (Credit: Fouad Althaibani, Emad Shaker, and Sunil Desai)



Resurfacing the Belt Parkway Bridge over Mill Basin on August 3, 2009. The Crew Completed a 13'x29' Cut in the Eastbound Center Lane, West Approach Spans. The Area Exhibited Rutting, Cracking and Excessive Patching. Breakout and Removal of Deteriorated Wearing Surface. Ironworker Assisting the Crew. Installation of New Asphalt. (Credit: Yousef Demis) Compacting the Asphalt With the Assistance of a Gasoline Roller Engineer From the Roadway Repair and Maintenance Division. (Credit: Ali Mozaffari)



Repaving the Williamsburg Bridge in 2011.

### Electrical and Mechanical Component Maintenance of the 4 East River Bridges and 25 Movable Bridges

#### Maintenance of Electrical Devices

Checking and servicing electrical systems such as travelers, relays, auxiliary contacts, meters, overload relays, time delay relays, span and tail locks, brake systems, transmitters, transformers, fuses, wiring, resistors, etc. Also includes checking interior anchorage lighting, caution lighting, navigation lighting, and necklace lighting. During inspection, the travelers of the East River Bridges are operated to ensure proper calibration of electric motors. If motors are not calibrated properly, the travelers may rotate and jam along their guides. Many of the movable bridges are very old and replacement parts are difficult to find or may not be available any longer. When necessary, Division personnel fabricate machine parts such as shafts, and brake and warning gate components. In addition to inspection of systems, the electrical technicians replace poor condition components with electric systems before corrective maintenance is required. This preventive maintenance strategy avoids disruption of bridge service to motorists. This is important, because once corrective maintenance is necessary, it may require the bridge to be out of service for lengthy periods.



## COMPONENTS OF THE PREVENTIVE MAINTENANCE PROGRAM



Construction Project Manager Gholamali Mozaffari, and Electricians Nelson Crooks and Gary Emmanuel Fixing Machinery in the Ninth Street Bridge Operator House in April 2008. (Credit: Vera Ovetskaya) Repairing the Navigation Lighting on the Hunterspoint Bridge. On the Bridge: Oilers Carl Wharton, Richard Morreale, and Paul Califano, Mozaffari Ali, Electrician Naum Golburt, and Highway Repairers Manny Nardiello and Kevin Donahue. In the Snooper Bucket: Harry Parmaman and Supervisor Electrician Jose Done. (Credit: Samuel Teaw)

**Maintenance of Mechanical Components** Cleaning and lubrication of all movable parts and bridge cables for the four East River Bridges and the twenty-five movable bridges. Cleaning and lubrication of travelers; cleaning, wedging and oiling of the main cable strands and eyebars; cleaning of truss bearings; cleaning and lubricating air and fire line valves. Cleaning and lubrication is required to keep components from corroding and becoming immobile. Allowing components to seize could cause operating failure and introduce unsafe structural stresses.



Repairing the Brooklyn Bridge Standpipe System, 130 Feet Below the Roadway. Maintenance Crew Conducting the Annual Cleaning and Lubrication of the Solid Rod Suspenders Spherical Bearings on the Brooklyn Bridge.

2<sup>nd</sup> Photo - Oilers Steven Marxhausen, Rene Francis, Richard Morreale, Thomas McAuliffe, and Andrew Sorrentino. (Credit: Anatoly Orlov) Oiler T. McAuliffe at the 9<sup>th</sup> Street Bridge



Oiler Tom Strommen Maintaining the Hydraulic Power Unit at the Hamilton Avenue Bridge in February 2010. (Credit: Vera Ovetskaya) Cleaning and Lubricating the Broadway Bridge. (Credit: Reza Taheri) Executive Director of Bridge Preventive Maintenance and Repair Thomas Whitehouse (Wearing Yellow Jacket) Inspecting the Broadway Bridge Machinery Room and Instructing the Contractor. (Credit: Albert Hong) . Assistant Mechanical Engineer Vera Ovetskaya Climbing to the Brooklyn Bridge Tower in 2008. (Credit: Gennadiy Kaplun)

### Steel Protection – Painting\*\*

**Total Paint Removal and Repainting** Constructing negative pressure containment (Class 1A); washing and surface blasting to commercial-blast or near-white metal condition (Society for Protective Coating SP-6 or SP-10); constructing Class 3P containment; power tool cleaning to bare metal condition (Society for Protective Coating SP-11 or SP-15); lead monitoring and disposal; applying lead-free paint; primer, intermediate coat and top coat. Surface preparation is accomplished by abrasive blasting. The containment materials include tarps, plywood, scaffolding, and cables. Equipment includes blasting machines, needle guns, spray pumps, compressors, dust collectors, filters, and ductwork.

## COMPONENTS OF THE PREVENTIVE MAINTENANCE PROGRAM

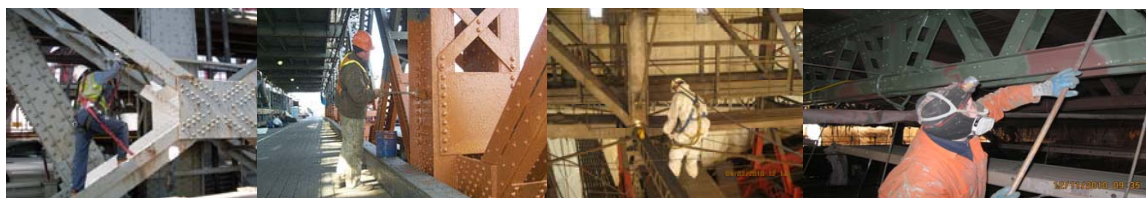


Assembly of Containment System at Franklin Square – in July and September 2010. Brooklyn Bridge Side Span Containment System – in November 2010.

