

NEW YORK CITY DEPARTMENT OF TRANSPORTATION DIVISION OF BRIDGES 2005 BRIDGES AND TUNNELS ANNUAL CONDITION REPORT



Examples of Large Loads Transported in 2005 With the Assistance of the Division's Truck Permit Section. Natasha, a 25-Year Old, 1,200-Pound Beluga Whale. (Credit: J.L. Maher/Wildlife Conservation Society). Consolidated Edison Relocated a 377,000 Pound Electrical Reactor – This was the Largest Equipment Move by the Utility Since the End of 2003. New Swarovski® Star at Rockefeller Center During the Holiday Season – the Star Measured 9.5 Feet in Diameter and Was Adorned With 25,000 Octagon-Shaped Crystals.

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Acknowledgements

Research and Analysis

For their contributions and assistance in the preparation of this report, the Division of Bridges would like to thank the following: Hasan Ahmed, Nazmul Ahsan, Robert Appel, Balram Chandiramani, Robert Cohen, Beatriz Duran, Lawrence Fletcher, James Gallagher, James Geraci, Yanina Goldfeld, Abul Hossain, Sudhir Jariwala, Paul Kahn, George Kern, Larry King, Kamal Kishore, Walter Kulczycki, Joseph Lamberson, Doreen Langhorne, Leon Levit, Reza Lotfi, Darlene Lucchese, Ali Mallick, Daniel Mando, Kevin McAnulty, David Moore, NYSDOT, Gus Psalidas, Shant Rally, Kalpa Ramachandran, Abdur Razzaq, Diana Recor, Javed Riaz, Vera Ribakove, Dorothy Roses, Mahabal Shah, Rahul Shah, Chris Sklavounakis, Jennie Too, and Antoinette Zeitoun.

Photography

For the photographs used in this report, the Division of Bridges would like to thank the assistance of the following: Syed Alam, Kristen Artz/Mayor's Office of Photography, Fred Arzideh, Peter Basich, Keith Burrowes, Hani Faouri, Russell Holcomb, Daniel Hom, Eric Ken, Nasir Khanzada, Jagtar Khinda, George Klein, Thomas Leung, Avelino Leyco Jr., Daniel Lima, Kevin McAnulty, Gholamali Mozaffari, Anatoly Orlov, Sergiy Parayev, Roly Parroco, Pinakin Patel, Cesar Pazmino, Devin Plantamura, Chad Rachman/Staten Island Advance, Carlos Ramirez, Joseph Saverino, Paul Schwartz, Elias Scoropanos Muhammad Siddiqui, Jonathan Smith, Vadim Sokolovsky, Hany Soliman, Reza Taheri, Samuel Teaw, Sasha Tsyrlin, and Bojidar Yanev.

Cover Photograph

Macombs Dam Bridge Over the Harlem River in May 2005. (Credit: Peter Basich)

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A Message from the

Commissioner

Dear Friends,

On behalf of the many dedicated professionals who staff the Division of Bridges, it is my pleasure to present the 2005 Edition of the New York City Department of Transportation's Annual Bridges and Tunnels Condition Report, as mandated under New York City's Charter. This report provides DOT with an opportunity to display the many achievements, innovations and improvements that were realized by the Division of Bridges during the 2005 calendar year.

Preventive maintenance is essential to preserve the City's multi-billion dollar investment in its bridges. These steel and concrete structures must be protected from the stresses of weather, traffic, deterioration and neglect. In the last year alone, 25,148 square feet of concrete were used to renew sidewalks, curbs, and road decks; some 9,279 cubic yards of debris were removed; 869 bridge drains were cleaned; and crews eliminated 4,403,955 square feet of graffiti. DOT crews also eliminated 473 safety flag conditions that presented clear vehicle or pedestrian traffic hazards. Also, in the Department's ongoing attempts to minimize construction disruptions, we consistently used incentive and disincentive clauses in contracts to reward contractors who finish work early and penalize contractors who finish work late.

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

- The American Council of Engineering Companies of New Jersey's Honor Award for the reconstruction of the Belt Parkway Bridge over Ocean Parkway.
- The American Council of Engineering Companies of New York's Silver Award for the reconstruction of the Belt Parkway Bridge over Ocean Parkway.
- The Metropolitan Section of the American Society of Civil Engineers' 2005 Design-Build Project of the Year Award for the reconstruction of the Belt Parkway Bridge over Ocean Parkway.
- The National Steel Bridge Alliance's Merit Award for the design of the new Third Avenue Bridge over Harlem River.
- The New York Tri-State Metro Chapter of the Design-Build Institute of America's "Project of the Year" award for the reconstruction of the Belt Parkway Bridge over Ocean Parkway.
- *New York Construction Magazine* selected the reconstruction of the Third Avenue Bridge over the Harlem River as the Best Bridge Project of 2005.

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,



Iris Weinshall
Commissioner

EXECUTIVE SUMMARY

Inventory

In calendar year 2005, the inventory of bridges under the jurisdiction of the Division remained at 790. Over the past 10 years, there has been a mostly steady decline in the number of bridges rated "Poor," and a somewhat steady increase in the number of bridges rated "Very Good," as shown below.

	1996*	1997	1998	1999	2000	2001	2002	2003	2004	2005
Poor	48	40	24	16	13	9	8	4	6	4
Fair	524	530	516	507	481	459	451	429	456	458
Good	148	145	154	160	180	196	202	209	212	210
Vgood	59	55	75	81	85	88	94	111	116	118
Unrated	68									
	**847	770	769	764	759	752	755	753	#790	790

* In 1996, NYCDOT adopted a new rating scale to be used to determine the verbal condition of bridges. The new scale matches the rating scale by New York State DOT. The new scale changed the dividing line between Fair and Good bridges from 4.500 to 4.999. The net effect of this change was that, in 1996, 157 bridges that would have been rated Good were classified as Fair. This accounts for the increase in Fair rated bridges and the decrease in Good rated bridges.

** The total count of structures in 1995 and 1996 still included the culverts.

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

Contract Acceleration

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

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

2005 was a year in which the use of incentives/disincentives resulted in the early completion of several new bridge projects, such as:

The early completion in August 2005 of the reconstruction of the **Congress Street Bridge over Brooklyn-Queens Expressway** earned the contractor the maximum incentive of \$480,000.

In December 2005, the **17th Avenue Bridge over NYCT** was re-opened to traffic 29 days early, thus earning the contractor a \$300,000 incentive.

EXECUTIVE SUMMARY

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 2004-2005, a total of 52,000 gallons of anti-icing chemicals 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. The construction work is expected to commence in spring 2007.

2005 Awards

In 2005, the outstanding work of the Division was recognized by the receipt of several awards. In March 2005, the American Council of Engineering Companies of New Jersey selected the reconstruction of the Belt Parkway Bridge over Ocean Parkway for an Honor Award in its 2005 Engineering Excellence Awards. In April 2005, the American Council of Engineering Companies of New York selected the reconstruction of the Belt Parkway Bridge over Ocean Parkway for two Silver Awards in the structural systems category in its 2005 Engineering Excellence Awards. In June 2005, the Metropolitan Section of the American Society of Civil Engineers selected the reconstruction of the Belt Parkway Bridge over Ocean Parkway as the 2005 Design-Build Project of the Year.

In July 2005, the National Steel Bridge Alliance selected the Third Avenue Bridge over Harlem River project for a merit award in the movable span category. The Prize Bridge Awards honor significant and innovative steel bridges constructed within the United States. Projects are judged on innovation, aesthetics, design, and engineering solutions. The winning projects were also announced and described in the November 2005 issue of Modern Steel Construction Magazine.

In September 2005, the New York Tri-State Metro Chapter of the Design-Build Institute of America selected the reconstruction of the Belt Parkway Bridge over Ocean Parkway as the 2005 Project of the Year in the transportation category. In December 2005, New York Construction Magazine selected the reconstruction of the Third Avenue Bridge over the Harlem River as the Best Bridge Project of 2005.

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

DIVISION OVERVIEW

The New York City Department of Transportation's Division of Bridges is comprised of six major bureaus. The **Chief Bridge Officer** is responsible for formulating policy and providing executive direction. He oversees all aspects of the design, construction, rehabilitation and reconstruction, maintenance, operation and administration of the 790 bridges (including 6 tunnels), and 67 culverts presently under the jurisdiction of the New York City Department of Transportation (NYCDOT). In addition to broad supervision, the Chief Bridge Officer also provides overall executive and administrative direction for the Division of Bridges, and ensures that all contractors are promptly paid.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The *Engineering Review and Estimates Unit* reviews all City-let bridge construction contract drawings; reviews drawings from other Agencies and entities, as well as State and private companies; and ensures that the work to be performed conforms to NYCDOT requirements. This unit establishes design standards, including seismic requirements, and oversees estimates prepared by consultants. This unit also reviews superload truck permit applications and performs load analyses for the City's bridges. In addition, the unit conducts other, non-bridge engineering projects, such as the annual balloon wind study for the Macy's Thanksgiving Day Parade.

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

The *Land Acquisition Unit* reviews and maintains a database of easement issues, right-of-way, and Uniform Land Use Review Procedures (ULURP).

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

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

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

Off-site Quality Assurance services relative to a wide variety of basic and manufactured construction materials including concrete, asphalt, soils, reinforcing steel, bridge bearings, structural steel and precast/prestressed structural components for all bridge projects, irrespective of the funding source, are handled by this section. Current major projects include the Macombs Dam, Third Avenue, Manhattan, Williamsburg, Metropolitan Avenue, Queensboro, and 145th Street Bridges.

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

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

The unit has been instrumental in preparing and obtaining waste water discharge permits for numerous projects involving the generation and disposal of waste water. Waste water testing and analysis (as well as application of SPDES permits) for several movable bridges such as the Eastern Boulevard Bridge, Greenpoint Avenue Bridge and Hamilton Avenue Bridge, have also been a part of the waste water management program. The unit has provided environmental oversight on major capital projects such as the Third Avenue Bridge, the Willis Avenue Bridge, the Washington Bridge, 145th Street Bridge, and the Queensboro Bridge, as well as Component Rehabilitation projects and Design/Build projects.

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

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

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

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

The *Inspections Unit* inspects the city's bridges in accordance with state and federal standards; monitors bridge conditions with a high hazard potential, such as temporary repairs, outstanding flags, and fire hazards; responds to emergency inspection requests from NYCDOT and external sources; recommends repairs and remedial measures for hazardous conditions; generates flag and inspection reports for the Division; supervises inspections by consultants working for the

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Division; conducts inspections and inventories of expansion joints; conducts acoustic emission monitoring; and inspects non-structural cladding.

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

This Section is also responsible for investigating new materials and methods to improve existing bridge conditions. It sponsors a series of lectures by experts on subjects relevant to design, construction, and maintenance, such as seismic retrofitting of bridges, salt substitutes, cathodic protection against corrosion, concrete patching materials, new paint strategies, non-destructive bridge testing, and deck resurfacing. The unit also participates in research programs with interested transportation and infrastructure entities. The unit contributed to the 1999 update of the Preventive Maintenance Manual for NYC bridges. In conjunction with the Port, Triborough Bridge and Tunnel, 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 2005, Bridge Operations effected a total of 6,454 openings, 5,163 of which allowed 8,027 vessels to pass beneath the bridges. The remaining 1,291 openings were for operational and maintenance testing. The section also operates the city's six mechanically-ventilated tunnels, performing electrical maintenance and arranging for roadway cleaning.

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

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

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

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

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

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

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

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

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

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

Railroad Force Account Agreements are a vital component in the rehabilitation/reconstruction program since train traffic affects 319 (40%) 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

DIVISION OVERVIEW

design drawings, track shutdowns and reductions in train service for bridge construction work. The coordinator informs managers of "typical" railroad problems and attempts to avoid them through proactive measures.

Our Legal Department and Division engineering staff work together to clarify force account language in an attempt to avoid ambiguity. New agreements are being designed to specify clearly when notices for outages or flagging protection are required, who will be responsible when outage/flagging is canceled, and specify those documents that can be audited to expedite reimbursement of bills. These additions will streamline payment processing. The use of a Master Agreement is not feasible since each railroad has its own rules and regulations governing its employees, its own scheduling procedures and different billing requirements/procedures.

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

This approval process typically requires three to six months to complete. A tracking process for change orders has been implemented; it reduces the time for the approval process to one-and-a-half to three months.

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

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

JANUARY

Indian Ocean Tsunami Victims Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on January 3, 2005 in tribute to the victims of the December 26, 2004 Indian Ocean tsunami. The tsunami left at least 216,000 people dead or missing and nearly 2 million homeless in 11 countries. The flags remained at half-mast until the end of the week.



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

Hamilton Avenue Asphalt Plant (Brooklyn)

On January 9, 2005, Division ironworkers repaired the plant's scrapers, chutes, bins, and scale. On January 15, 2005, Division ironworkers repaired the plant's stack, chutes, shaker, and cyclone.

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

The temporary bridges were opened to two lanes of northbound traffic, as well as pedestrians, on January 10, 2005.



Opening of the Temporary Bridges.

52nd Street Bridge over LIIR Bay Ridge (Brooklyn)

The reconstruction of this bridge, which began on May 5, 2003, was substantially completed on January 11, 2005.

Manhattan Bridge

A Notice to Proceed for the reconstruction of the lower roadway (Contract #11) was issued to the contractor with a start date of January 14, 2005.



View of the Manhattan Bridge From the Brooklyn Bridge Walkway. (Credit: Russell Holcomb)

Anti-Icing

On January 16 and 17, 2005, Division personnel applied anti-icing chemicals 5 times to the East River bridges. Another 9 applications were made to the bridges on January 19 and 20, 2005.

18th Avenue Bridge over NYCT (Brooklyn)

Stage III reconstruction of the bridge began on January 20, 2005.

Anti-Icing

The blizzard of January 22 and 23, 2005 dumped 11.6 inches of snow in the Bronx, 13.8 inches in Manhattan, 15.5 inches in Queens, and 17.5 inches in Brooklyn. From January 22 through January 24, 2005, Division personnel applied anti-icing chemicals 15 times to the East River bridges. All of the priority overpasses were cleared by January 27, 2005. Another 3 applications were made to the bridges on January 29 and 30, 2005. Icicle patrols monitored the FDR Drive, the Battery Park Underpass, the Brooklyn-Queens Expressway, and the Cross Bronx Expressway.



Brooklyn Bridge Walkway. (Credit: Peter Basich)

Pulaski Bridge over Newtown Creek (Brooklyn/Queens)

At approximately 3:30 AM on January 24, 2005, the bridge failed to open due to the heavy snow. The bridge was placed back in service to marine traffic at 3:50 PM that afternoon.

Shore Road Bridge over Hutchinson River (Bronx) (a.k.a. Pelham Bay Bridge)

At approximately 7:50 AM on January 24, 2005, the south leaf of the bridge failed to lower after a vessel opening due to snow and ice accumulation on the main power cable. The bridge was placed back in service to marine traffic at 11:15 AM that morning.

Fire Lieutenant Curtis W. Meyran, Firefighter John G. Bellew, and Firefighter Richard T. Sclafani Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on January 25, 2005 in tribute to Fire Lieutenant Curtis W. Meyran, 46, Firefighter John G. Bellew, 37, and Firefighter Richard T. Sclafani, 37, who died in the line of duty on January 23, 2005. Fire Lieutenant Meyran, a 15 year veteran of the NYFD, and Firefighter Bellew, a 10 year veteran of the NYFD, were both fatally injured battling a three alarm fire in a four story apartment building in the Bronx. On January 25, 2005, Fire Commissioner Nicholas Scoppetta announced that he would posthumously promote Firefighter Bellew to the rank of Fire Lieutenant. Firefighter Sclafani, a 10 year veteran of the NYFD, was fatally injured battling a two alarm fire in east New York, Brooklyn.

The three firefighter deaths made January 23, 2005 the deadliest day the department had seen since the September 11, 2001 attack on the World Trade Center killed 343 firefighters. The flags remained at half-mast until February 1, 2005.

FEBRUARY

Andrews Avenue Bridge over LIRR (Queens)

The reconstruction of this bridge, which began on August 4, 2003, was substantially completed on February 1, 2005.