The Division treats all lead paint waste as hazardous waste, and stores and disposes of it according to the Resource Conservation and Recovery Act (RCRA). Waste is stored in approved leak-proof drums and containers which are, in turn stored temporarily in a fenced, secured area on-site until they are transferred to a disposal/recycling facility.

**Full-Steel (Overcoating)** Overcoating of the entire bridge. Solvent cleaning and cleaning of steel surfaces in areas with deteriorated paint is conducted using approved environmentally safe paint removal techniques, and either power tools, hand tools or combination hand/power tools. Power tool cleaning is performed in a Class 3P containment, and hand tool cleaning in a Class 4 containment. Combination hand/power tool cleaning is performed in a Class 3P containment. A localized primer coat and a single finish coat are then applied by brush, roller, or spray over the entire bridge.

**Salt Splash/Spot Painting** This is a new process that combines salt splash with spot painting. It involves preparation of the area to be painted by power wash, using clean water or steam. Solvent cleaning is done in locations where oil and grease need to be removed from the steel surface. Areas to be power washed and painted are: the superstructure (up to six feet upwards from the deck), the underdeck steel (up to three feet from each side of the center line of the expansion joints), and the outside of the bridge's steel faces. In addition to these painted areas, we now perform localized surface preparation and painting of any deteriorated locations as mentioned in our spot painting definition above. After power washing, hand and power tools are used in areas that have started to show deterioration from accumulated de-icing agents. Power tool cleaning is performed in a Class 3P containment, and hand tool cleaning in a Class 4 containment. Combination hand/power tool cleaning is performed in a Class 3P containment. A spot primer coat and finish coat are then applied by brush or roller. Occasionally, when there is no danger of overspray, spray painting may be performed.



Williamsburg Bridge in June 2010: Application of Finish Coat at North Truss Diagonal. Salt Splash Painting on the Williamsburg Bridge. (Salt Splash Credit: Fouad Althaibani). Inspection of Blasting Surfaces Inside the Franklin Square Arch Containment in September 2010. Brooklyn Bridge Main Span Painting in December 2010.

## **COMPONENTS OF THE PREVENTIVE MAINTENANCE PROGRAM**

<b>TASK</b>	<b>IMPACT*</b>
Debris Removal	6.1%
Sweeping	5.3%
Clean Abutments & Piers	8.1%
Clean Open Grating	7.0%
Clean Expansion Joints	9.1%
Wash Deck & Splash Zones	5.1%
Paint	4.2%

<b>TASK</b>	<b>IMPACT*</b>
Spot Paint	3.7%
Drain Cleaning	10.6%
Sidewalk & Curb Repair	2.5%
Pavement & Crack Sealing	12.2%
Wash Underside	15.9%
Mechanical Device Maintenance	6.7%
Replace Wearing Surface	3.5%

\*IMPACT ON BRIDGE RATING



Cleaning the Brooklyn Bridge Brooklyn Anchorage in July 2007.  
 (Credit: Serag Saad) During Fall Protection Training in August 2010,  
 Executive Director of Bridge Preventive Maintenance and Repair  
 Thomas Whitehouse Was Hoisted in the Air While Wearing a Full Body  
 Harness - Demonstrating How to Deploy and Use the Foot Stand to  
 Prevent Orthostatic Intolerance (Commonly Referred to as Suspension  
 Trauma), Which Can be Fatal if Not Prevented. (Credit: Gean Pilipiak)

\*Consortium of Civil Engineering Departments of New York City Colleges and Universities.  
*Preventive Maintenance Management System For New York City Bridges: Update 1998.*  
*Technical Report No. 98-1. 1999. \*\*Descriptions modified in November 2003.*



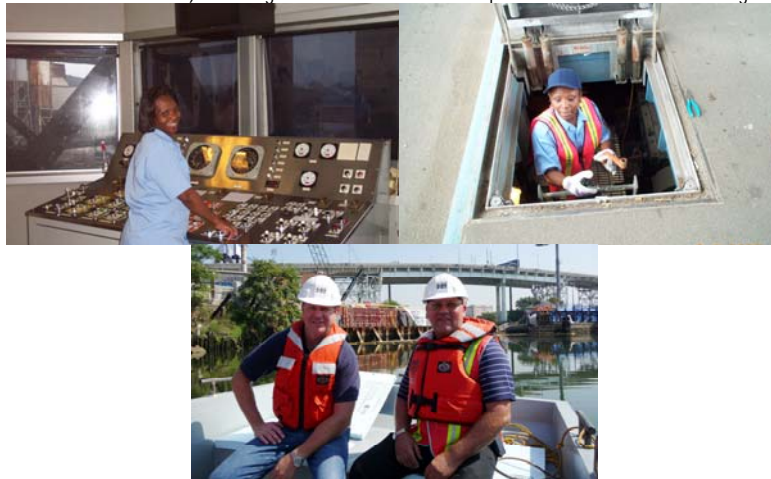
## ***MAINTENANCE PERSONNEL RESOURCES IN 2012***

Preventive maintenance, corrective repair, flag repair, and painting work on the bridges and other structures within the City is performed by mechanics and supervisors in a variety of trades. The bridge operators provide safe and expedient passage to all marine and vehicular traffic under and on movable bridges. A breakdown of this work force by trade is:

	SUPERVISORS	MECHANICS
BRICKLAYERS	2	3
BRIDGE OPERATORS	21	64
BRIDGE PAINTERS	7	25
BRIDGE REPAIRERS/RIVETERS	4	36
CARPENTERS	3	14
CEMENT MASONS	-	10
ELECTRICIANS (INCLUDES HELPERS)	4	23
HIGHWAY REPAIRERS (INCLUDES ASSISTANTS & SEASONAL WORKERS)	25	70
MACHINISTS	-	1
MOTOR GRADER OPERATORS	-	1
OILERS	-	16
TRACTOR OPERATORS	-	1
<b>TOTALS</b>	<b>67 SUPERVISORS</b>	<b>263 MECHANICS</b>



Bridge Operator Mary Harrigan at the Union Street Bridge. (Credit: Adal Maldonado) Bridge Repairer Riveter Damian Venezia Squeezing Between the Girders to Access a Floor Beam That Needed to be Reinforced on the Ed Koch Queensboro Bridge – August 2010. (Credit: Hany Soliman) Carpenters John Horgan and Ruben Urena, and Assistant Civil Engineer Fouad Althaibani Repairing the PS-5 Bridge in November 2011. (Credit: Thomas Whitehouse) Civil Engineer Omar Makki at the Inspection of the Carroll Street Bridge - December 2010.