Hamilton Avenue Asphalt Plant (Brooklyn)

On February 5, 2005, Division ironworkers repaired the plant's grizzly ladder and door.

15th Avenue Bridge over NYCT (Brooklyn)

The reconstruction of this bridge, which began on September 29, 2003, was substantially completed on February 8, 2005.

Third Avenue Bridge over Harlem River (Bronx-Manhattan)

The bridge was re-opened to all five lanes of traffic at 5 AM on February 10, 2005.



Third Avenue Bridge Open to Traffic. Sidewalk, Guardrail, and Protective Fencing.
(2nd View Credit: Michele N. Vulcan)

Belt Parkway Bridge over Mill Basin (Brooklyn)

On February 9, 2005, responding to a bridge operator report of a newly developed one square foot through-hole in the westbound right lane on the north leaf, Division repair crews installed a temporary plate. Permanent repairs were completed on the night of February 15, 2005, when Division personnel installed a recessed plate over the area of deteriorated grating.

Metropolitan Avenue Bridge over English Kills (Brooklyn)

Stage II reconstruction of the bridge began on February 16, 2005.

Anti-Icing

On February 20 and 21, 2005, Division personnel applied anti-icing chemicals 9 times to the East River bridges. Another 15 applications were made to the bridges on February 24 and 25, 2005. Icicle patrols monitored the FDR Drive, the Battery Park Underpass, the Brooklyn-Queens Expressway, and the Cross Bronx Expressway. The first storm dumped 5 inches of snow in Central Park, and the second left an additional accumulation of 6 inches.



Cleaned Brooklyn Bridge Walkway After the Storm. Cement Mason Joseph Cassella Behind the Wheel of a Gator Used to Plow the Brooklyn Bridge Walkway. (Credit: Russell Holcomb)

3rd Avenue Bridge over Gowanus Canal (Brooklyn), 49th Street Bridge over Grand Central Parkway (Queens), Jamaica Avenue Bridge over Cross Island Parkway (Queens), Metropolitan Avenue Bridge over Conrail (Queens), Bronx Boulevard Bridges (NB & SB) over Bronx River (Bronx), Fort Tryon Place Bridge over Entrance from Riverside Drive (Manhattan), Unionport Road Bridge over Amtrak (Bronx), and East 149th Street Bridge over Amtrak (Bronx)

A Notice to Proceed for the component rehabilitation of these bridges was issued to the contractor with a start date of February 28, 2005.



3rd Avenue Bridge over Gowanus Canal, 49th Street Bridge over Grand Central Parkway, and Jamaica Avenue Bridge over Cross Island Parkway. (Credit: NYSDOT)

CHRONOLOGY



Metropolitan Avenue Bridge over Conrail, and Bronx Boulevard Bridges (NB & SB) over Bronx River. (Credit: NYSDOT)



Fort Tryon Place Bridge over Entrance from Riverside Drive, Unionport Road Bridge over Amtrak, and East 149th Street Bridge over Amtrak. (Credit: NYSDOT)

MARCH

Award

In March 2005, the American Council of Engineering Companies of New Jersey selected the reconstruction of the Belt Parkway Bridge over Ocean Parkway for an Honor Award in its 2005 Engineering Excellence Awards. The Engineering Excellence Awards Program recognizes engineering achievements that demonstrate the highest degree of skill and ingenuity. This project also involved the reconfiguration of the interchange, roadway work on approximately a mile of the Belt Parkway, and roadway and associated landscaping work on Ocean Parkway from approximately Avenue Z to West End Avenue. The new bridge utilized many precast elements, including deck units, t-wall abutments, cap beams, parapets, and approach slabs.

Anti-Icing

On February 28 and March 1, 2005, Division personnel applied anti-icing chemicals 13 times to the East River bridges. The storm dumped 7.5 inches of snow in Central Park. The priority overpasses were monitored and cleaned as necessary, and icicle patrols monitored the FDR Drive, the Battery Park Underpass, the Brooklyn-Queens Expressway, and the Cross Bronx Expressway.

Hamilton Avenue Asphalt Plant (Brooklyn)

On March 5, 2005, Division ironworkers re-installed the section of the plant's crusher that had been removed and brought to the shop for repair on February 5, 2005.

Tracy Avenue Pedestrian Bridge over SIRT South Shore (Staten Island)

The project to repair the red-flagged bottom two steel girders of the bridge, which began on February 19, 2005, was completed by Division ironworkers and painters on March 6, 2005. The work was performed from the top of a wooden platform supported by steel scaffolding erected from ground level.

CHRONOLOGY



Tracy Avenue Bridge Girders Prior to Repair. Box Covers for the Third Rail. Carpenters Erecting the Scaffolding.



Transporting Materials by Crane to the Tracy Avenue Bridge Platform. Ironworkers Installing C-Channels to Stiffen the Girder. Working on the Extended Platform With Hanging Support Above the Train.



Train Running Below the Tracy Avenue Bridge Hanging Platform. Ironworkers Repairing the Girders. Painting Containment for Surface Preparation of Steel.



Painters Applying Primer. Repaired and Painted Girders. Tracy Avenue Bridge After Completed Repairs.

Anti-Icing

On March 8 and 9, 2005, Division personnel applied anti-icing chemicals 9 times to the East River bridges. Another 5 applications were made to the bridges on March 11, 2005. The priority overpasses were monitored and cleaned as necessary, and ice patrols monitored the FDR Drive, the Battery Park Underpass, the Brooklyn-Queens Expressway, and the Cross Bronx Expressway.



Cleaned Brooklyn Bridge Roadway After the Storm. (Credit: Russell Holcomb)

Gun Hill Road Bridge over Metro North RR (Bronx)

Effective March 9, 2005, the southbound off ramp of the Bronx River Parkway at Gun Hill Road was closed to traffic for a three year duration.

Queensboro Bridge

March 30, 2005 marked the 96th anniversary of the opening of the bridge.



Queensboro Bridge at Night. (Credit: Jonathan Smith)

Boston Post Road Bridge over Hutchinson River (Bronx)

The replacement of the deteriorated timber fender system, which began in September 2004, was completed in March 2005.

APRIL

Awards

In April 2005, the American Council of Engineering Companies of New York selected the reconstruction of the Belt Parkway Bridge over Ocean Parkway for two Silver Awards in the structural systems category in its 2005 Engineering Excellence Awards. Founded in 1921, ACEC New York is the oldest continuing organization of professional consulting engineering firms in the United States.

Pope John Paul II Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on April 4, 2005 in tribute to Pope John Paul II, 84, who died on April 2, 2005. The pope led the Roman Catholic Church for 26 years.

Williamsburg Bridge

On April 6, 2005, Division personnel assisted DEP Director of Wildlife Studies Christopher Nadeski with access to the old south comfort station near the Manhattan anchorage for the building of a falcon nesting box. According to the DEP, New York State has 50 pairs of falcons, of which New York City hosts 16 on its bridges and buildings. Mr. Nadeski inspects and bands the City's new chicks every spring.



View From the Nesting Box. Christopher Nadeski Assembling the Box.
(Credit: Peter Basich)

Grand Concourse Bridge over East 170th Street (Bronx)

The component rehabilitation of this bridge was substantially completed on April 7, 2005.



Parapet Repairs on the Grand Concourse over East 170th Street Bridge. Engineer Krishan Baweja
Inspecting the Retaining Wall. (Credit: Nasir Khanzada) Completed Repairs.

Hamilton Avenue Asphalt Plant (Brooklyn)

On April 9, 2005, Division ironworkers repaired the plant's silo, paddles, and winches.

Willis Avenue Bridge over Harlem River (Bronx/Manhattan)

The emergency repairs to replace sections of deteriorated grating and their supporting members, which began on the night of April 15, 2005, were completed by Division personnel on the afternoon of April 18, 2005.



Opening the Grating on the Willis Avenue Bridge. Installing the Platform.
View of the Bridge From the Manlift on the Barge. (Credit: Reza Taheri)



Platform Built by Bridge Painters for the Ironworkers' Repairs of the Willis Avenue Bridge. Deputy Director of In-House Painting Earlene Powell & Bridge Painters Joseph Guzzetta & Robert Avellino Inspecting the Platform. Ironworkers Performing Emergency Repairs. (Repair Credit: Russell Holcomb)

Congress Street Bridge over Brooklyn-Queens Expressway (Brooklyn)

Stage IB reconstruction of the bridge began on April 18, 2005.