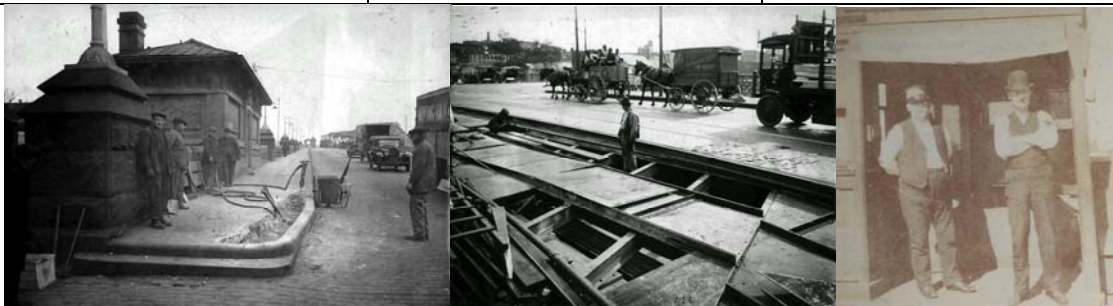
Bridge Operator-in-Charge Delonda Bates-Pinkney at the Controls of the 9th Street Bridge. She has worked for the Department since 1989. (Credit: Keith Burrowes) BOIC Bates-Pinkney Preparing to Check the Bridge's Mechanisms. (Credit: Vera Ovetskaya) Administrative Engineer John Kurre and Assistant Civil Engineer Sergey Parayev Preparing to Inspect the Borden Avenue Bridge Project Site in September 2010.

Revised 11/19/12

## ***MAINTENANCE PERSONNEL RESOURCES IN 1900***

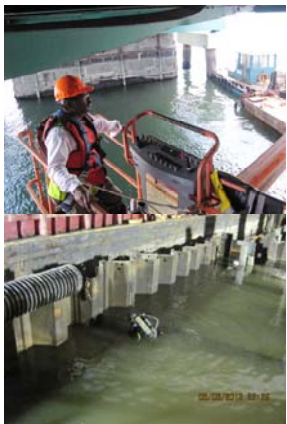

A breakdown of the Department of Bridges work force by trade in 1900:

	SUPERVISORS	MECHANICS
AXEMAN		8
BLACKSMITH	1	2
BOILERMAKER		1
BRICK MASON	1	4
BRIDGE TENDER	15	137
CARPENTER	1	23
DOCKBUILDER		1
DRIVER		11
FIREMAN		18
FITTER		3
GATEMAN		7
INSPECTOR (INCLUDING STEEL)		10
LABORER (INCLUDES HELPERS)	7	111
LEVELER		4
LINEMAN		3
MACHINIST (INCLUDING HELPERS)		13
MASONRY INSPECTOR		7
MECHANIC	1	2
PAINTER	1	16
RIGGER		11
RIVETER	1	6
RODMAN		4
SHIP CARPENTER		4
SOUNDER		4
STABLEHAND		3
STEAM ENGINEER (INCLUDES DYNAMO)		15
STONE CUTTER/STONE MASON	1	2
SUPERINTENDENT ELECTRIC LIGHT	1	
SUPERVISOR (INCLUDES ASSTS)	12	
TOOLMAN		2
TRANSITMAN		7
TRIMMER		2
<b>TOTALS</b>	<b>42 SUPERVISORS</b>	<b>441 MECHANICS</b>



Willis Avenue Bridge Curbing and Road Repair in the Early 1920's. Gateman J. J. McDonough (on left), Great-Grandfather of Deputy Chief Engineer Russell Holcomb

## BRIDGE INSPECTION EQUIPMENT LIST

Inspector Equipment	Inspection Team Equipment	Inspection Van Equipment
Boots-Knee High Dust Masks (Disposable) Safety Goggles Hard Hat With Liner Rain Hat & Jacket Work Gloves Long Cuff Work Gloves Unlined Work Gloves Lined Work Boots  Chipping Hammer Clip Boards Deceleration Lanyards Flashlight (2 "D" Cell)  Safety Vest Level 9" (Magnetic) Tool Bags (24") Class III Body Harness Lanyards Bridge Inspection Manual (New York State) Technical Advisories For Inspection Manual  Emergency Procedure Instructions  OSHA Approved Respirator & Filters Belt With Two Drop Forged D-Rings Hard Hat Flashlight	5 Boro Map Binoculars Broom Digital Camera Camera Card Reader Hand Compass Screwdriver Set (Regular) Screwdriver Set (Phillips) Dye Penetrant Kit  Lantern D-Meter With Test Block Marking Paint Spray Retract Survey Rod 25' Portable Laser Distance Meter Handheld Computer Thermometer Spray Penetrating Oil Cell Phone/Radio Vernier Calipers Wrenches 12" Tool Pouch  Lumber Crayons  Spray Paint Awl Calipers Hacksaw Hacksaw Blades (Extra) Paint Scraper Inspection Mirror Level 24" Pliers 8", Vinyl Coated Plumb Bob Pocket Knife Ruler 25' or 30' (Metal) Ruler 100' (Fiberglass) Scraper Blades (Extra) Wire Brush Folding Ruler 8'  Rope 5/8" With 100' Coil Digital Angle Gauge	Tool Chest Clip Boards Flashlight (3 "D" Cell) Fire Extinguisher First Aid Kit 3 Safety Flags Step Ladder 6' or 8' 10 Traffic Cones  <b>Special Equipment for Inspection of Bridges Over Railroads</b> Third Rail Insulating Mat <b>Put In Trucks By Highway Repairers When Needed</b> Generator  Oil For Generator Extension Ladder 32' Extension Ladder 24' Extension Ladder 16' Shovel Push Broom Dust Pan & Sweep Broom  Bottled Water  Bolt Cutter Flood Lights Approved Safety Gasoline Can Sledge Hammer (8 lbs.) Extension Cord Winder
 <p>Team Leader Thirugnanam Mohan Inspecting City Island Bridge. (Credit: Bojidar Yanev). Diver Checking Steel Sheetting at the Fresh Creek Cofferdam Pier 2 in June 2012.</p>		 <p>Brooklyn Bridge Biennial Inspection in October 2010.</p>

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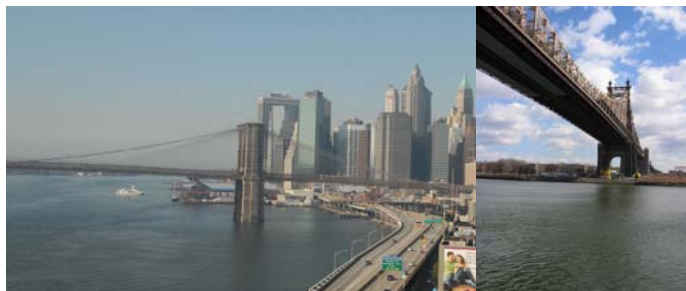
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Brooklyn Bridge in 2009. (Credit: Jagtar Khinda)  
Ed Koch Queensboro Bridge in 2006. (Credit: Russell Holcomb)

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Gapstow Bridge (East 62<sup>nd</sup> Pedestrian Bridge) During the Exhibition *The Gates, Project for Central Park, 1979-2005*. (Credit: Russell Holcomb)  
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Southern Boulevard, Madison Avenue, and Moshulu Parkway Bridges. (Credit: Russell Holcomb) 17<sup>th</sup> Avenue Pedestrian Bridge. (Credit: Peter Basich) Wards Island Pedestrian Bridge in October 2011. (Credit: Rafael Lopez) University Heights Bridge in July 2011. (Credit: Russell Holcomb)

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Ed Koch Queensboro Bridge in 2009. (Credit: Bernard Ente) The Manhattan Bridge Brooklyn Plaza in 1916: The Statues Represent Manhattan and Brooklyn. Manhattan Bridge in 2009. (Credit: Bernard Ente) Brooklyn Bridge Flag in June 2011.

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Assistant Mechanical Engineer Vera Ovetskaya. Harlem River Bridges Engineer Reza Taheri. (Credit: Peter Basich) Deputy Chief Engineer Russell Holcomb on Ed Koch Queensboro Bridge. Mechanical Engineering Intern Christopher Brathwaite Assisting in Strain Gauge Balance Testing on Unionport Bridge in October 2010.



Design-Build Engineer Leonid Gitis. Component Rehabilitation Engineer Malgorzata Banka. Assistant Civil Engineer Andrew Hoang. (Credit: Peter Basich) Civil Engineer Tiffany Wong on the Brooklyn Bridge Traveler. (Credit: Andrew Hoang)

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Civil Engineers Tiffany Wong and Maria Mikolajczyk, Administrative Engineer Danuta Ryduchowska, Civil Engineer Aldona Ulanecka, Civil Engineer Simona Finkelstein, Civil Engineer Malgorzata Banka, and Associate Staff Analyst Raisa Rapoport. (Credit: Jagtar Khinda) Deputy Director of In-House Painting Earlene Powell. (Credit: Michele N. Vulcan)



Assistant Civil Engineer Elena Maressova, Associate Project Manager Mariya Zhurakhinskaya, Assistant Civil Engineer Ajda Ozyurt. Project Manager Tamara Berlyavsky, Assistant Mechanical Engineer Nancy Guernsey. Construction Project Manager Beatriz Duran. (Credit: Kamran Sikandar). Computer Associate (Software) Laurie Oberson, Associate Staff Analyst Zoya Kiseleva. (Credit: Michele N. Vulcan)

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Manhattan Bridge Plaque Detail. (Credit: Peter Basich)