Cortelyou Road Bridge over NYCT (Brooklyn)

Stage IIIB reconstruction of the bridge began on April 18, 2005.

239th Street Pedestrian Bridge over Henry Hudson Parkway (Bronx)

Stage I reconstruction of the bridge began on April 25, 2005.

Fourth Annual "Take Our Children to Work Day"

On April 28, 2005, as part of the Agency's third annual "Take Our Children to Work Day," Division personnel hosted children at several trades' shops located at the Queensboro Bridge. The children were treated to demonstrations by the ironworkers, engineers, and painters, and were taken on a guided tour of the bridge.



Assistant Engineer-in-Charge Reza Taheri & Engineer-in-Charge Pinakin Patel With the Children at the Waterway Bridges & Tunnels Office. Bridge Painters Willie Tyler and Joseph Guzzetta, Supervisor Bridge Painter Hughie Flood, and Bridge Painters Frank Hollen and Robert Avellino in the Painters' Yard. (Credit: Reza Taheri)



Bridge Painter Joseph Guzzetta Demonstrating Climbing Technique in the Painters' Yard. Bridge Repairer & Riveter James Murray (Right) And Children Listening to Bridge Repairer & Riveter Gean Pilipiak Explain Procedures. (Credit: Reza Taheri)



Demonstration by Bridge Repairer & Riveters Dominick Santo, Sze Ming Liu, and James Wright III at the Ironworker Shop. Deputy Director of In-House Painting Earlene Powell With the Children on the Queensboro Bridge. (Credit: Reza Taheri)

Cross Island Parkway Bridge over Dutch Broadway – 115th Avenue (Queens)

Cleaning and painting of the bridge began and was completed in April 2005.

Highland Boulevard Bridge (NB) over Vermont Avenue (Brooklyn)

Cleaning and painting of the bridge began and was completed in April 2005.

MAY

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

May 1, 2005 marked the 110th anniversary of the opening of the bridge.



Macombs Dam Swing Span.
(Credit: Peter Basich)

28th Annual Five Borough Bike Tour

In preparation for the 42-mile Five Borough Bike Tour on May 1, 2005, Division personnel performed mechanical sweeping along the route on the night before the event, including the Queensboro, Pulaski, Madison Avenue, and 145th Street Bridges, and performed asphalt repairs as necessary. In addition, they temporarily placed covers over the expansion joints on the Pulaski Bridge.

Congress Street Bridge over Brooklyn-Queens Expressway (Brooklyn)

Stage II reconstruction of the bridge began on May 4, 2005.

Hamilton Avenue Asphalt Plant (Brooklyn)

On May 14, 2005, Division ironworkers repaired the plant's chutes and drainpipe.

18th Avenue Bridge over NYCT (Brooklyn)

The reconstruction of this bridge, which began on September 29, 2003, was substantially completed on May 16, 2005.



Nearing Completion of the 18th Avenue Bridge.

Lincoln Road Bridge over BMT Subway (Brooklyn)

Effective May 19, 2005, the bridge was closed to traffic for rehabilitation, as agreed to by Community Board #9.

Brooklyn Bridge

May 24, 2005 marked the 122nd birthday of the bridge.



Water Taxi Dock Near the Bridge. Roebling Memorial Plaque. (Credit: Russell Holcomb)

Ocean Avenue Pedestrian Bridge over Sheepshead Bay (Brooklyn)

On May 28, 2005, the bridge partially collapsed. The south bulkhead had shifted towards the water, allowing the sidewalk at Exeter Street and Shore Boulevard to collapse into a void behind the bulkhead. The movement of the bulkhead also pulled two of the piles supporting the bridge out from under the bridge's bearings and undermined the wood ramp leading to the bridge. The Economic Development Corporation will restore and reconstruct the bulkhead and the bridge. A pontoon bridge was immediately installed to serve as a temporary pedestrian crossing. Division engineers reviewed the bridge reconstruction portion of the project.



Ocean Avenue Bridge Seawall Failure. (Credit: Russell Holcomb)



The Temporary Bridge. (Credit: Russell Holcomb)

Braddock Avenue Bridge over Cross Island Parkway (Queens)

Cleaning and painting of the bridge, which began in April 2005, was completed in May 2005.

Central Drive Bridge over Transverse Road #1 (at 65th Street) (Manhattan)

In April 2005, contractor crews began the nighttime installation of flat bar steel bracing for the bridge's arch stones, as well as the installation of expanded metal mesh to protect the public from possible falling debris. This project was completed in May 2005.

Clintonville Street Bridge over Cross Island Parkway (Queens)

Cleaning and painting of the bridge, which began in April 2005, was completed in May 2005.

Hempstead Avenue Bridges over Cross Island Parkway (Queens)

Cleaning and painting of the bridges, which began in April 2005, was completed in May 2005.

South Conduit Boulevard Bridge over Southern Parkway (Queens)

Cleaning and painting of the bridges, which began in April 2005, was completed in May 2005.

14th Avenue Bridge over Cross Island Parkway (Queens)

Cleaning and painting of the bridge began and was completed in May 2005.

JUNE

Award

In June 2005, the Metropolitan Section of the American Society of Civil Engineers selected the reconstruction of the Belt Parkway Bridge over Ocean Parkway as the 2005 Design-Build Project of the Year.



Deputy Director of Design-Build Beatriz Duran, Andre Celestin, and Director of Design-Build/Emergency Contracts Chris Sklavounakis at the Award Presentation. Belt Parkway Bridge in Spring 2005.

Hamilton Avenue Asphalt Plant (Brooklyn)

On the morning of June 2, 2005, Chief Bridge Officer Henry Perahia, Deputy Chief Engineer Russell Holcomb, and Division engineers and ironworkers went to the asphalt plant to investigate a report that one of the silos was in danger of collapse. The deformation of a patch on the silo wall and the downward movement of the top of the silo were visible to the naked eye. The silo was emptied and the plant's crane was used to prevent further downward movement of the silo top. Later that day, the ironworkers installed temporary supports for the machinery above the silo.



Investigating the Damage at the Asphalt Plant. (Credit: Hany Soliman)

Willis Avenue Bridge over Harlem River (Bronx/Manhattan)

On June 4 and 5, 2005, Division personnel performed red and yellow flag repairs to the purlins and open grating.



Repairing the Willis Avenue Bridge Grating. (Credit: Reza Taheri)

Pitkin Avenue Bridge over LIRR (Brooklyn)

Stage II reconstruction of the bridge began on June 6, 2005.

Bruckner Expressway over Westchester Creek (Bronx) (a.k.a. Unionport Bridge)

Due to heat expansion, the bridge was closed to marine traffic beginning at 1:25 PM on June 8, 2005. It was returned to service at 1:10 AM on June 9, 2005.

Hutchinson River Parkway Bridge over Hutchinson River (Bronx)

Due to heat expansion, the bridge was closed to marine traffic beginning at 1:25 PM on June 8, 2005. It was returned to service at 1:10 AM on June 9, 2005.

Cortelyou Road Bridge over NYCT (Brooklyn)

The reconstruction of this bridge, which began on April 22, 2002, was substantially completed on June 11, 2005.

Grand Street Bridge over Newton Creek (Brooklyn/Queens)

Due to heat expansion, the bridge was closed to marine traffic beginning at 11:35 AM on June 14, 2005. It was returned to service at 8:40 PM that night.

Grand Concourse Bridge over 167th Street (Bronx)

The project to install concrete caps along the length of the underpass, which began on September 13, 2004, was completed by Division masons on June 21, 2005. Approximately 10,000 square feet of concrete were installed to construct the caps and thereby end the chronic dumping problem.



Millings and Formwork. (Credit: Paul Schwartz) Poured Concrete Cap. (Credit: Joseph Saverino)



Masons and Carpenters Working on the East Side in March 2005. (Credit: Pinakin Patel)



Views of Completed Grand Concourse Concrete Cap Work in June 2005. (Credit: Paul Schwartz)

Hamilton Avenue Asphalt Plant (Brooklyn)

On June 11, 18, and 25, 2005, Division ironworkers repaired the plant's scales, chutes, paddles, conveyors, transfer chute, drag paddles, and silo support.

Belt Parkway Bridge over Shell Road (Brooklyn) (NYS)

On June 27, 2005, Division personnel addressed an emergency condition of failed expansion joints on this State-owned bridge by covering the areas with steel plates.

Carroll Street Bridge over the Gowanus Canal (Brooklyn)

Cleaning and painting of the bridge, which began in May 2005, was completed in June 2005.

Elliot Avenue Bridge over Queens Boulevard (Queens)

Cleaning and painting of the bridge began and was completed in June 2005.

Grand Concourse Bridge over East 204th Street (Bronx)

Cleaning and painting of the bridge, which began in May 2005, was completed in June 2005.

PS-5 Pedestrian Bridge over 10th Avenue (Manhattan)

Cleaning and painting of the bridge began and was completed in June 2005.

Queens Boulevard Bridge over Jackie Robinson Parkway (Queens)

Cleaning and painting of the bridge, which began in May 2005, was completed in June 2005.

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

In June 2004, netting was installed beneath the bridge's lift span to protect mariners from being injured by falling pieces of deteriorated steel formwork angles. In May, 2005, contractor crews began to raise the height of the netting to increase the clearance. This project was completed in June 2005.



Raising the Netting on the Roosevelt Island Bridge. (Credit: Peter Basich)

CHRONOLOGY

Woodhaven Boulevard Bridge over Queens Boulevard (Queens)

Cleaning and painting of the bridge, which began in May 2005, was completed in June 2005.

3rd Avenue Bridge over LIRR Bay Ridge (Brooklyn)

Cleaning and painting of the bridge began and was completed in June 2005.

3rd Street Bridge over Gowanus Canal (Brooklyn)

Cleaning and painting of the bridge began and was completed in June 2005.

65th Place Bridge over Brooklyn-Queens Expressway (Queens)

Cleaning and painting of the bridge began and was completed in June 2005.

JULY

Award

In July 2005, the National Steel Bridge Alliance selected the Third Avenue Bridge over Harlem River project for a merit award in the movable span category. The Prize Bridge Awards honor significant and innovative steel bridges constructed within the United States. Projects are judged on innovation, aesthetics, design, and engineering solutions. The winning projects were also announced and described in the November 2005 issue of *Modern Steel Construction Magazine*.

London Transit Bombing Victims Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on July 9, 2005 in tribute to the victims of the London, England transit bombings of July 7, 2005. The attacks killed 56 people and injured 700 on three Underground trains and a double-decker bus. The flags remained at half-mast until July 13, 2005.

3rd Street Bridge over Gowanus Canal (Brooklyn)

Due to heat expansion, the bridge was closed to marine traffic beginning at 4:25 PM on July 10, 2005. It was returned to service at 8:15 AM on July 11, 2005.

Belt Parkway Bridge over Mill Basin (Brooklyn)

Due to heat expansion, the bridge was closed to marine traffic beginning at 3 PM on July 11, 2005. It was returned to service at 11:20 PM that night.

17th Avenue Bridge over BMT Sea Beach (Brooklyn)

Effective July 13, 2005, the bridge was closed to traffic for rehabilitation.



Inspecting the 17th Avenue Bridge Before Construction.

Hamilton Avenue Bridge over Gowanus Canal (Brooklyn)

Due to heat expansion, the bridge was closed to marine traffic beginning at 3:25 PM on July 17, 2005. It was returned to service at 6:30 PM that night.

Belt Parkway Bridge over Mill Basin (Brooklyn)

Due to heat expansion, the bridge was closed to marine traffic beginning at 4:20 PM on July 18, 2005. It was returned to service at 7:30 PM that night.

Willis Avenue Bridge over Harlem River (Bronx/Manhattan)

On July 22, 2005, three trucks hit the bridge, causing a bridge fascia member to crack, and bending another interior steel girder. Contractor ironworkers removed loose and damaged steel bottom flange angles underneath the damaged steel structure. Division personnel removed loose concrete, and installed timber shoring and diagonal bracing. Traffic was restored by 8:00 AM on July 23, 2005.



Inspecting and Repairing the Damage. (Credit: Thomas Leung)



Close-up of the Damage. (Credit: Samuel Teaw)

Hamilton Avenue Bridge over Gowanus Canal (Brooklyn)

Due to heat expansion, the bridge was closed to marine traffic beginning at 10:40 PM on July 24, 2005. It was returned to service at 3:35 AM on July 25. Further heat expansion closed the bridge to marine traffic from 1:45 PM on July 26, 2005 until 7 AM on July 28, 2005, from 3:40 PM on July 29, 2005 until 7:30 AM on July 30, 2005, and from 5:45 PM on July 30, 2005 until 12:05 AM on July 31, 2005.

Hamilton Avenue Asphalt Plant (Brooklyn)

On July 30, 2005, Division ironworkers repaired the plant's chute, paddles, rap frame, and silo.

Northern Boulevard Bridge over Alley Creek (Queens)

Cleaning and painting of the bridge, which began in June 2005, was completed in July 2005.

Queens Boulevard Bridge over Access Road to Brooklyn-Queens Expressway (SB) (Queens)

Cleaning and painting of the bridge, which began in April 2005, was completed in July 2005.

3rd Avenue Bridge over Gowanus Canal (Brooklyn)

Cleaning and painting of the bridge, which began in June 2005, was completed in July 2005.

Queensboro Bridge

In July 2005, the Mayor's Office of Film, Theatre, and Broadcasting named this bridge as a "Location of the Month."

The Queensboro Bridge, which connects the Long Island City neighborhood of Queens with Manhattan, has long been a favorite of filmmakers for the beauty shots of the City it offers. Cameras mounted to vehicles or placed on the northern walkways are used for establishing shots of Manhattan's skyline, buildings and river. The bridge, which is currently undergoing renovations, has been used by productions including *Spider-Man* and *The Interpreter*.

Location of the Month. (July 2005),

http://www.nyc.gov/html/film/html/locations/location_queensboro_bridge.shtml (accessed January 19, 2006).



View of the Queensboro Bridge from the East
51st Street Pedestrian Bridge.
(Credit: Russell Holcomb)

AUGUST

Officer James D. McNaughton Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on August 4, 2005 in tribute to Police Officer James D. McNaughton of Transit District 2 in Lower Manhattan, who was killed in action on August 2, 2005, while serving in Iraq with the 306th Military Police Battalion. Army Reserves Staff Sergeant McNaughton, 27, was the first New York City police officer to die on active military duty in the war. There are 273 New York City police officers on active duty in Iraq. Officer McNaughton was a four year veteran of the New York City Police Department, and a member of the first police academy class to graduate after the September 11, 2001 attacks. The flag remained at half-mast until August 16, 2005.

Hamilton Avenue Bridge over Gowanus Canal (Brooklyn)

A Notice to Proceed for the reconstruction of this bridge was issued to the contractor with a start date of August 4, 2005.

Bruckner Expressway over Westchester Creek (Bronx) (a.k.a. Unionport Bridge)

Due to heat expansion, the bridge was closed to marine traffic beginning at 11:30 AM on August 5, 2005. It was returned to service at approximately 1 AM on August 6, 2005.

Congress Street Bridge over Brooklyn-Queens Expressway (Brooklyn)

The reconstruction of this bridge, which began on April 26, 2004, was substantially completed on August 5, 2005.

Greenpoint Avenue Bridge over Newton Creek (Brooklyn/Queens)

Due to heat expansion, the bridge failed to close after a vessel opening at approximately 4:20 PM on August 5, 2005. The bridge remained out of service to marine traffic until 3:00 AM on August 6, 2005.

Pulaski Bridge over Newtown Creek (Brooklyn/Queens)

Due to heat expansion, the bridge was closed to marine traffic beginning at 11:30 AM on August 5, 2005. It was returned to service at approximately 1 AM on August 6, 2005.

3rd Street and 9th Street Bridges over Gowanus Canal (Brooklyn)

Due to heat expansion, the bridges were closed to marine traffic beginning at 9:45 AM on August 8, 2005. They were returned to service at 8:40 AM on August 9, 2005.