Revised 12/13/12



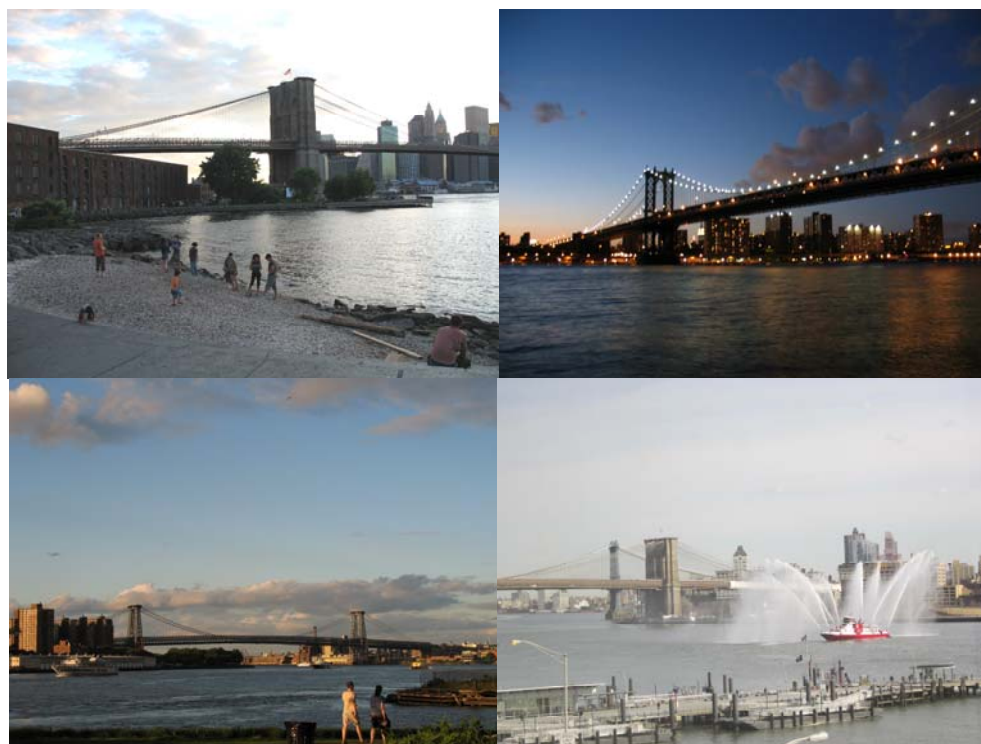
## 2012 INVENTORY LOCATION MAPS

On these maps, all Community Boards consist of three (3) digits. The first digit is for map plotting purposes. The next two digits identify the Community Board. In cases of certain parks and airports, the Community Board number does not correspond with any Community Board. These exceptions are:

<b>Bronx</b>	26=Van Cortlandt Park	<b>Brooklyn</b>	55=Prospect Park
	27=Bronx Park		56=Gateway Nat'l Rec. Area/Floyd Bennett Field
	28=Pelham Bay Park	<b>Queens</b>	80=La Guardia Airport
<b>Manhattan</b>	64= Central Park		81=Alley Pond Park
			82=Cunningham Park
			83=JFK Airport
			84= Gateway Nat'l Rec. Area/Fort Tilden-Jacob Riis Park

The Community Board listings correspond to those listed in the inventory, which begins on page 178.

Some structures fall on Community Board dividing lines: their additional Community Boards are identified in the inventory in columns CD2 and CD3.



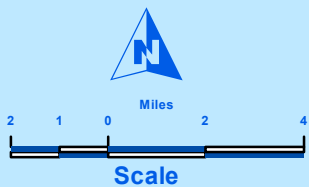
Brooklyn, Manhattan, and Williamsburg Bridges. FDNY Boat Test Near the Brooklyn Bridge in March 2012. (Credit: Michele N. Vulcan)

# ALL BOROUGHES



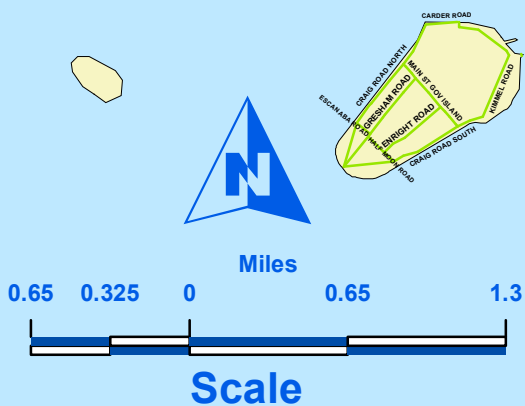
## Legend

- Community Boards
- Central Park
- The Bronx
- Brooklyn
- Manhattan
- Queens
- Staten Island





## DOWNTOWN MANHATTAN



## Legend

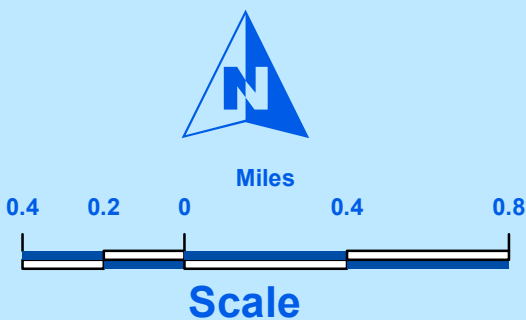
- Community Boards**
- Bridges In Parks
- DOT Bridges
- Major Roadways
- 101 102 103 104 105 106
- 
- | Community Board | Bridges In Parks | DOT Bridges | Major Roadways |
|-----------------|------------------|-------------|----------------|
| 101             | 1                | 0           | 0              |
| 102             | 1                | 1           | 0              |
| 103             | 1                | 1           | 0              |
| 104             | 1                | 1           | 0              |
| 105             | 1                | 1           | 0              |
| 106             | 1                | 1           | 0              |

# MIDTOWN MANHATTAN

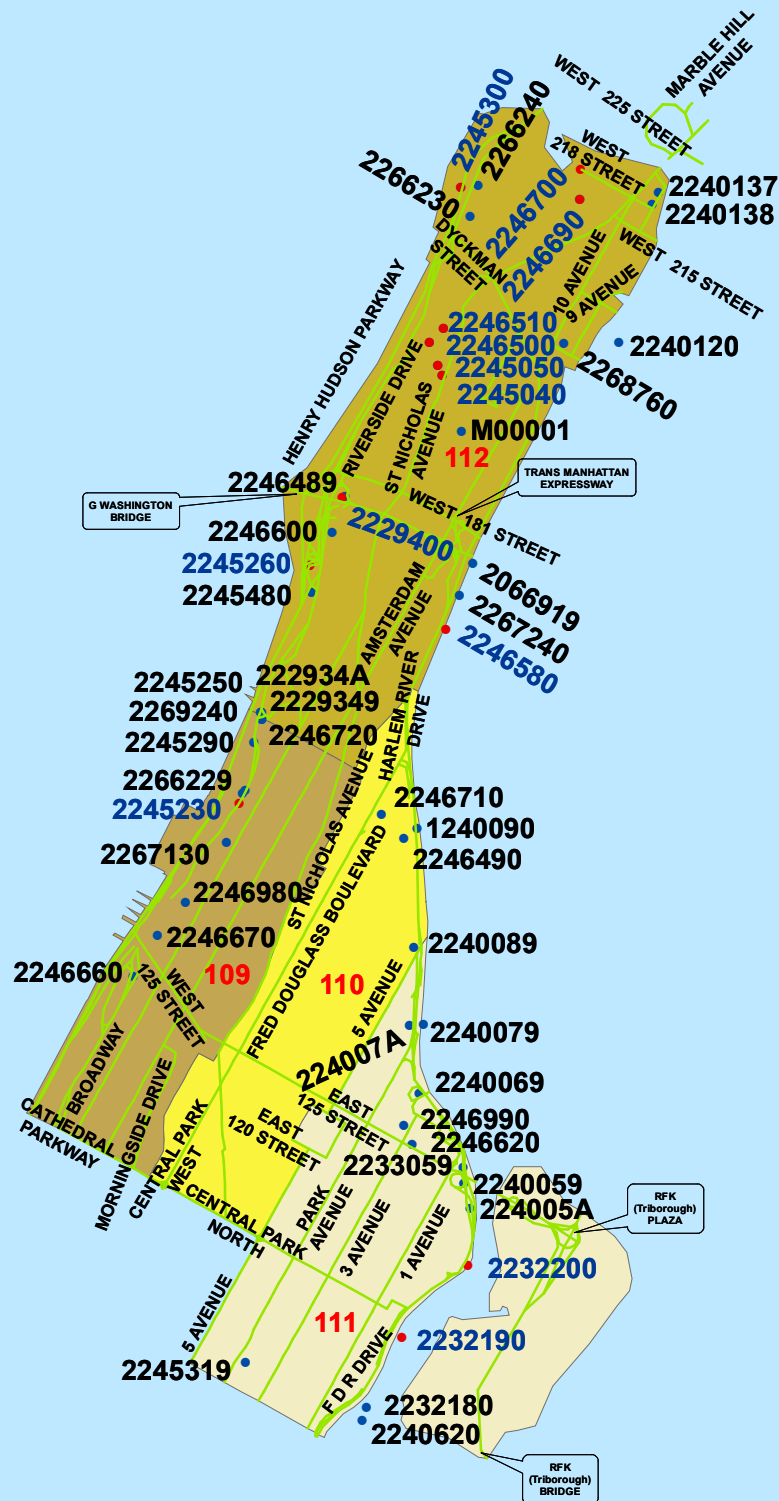


## Legend

- Bridges in Parks
  - DOT Bridges
  - Major Roadways
- Community Boards
- 107 108 164



# UPTOWN MANHATTAN



0.75 0.375 0 0.75 1.5  
Miles



Scale

## Legend

- Bridges in Parks
  - DOT Bridges
  - Major Roadways
- Community Boards**
- | Community Board | Color        |
|-----------------|--------------|
| 109             | Light Brown  |
| 110             | Yellow       |
| 111             | Light Yellow |
| 112             | Light Orange |

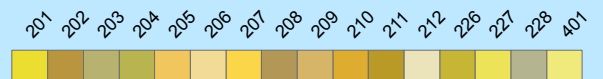
# BRONX



## Legend

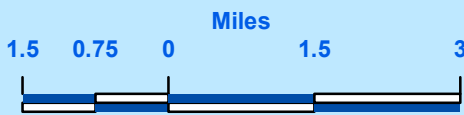
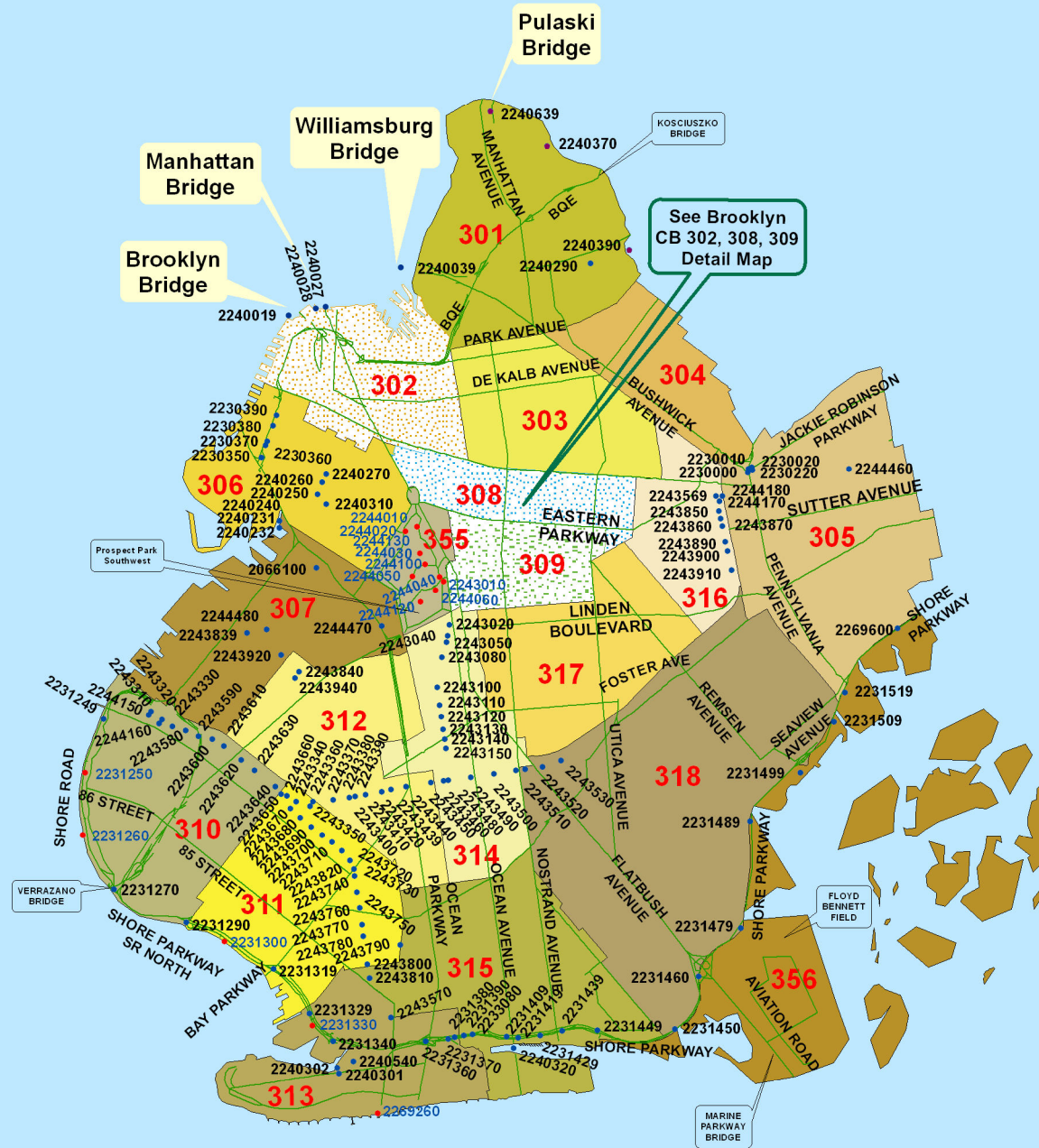
- Bridges In Parks
- Dept. of Education
- Manhattan/Bronx Bridges
- DOT Bridges
- Major Roadways