CHRONOLOGY

Greenpoint Avenue Bridge over Newton Creek (Brooklyn/Queens)

Due to heat expansion, the bridge was closed to marine traffic beginning at 4:40 PM on August 12, 2005. It was returned to service at 7 AM on August 13, 2005.

Hamilton Avenue Bridge over Gowanus Canal (Brooklyn)

Due to heat expansion, the bridge was closed to marine traffic beginning at 12:55 AM on August 13, 2005. It was returned to service at 8:50 PM that night.

Hamilton Avenue Asphalt Plant (Brooklyn)

On August 6, 13, and 20, 2005, Division ironworkers repaired the plant's chute and drum paddles.

Rikers Island Bridge over Rikers Island Channel (Queens)

A Notice to Proceed for the rehabilitation of the bridge deck was issued to the contractor with a start date of August 24, 2005.

Brooklyn-Queens Expressway (EB) over Cadman Plaza (Brooklyn)

On August 15, 2005, Division personnel began PIA safety flag repairs to the retaining wall, removing loose bricks and corroded brackets, and placing steel angles to support the railing cap stones. The project was completed on August 25, 2005.



Bricklayer Ignazio Trapani, Highway Repairers Clifton Gravesande and Warren Chiles, & Cement Mason Joseph Cassella Removing the Bricks. (Credit: Michele N. Vulcan) Maneuvering the Bucket. (Credit: Peter Basich)



Maneuvering the Bucket. Large Piece in Mid-Flight. (Credit: Peter Basich) Loose Bricks. Completed Section of Wall. (Credit: Samuel Teaw)

Belt Parkway Bridge over Bedford Avenue (Brooklyn)

Cleaning and painting of the bridge was completed in August 2005.

Brooklyn Bridge

Repainting of the walkway markings, which began in June 2005, was completed in August 2005.

Carroll Street Bridge over the Gowanus Canal (Brooklyn)

The project to replace the wood deck's top layer (and middle layer, where necessary), which began in July 2005, was completed in August 2005.

Grand Concourse Bridge over Burnside Avenue (Bronx)

Cleaning and painting of the bridge, which began in June 2005, was completed in August 2005.

Grand Concourse Bridge over 167th Street (Bronx)

Cleaning and painting of the bridge, which began in April 2005, was completed in August 2005.

Union Turnpike Bridge over Austin Street (Queens)

Cleaning and painting of the bridge began and was completed in August 2005.

Yankee Stadium Pedestrian Bridge over East 153rd Street & Metro North (Bronx)

Cleaning and painting of the bridge began and was completed in August 2005.

147th Street Bridge over Cross Island Parkway (Queens)

Cleaning and painting of the bridge began and was completed in August 2005.

SEPTEMBER

Award

In September 2005, the New York Tri-State Metro Chapter of the Design-Build Institute of America selected the reconstruction of the Belt Parkway Bridge over Ocean Parkway as the 2005 Project of the Year in the transportation category. The Institute advocates and advances single source project delivery within the design and construction community. Members include practitioners from all project phases, plus public- and private-sector project owners. The organization was founded in 1993.



Looking South at the Bridge.

Hurricane Katrina and Chief Justice William H. Rehnquist Tribute

The American flags on the Brooklyn Bridge were lowered to half-mast by Division painters on September 4, 2005 in tribute to both the 1,321 victims of Hurricane Katrina and the death of Chief Justice William H. Rehnquist. The hurricane struck northwest Florida and the Gulf Coast states of Louisiana, Mississippi, and Alabama on August 29, 2005. Hurricane Katrina was a long-lived hurricane that made landfall three times along the United States coast and reached Category 5 at its peak intensity.



Brooklyn Bridge Flag at Half-Mast.

Supreme Court Chief Justice William H. Rehnquist, 80, died on September 3, 2005. Justice Rehnquist served from 1943-1946 as an Army Air Force Sergeant in North Africa. He then graduated first in his class in 1952 from Stanford Law School. Justice Rehnquist was appointed to the United States Supreme Court as an Associate Justice by President Richard M. Nixon in 1972. He was then elevated to Chief Justice by President Ronald Reagan in 1986 after the retirement of Chief Justice Warren Burger. Chief Justice Rehnquist was the 16th Chief Justice of the Court. The flags remained at half-mast until September 20, 2005.



http://www.supremecourthistory.org/01_society/suns/01_feature_q.html
(accessed November 22, 2005).

Patriot Day Tribute

The Brooklyn Bridge flags flew at half-mast on September 11, 2005 to commemorate Patriot Day.

Hamilton Avenue Bridge over Gowanus Canal (Brooklyn)

Due to heat expansion, the bridge was closed to marine traffic beginning at 1:40 PM on September 12, 2005. It was returned to service at 3:55 PM that afternoon.

Conference

At the Third New York City Bridge Conference, held on September 12 and 13, 2005, Division Directors presented papers on the replacement of the Belt Parkway Bridge over Ocean Parkway and on seismic hazard analysis. In addition, Chief Bridge Officer Henry Perahia delivered a keynote session address on the salient features of the new City Island cable-stayed bridge, now under final design.



Chief Bridge Officer Henry Perahia
Addressing the Conference.
(Credit: Jagtar Khinda)

Brooklyn Bridge

The new \$40 million Staten Island Ferry, the “Spirit of America,” completed its 22 day voyage from Marinette, Wisconsin to New York Harbor on September 15, 2005. The vessel's name honors how Staten Islanders pulled together and sacrificed during the September 11, 2001 tragedy.



New Ferry Passing Under the Brooklyn Bridge.
(Credit: Chad Rachman/Staten Island Advance)

Hamilton Avenue Asphalt Plant (Brooklyn)

On September 17, 2005, Division ironworkers repaired the plant's drum, crusher, and smokestack. On September 19, 2005, they performed emergency repairs on the silo's transfer mechanism.

239th Street Pedestrian Bridge over Henry Hudson Parkway (Bronx)

Stage II reconstruction of the bridge began on September 22, 2005.

Assistant City Highway Repairer Nicky Antico and Judge Constance Baker Motley Tribute

The American flags on the Brooklyn Bridge were lowered to half mast by Division painters on September 28, 2005 in tribute to Assistant City Highway Repairer Nicky Antico of the Agency's Roadway Maintenance and Repair Division, who died on September 27, 2005 as a result of injuries suffered on the job on September 22, 2005. Mr. Antico and two other Department highway workers were struck by a hit-and-run driver as they were preparing to resurface Slosson Avenue near Lortel Avenue in Staten Island.

Mr. Antico, 35, was a six year veteran of the Department. His jokes and comedic impersonations were always remarked upon and admired by his colleagues and friends. After the 9/11/01 attack,

CHRONOLOGY

Mr. Antico volunteered to work at the World Trade Center site, doing everything he could to put his city back together. He is survived by his widow, Anna, and his eight year old daughter, Arianna. Mr. Antico was posthumously promoted to Highway Repairer, and the City Council passed legislation to ensure that his family would continue to receive health insurance coverage.



Nicky Antico.

The flags continued to be flown at half-staff in tribute to Judge Constance Baker Motley, 84, senior judge for the U.S. District Court for the Southern District of New York, who died on September 28, 2005. She was the only woman on the NAACP legal team that won the epochal school desegregation decision *Brown v. Board of Education*. She became the first black woman elected to the New York State Senate, and the first black woman to hold the office of Manhattan Borough President. In January 1966, President Lyndon B. Johnson named her to the District Court for the Southern District of New York, a region that includes Manhattan, the Bronx and six counties north of the city. The first African American woman to serve as a federal judge, she became Chief Judge in 1982. The flags remained at half mast until October 8, 2005.

Brooklyn-Queens Expressway over Prospect Street (Brooklyn)

Cleaning and painting of the bridge, which began in August 2005, was completed in September 2005.

Brooklyn-Queens Expressway over Washington Street (Brooklyn)

Cleaning and painting of the bridge, which began in August 2005, was completed in September 2005.

Hunters Point Avenue Bridge over Dutch Kills (Queens)

Cleaning and painting of the bridge, which began in June 2005, was completed in September 2005.