## Community Boards





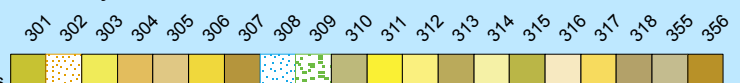
# BROOKLYN



## Legend

- Bridges In Parks
- Brooklyn/Queens Bridges
- Manhattan/Brooklyn Bridges
- DOT Bridges
- Major Roadways

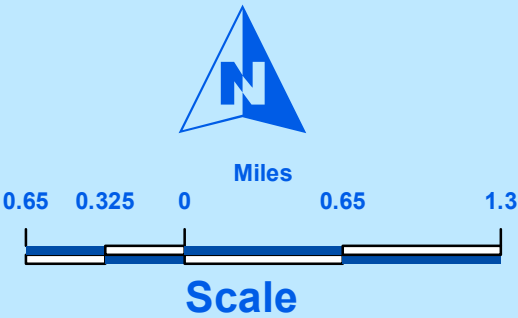
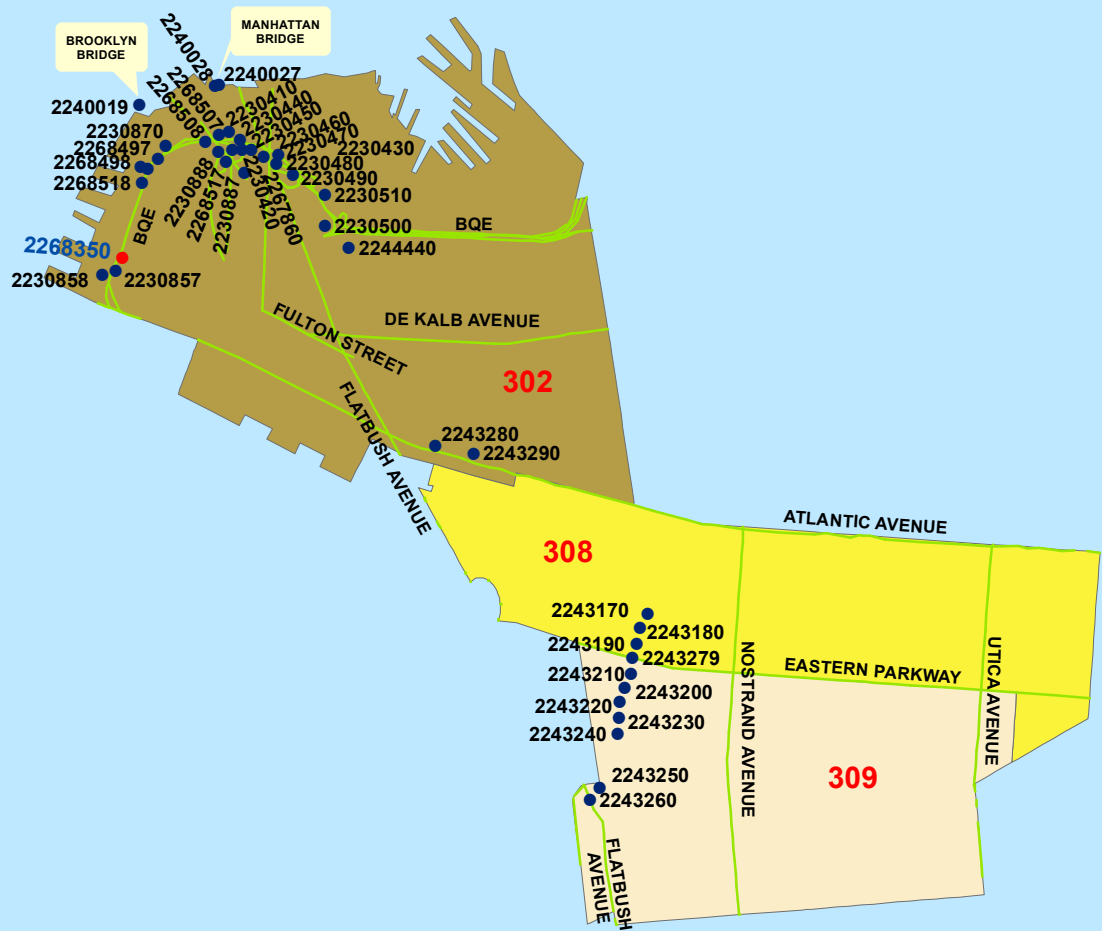
## Community Boards