Peter Basich Photographing the Project's Progress. (Credit: Michele N. Vulcan) Preventing Paint From Falling Into the Dutch Kills. Supervisor Bridge Painter Georgeios Ploumis and Bridge Painter Goncalo Lima Painting the Bridge. (Credit: Sergiy Parayev)

East 12th Street over Belt Parkway (Brooklyn)

Cleaning and painting of the bridge, which began in August 2005, was completed in September 2005.



Bridge Painter Sadfar Ali Mixing Paint. Bridge Painters Brian Kavanagh, Thomas Jones, and Michael Scohi Working on the Bridge. (Credit: Sergiy Parayev)

Pedestrian Bridge over East 128th Street (Manhattan)

Cleaning and painting of the bridge, which began in August 2005, was completed in September 2005.



Freshly Painted 128th Street Bridge.
(Credit: Sergiy Parayev)

149th Street Bridge over Cross Island Parkway (Queens)

Cleaning and painting of the bridge, which began in August 2005, was completed in September 2005.

OCTOBER

Bruckner Expressway NB over Amtrak (Bronx)

A tanker truck carrying home heating fuel overturned and caught fire on the 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 re-opened in time for the morning rush hour on October 6, 2005.



The Tanker Truck. Repairs and Cleanup. (Credit: Bojidar Yanev)

Queensboro Bridge

On October 18, 2005, at approximately 1:00 PM, a street light's electrical wiring started a fire in the painting contractor's containment over the upper roadway. No injuries were reported. The containment was undergoing abrasive blasting at the time of the fire and all debris and blast media were continuously being vacuumed during the blasting operations. Declared a four-alarm blaze, the fire drew 168 firefighters and 39 units. It took firefighters about two hours to get the blaze under control, pumping water from ground hydrants through a series of bridge pipes to douse the flames. The fire caused burnt debris, blasting grit, and loose paint to fall onto the upper roadway. Until the fire was extinguished and the structure inspected for damage, all lanes of the bridge remained closed. Notifications were made to the regulatory agencies of the release to land, air and water. The contractor mobilized its work force and commenced clean-up of the roadway and the damaged containment upon clearance from the Fire and Police Departments. By approximately 5:00 PM, after the lower roadways were cleared of debris, traffic was restored. Clean-up operations of the upper roadways were completed by 10:00 PM. Structural steel repairs on the upper roadways continued through the night. Traffic was restored to the upper roadway by 5:00 AM on October 19, 2005.



Inspecting the Bridge After the Fire.

Hamilton Avenue Asphalt Plant (Brooklyn)

On October 22, 2005, Division ironworkers repaired the plant's drum and crusher.

Belt Parkway Bridge over Mill Basin (Brooklyn)

A Notice to Proceed for the reconstruction of the bridge grid deck was issued to the contractor with a start date of October 25, 2005.



Mill Basin Bridge Deck.

Pitkin Avenue Bridge over LIRR (Brooklyn)

The reconstruction of this bridge was substantially completed on October 27, 2005.



The New Pitkin Avenue Bridge.
(Credit: Fred Arzideh)

Shore Road Bridge over Hutchinson River (Bronx) (a.k.a. Pelham Bay Bridge)

On October 31, 2005, Division ironworkers replaced the bridge's northwest semaphore gate, which had been struck by a vehicle on October 30, 2005.

Ms. Rosa Parks Tribute

The American flags on the Brooklyn Bridge were lowered to half mast by Division painters on October 31, 2005 in tribute to Ms. Rosa Parks, 92, who died on October 24, 2005. Ms. Parks' arrest on December 1, 1955 for refusing to give up her city bus seat to a white man in Montgomery, Alabama, made the black seamstress a heroine in the civil rights movement. Her disorderly conduct arrest led to the Montgomery Bus Boycott, which ran from December 1955 through November 1956, ending only when the United States Supreme Court declared that segregation on public buses was unconstitutional. In 1965 Ms. Parks joined the staff of U.S. Representative John Conyers of Michigan and served on his staff until her retirement in 1988. In 1979, she was awarded the NAACP's Springarn Medal for outstanding achievement by a black American. In 1996, Ms. Parks received the Presidential Medal of Freedom, awarded to civilians making outstanding contributions to American life. In 1999, she was awarded the Congressional Gold Medal, the nation's highest civilian honor. The flags remained at half-mast until sunset on November 2, 2005, the date of her interment.



Ms. Parks Sitting on a
Montgomery, Alabama
Bus in 1956.

Belt Parkway Bridge over Fresh Creek (Brooklyn)

Cleaning and painting of the bridge, which began in June 2005, was completed in October 2005.

25th Street Pedestrian Bridge over FDR Drive (Manhattan)

Cleaning and painting of the bridge, which began in September 2005, was completed in October 2005.

NOVEMBER

Gun Hill Road Bridge over Metro North RR (Bronx)

Stage II reconstruction of the bridge began on November 3, 2005.

Hamilton Avenue Asphalt Plant (Brooklyn)

On November 5, 2005, Division ironworkers repaired the plant's silo, adjusting rods, and drum.

New York City Marathon

In preparation for the Marathon on November 6, 2005, Division personnel inspected and cleaned the Queensboro, Pulaski, Madison Avenue, Third Avenue, and Willis Avenue Bridges. Division crews secured and ramped roadway plates on the Willis Avenue Bridge, and temporarily removed Jersey barriers on the Queensboro Bridge. Standard traffic configurations were restored before the next morning rush hour.



Preparing the Carpet for the Marathon on the Willis Avenue Bridge. Wheelchair Racers on the Bridge: Mexico's Aaron Gordian Minz (Wearing #5, Finished in 2nd Place); Australia's Kurt Fearnley (Wearing #6, Finished in 3rd Place); and Canada's Kelly Smith (Wearing #3, Finished in 5th Place). (Credit: Russell Holcomb)

Bruckner Expressway Bridge NB over Amtrak (Bronx)

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.

Grand Concourse Bridge over East 175th Street (Bronx)

The component rehabilitation of this bridge was substantially completed on November 10, 2005.



Grand Concourse over East 175th Street Bridge. Engineers Nasir Khanzada and Krishan Baweja Inspecting the Materials and Repairs. (Baweja Credit: Nasir Khanzada).



Repairs on the Grand Concourse over East 175th Street Bridge. Bridge Marker Detail.

Liberty Avenue Bridge over LIRR (Brooklyn)

The reconstruction of this bridge was substantially completed on November 15, 2005.

East 168th Street Bridge over Metro North (Bronx)

The component rehabilitation of this bridge was substantially completed on November 15, 2005.



East 168th Street Bridge Old Fence and Guardrail. New Fence and Guardrail.

Metropolitan Avenue Bridge over English Kills (Brooklyn)

The bridge was re-opened to vehicular and pedestrian traffic on November 18, 2005.



Northeast View of the Metropolitan Avenue Bridge.

Carroll and Union Street Bridges over the Gowanus Canal (Brooklyn)

On November 18 and 21, 2005, Bridge Operations personnel hosted first grade children from PS #321 on class trips to the bridges. Students, teachers, and parents enjoyed their visit.



Bridge Operator-in-Charge Tony Allen Answering Questions. Mr. Allen Has Been With DOT Since 1982. Students Observing & Drawing on the Carroll Street Bridge. Students Listening to Supervisor Bridge Operator Mohamed Adel Tork as the Union Street Bridge Opens.

Hamilton Avenue Asphalt Plant (Brooklyn)

On November 21 and 22, 2005, Division ironworkers performed emergency repairs to the plant's mixing drum and paddle.

Jamaica Avenue Bridge over Cross Island Parkway (Queens)

The component rehabilitation of this bridge was substantially completed on November 23, 2005.

79th Annual Macy's Thanksgiving Day Parade

Division engineers reviewed and approved the design specifications of four new large balloons to be introduced in the parade, as follows: JoJo the Clown, Dora the Explorer, Mr. Potato Head, and Scooby Doo. A balloon is classified as large if it is larger than 5,000 cubic feet. However, the balloons in the parade cannot be taller than 70 feet, wider than 40 feet, or longer than 78 feet.

On November 24, 2005, Chief Bridge Officer Henry Perahia, Deputy Chief Engineer Kamal Kishore, Director of Engineering Review Abul Hossain, Mahabal Shah, and George Jarvis, as well as three consultants, were positioned at various locations along the parade route to ensure that the balloons were flown within the prescribed requirements for the wind conditions at that site.