# BROOKLYN

## CD 302, 308 & 309 DETAIL



**Legend**

- Bridges in Parks
- Brooklyn BINS
- Brooklyn Major Roadways

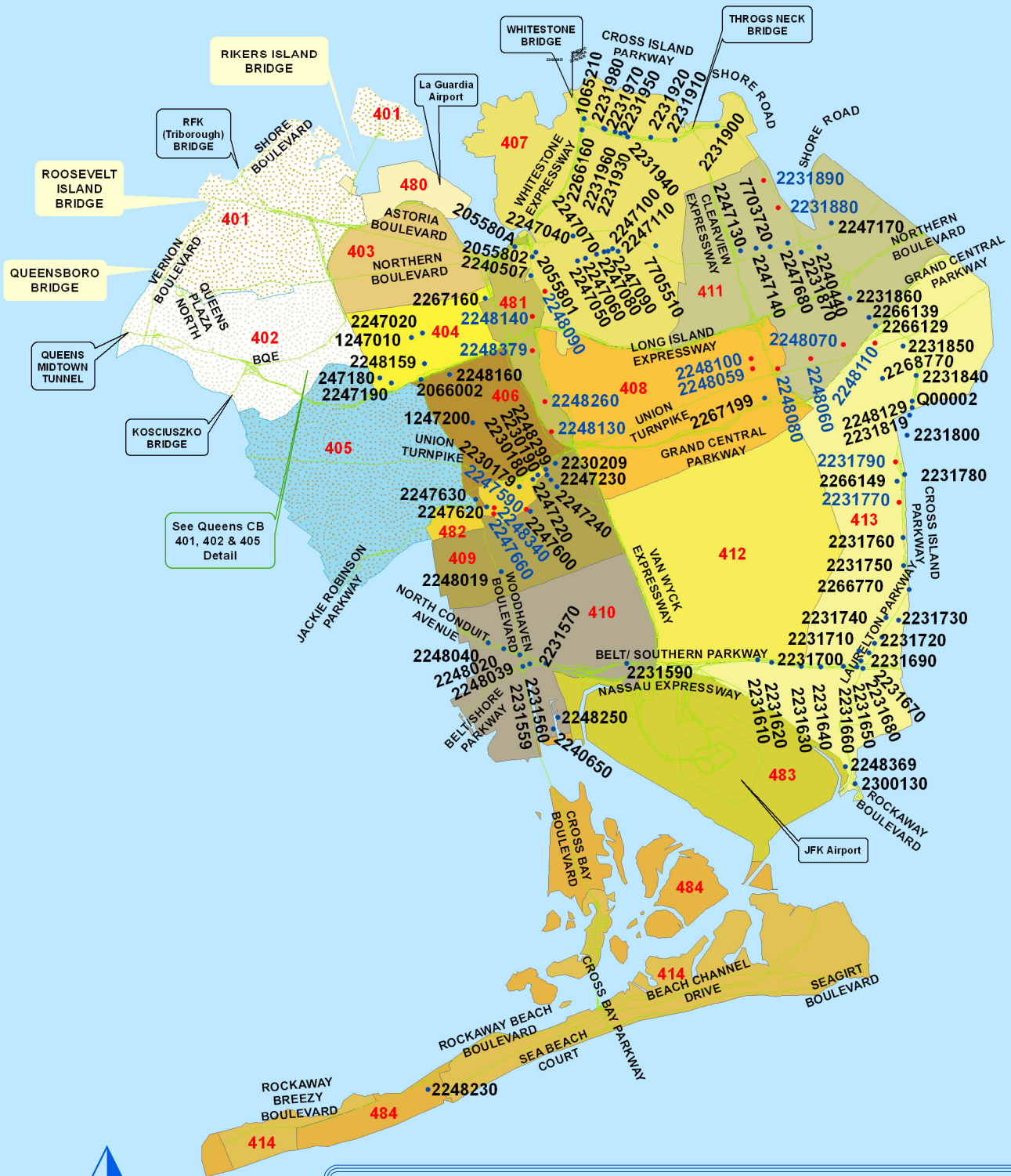
**Community Boards**

302

308

309

# QUEENS



Scale

### Legend

- Bridges In Parks
- DOT Bridges
- Major Roadway

### Community Board

401 402 403 404 405 406 407 408 409 410 411 412 413 414 480 481 482 483 484

# QUEENS

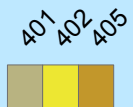
## CD 401, 402, & 405 DETAILS



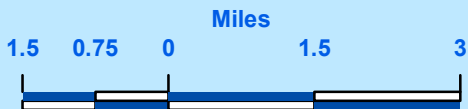
### Legend

- Bridges In Parks
- Manhattan/Queens Bridges
- DOT Bridges
- Major Roadways

### Community Boards



# STATEN ISLAND



Scale

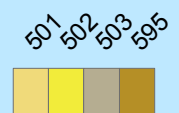
## Legend

- Bridges In Parks
- DOT Bridges
- Culverts

— Major Roadways

+ Staten Island Railway

## Community Boards





Michael R. Bloomberg  
Mayor



Janette Sadik-Khan  
Commissioner