At approximately 11:40 AM, the M&M balloon swung out of control on Broadway between 44th and 43rd Streets at Times Square, and its line got caught on a light pole. The luminaire came down and injured two people, who were treated and subsequently released from the hospital. The winds at the intersection at 44th Street were approximately 15 miles per hour, and the rope lengths were at the 15 miles per hour position at the time of the accident.



New JoJo the Clown, New Dora The Explorer, and New Mr. Potato Head.



Charlie Brown, New Scooby Doo, and Garfield.



Assistant Commissioner for Special Events Evan Korn; George Jarvis; Chief Bridge Officer Henry Perahia; Mahabal Shah; Police Commissioner Raymond Kelly (Speaking to Officers); Director of Engineering Review Abul Hossain; DOT Commissioner Iris Weinshall; Deputy Chief Engineer Kamal Kishore; and First Deputy Commissioner Judith Bertraum.

Officer Dillon Stewart Tribute

The American flags on the Brooklyn Bridge were lowered to half mast by Division painters on November 28, 2005, in tribute to Police Officer Dillon Stewart of the 70th Precinct, who was fatally shot in East Flatbush, Brooklyn on November 28, 2005. Despite being shot in the heart during a car chase, he ignored the wound and helped try to catch his suspected shooter before dying later at the hospital. Officer Stewart, 35, and a five year veteran of the department, was a four time recipient of commendations for Excellent Police Duty. He was posthumously promoted to Detective, First Grade on November 30, 2005. This was the first fatal shooting of a New York City police officer in 2005. The flag remained at half-mast until after his interment on December 6, 2005.

Bedford Park Boulevard Bridge over Metro North (Bronx)

The component rehabilitation of this bridge was substantially completed on November 29, 2005.



Completed Bedford Avenue Bridge.

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

Cleaning and painting of the bridge, which began in September 2005, was completed in November 2005.

DECEMBER

Award

In December 2005, *New York Construction Magazine* selected the reconstruction of the Third Avenue Bridge over the Harlem River as the Best Bridge Project of 2005. The award recognizes design and construction excellence, the contribution of key team members and the innovative solutions to a project's challenges.



Third Avenue Bridge.

Anti-Icing

In the first snow of the 2005-2006 winter season, 2.5 inches of snow were recorded in Central Park, and 3.2 inches in Queens on December 4, 2005. Another inch fell on December 6, 2005. Anti-icing crews were mobilized from 11:00 PM on December 3, 2005 to 11:00 AM the following day, and again from 6:00 PM on December 5, 2005 to 10:00 AM the following day. 20 applications totaling 10,500 gallons of potassium acetate were necessary to clear all of the priority overpasses.

Queensboro Bridge

The project to repair the fire-damaged nine steel barriers, which began on November 29, 2005, was completed by Division ironworkers on December 6, 2005.

DOT Employee Recognition Ceremony

Many Division personnel were among the DOT employees honored on December 7, 2005 for their years of service to the City. Commissioner Iris Weinshall and Lillian Roberts, Executive Director of District Council 37, led the ceremony, which took place at DC 37's headquarters at 125 Barclay Street in Manhattan.

47 Years of Service

Supervisor Highway Repairer Willie E. Tucker Sr.

35 Years of Service

Civil Engineer Saul Basri, and Administrative Engineer Balram Chandiramani.

30 Years of Service

Bridge Repairer & Riveter William Caputo, and Bridge Operator Wilbert Holt.

25 Years of Service

Administrative Engineer Jose Bartoli, Associate Staff Analyst William Donley, Associate Staff Analyst Darlene Lucchese, Area Supervisor Highway Maintenance Charles Remi, and Electrician Jerry Salzman.

20 Years of Service

Principal Administrative Associate Michele Adimu, Carpenter Stephen Buckley, Highway Repairer Deborah Cavaliere, Clerical Associate Marie De Madet, Supervisor Electrician Jose Done, Civil Engineer Saeid Edward, Principal Administrative Associate Paula Friend, Clerical Associate Loraine Fulgham, Area Supervisor Highway Maintenance Louis Garzia, Principal Administrative Associate Gail Hatchett, Oiler Stanley Karolewicz, Associate City Planner Dr. Paul-Michael Kazas, Supervisor Highway Repairer Joseph Lopez, Highway Repairer Dionisio Matos, Bridge Repairer & Riveter James Meyers, Staff Analyst Earlene Powell, Associate Staff Analyst Kalpakam Ramachandran, Bricklayer Salvatore Romano, Civil Engineer Ahmed Shakir, Bridge Operator In Charge George Siebor, Oiler Andrew Sorrentino, Highway Repairer Johnny Tavarez, Clerical Associate Elena Vega, and Stationary Engineer Electric Louis Vullo.

15 Years of Service

Bridge Painter Safdar Ali, Highway Repairer Darryl Anderson, Supervisor Bridge Painter Vincent Babajko, Bridge Operator In Charge Delonda Bates-Pinkney, Bridge Operator Shirley Bennett, Assistant Civil Engineer John Bost, Highway Repairer Leonard Buccola, Civil Engineer Kwing Chan, Civil Engineer Jin Chang, Highway Repairer Anthony Codianni, Assistant Civil Engineer Yousef Demis, Highway Repairer Edward Esposito, Civil Engineer Hani Faouri, Bridge Repairer & Riveter Michael Greenwood, Bridge Painter Branko Grzancic, Civil Engineer Albert Hong, Assistant Civil Engineer Mozzammel Huq, Civil Engineer Ferdinand John, Construction Project Manager Thomas Leung, Associate Staff Analyst Kevin Lobat, Area Supervisor Highway Maintenance John Lucchese, Assistant Civil Engineer Ramakumar Magge, Highway Repairer Paul Maguire, Principal Administrative Associate Linda Mangum, Bridge Painter Samuel Martinez, Bridge Painter Louis Masucci, Administrative Engineer Kevin McNulty, Civil Engineer Seyed Mirhosseini, Carpenter Andrew Myjer, Civil Engineer Rajesh Naik, Associate Project Manager Patrick Nestor, Principal Administrative Associate Cedrick Niles, Principal Administrative Associate Jose Oliveras, Cement Mason John Padovano, Supervisor Highway Repairer Joseph Palemine, Civil Engineer Sudhakar Pallaki, Carpenter Mark Pavia, Area Supervisor Highway Maintenance Edward Pedersen, Oiler George Rivera, Supervisor Highway Repairer Gerard Rollino, Bridge Repairer & Riveter Peter Sciandra, Highway Repairer Luis Soto, Associate Staff Analyst Jennie Too, Research Assistant Nelly Tselnik, Electrician Donald White, Clerical Associate Gloria Wyche, Administrative Engineer Bojidar Yanev, and Staff Analyst Antoinette Zeitoun.

Anti-Icing

In the second storm of the 2005-2006 winter season, 5.8 inches of snow were recorded in Central Park, and 3.8 inches in Queens on December 9, 2005. Anti-icing crews were mobilized from 12:30 AM on December 8, 2005 to noon the following day. Nine applications were made. Priority overpasses were cleared and icicle patrols monitored the FDR Drive, the Battery Park Underpass, the Brooklyn-Queens Expressway, and the Cross Bronx Expressway.

Hamilton Avenue Asphalt Plant (Brooklyn)

On December 10, 2005, Division ironworkers repaired the plant's catwalk and its supports.

Officer Daniel Enchautegui Tribute

The American flags on the Brooklyn Bridge were lowered to half mast by Division painters on December 11, 2005, in tribute to Police Officer Daniel Enchautegui of the 40th Precinct, who was fatally shot attempting to stop a burglary in the Pelham Bay section of the Bronx on December 10, 2005. Despite being shot in the chest, he managed to fire eight rounds and wound both of his suspected attackers before dying. Officer Enchautegui, 28, was a three year veteran of the department. He was posthumously promoted to Detective, First Grade on December 14, 2005. This was the second fatal shooting of a New York City police officer in 2005. The flag remained at half-mast until after his interment on December 14, 2005.

17th Avenue Bridge over BMT Sea Beach (Brooklyn)

The bridge was re-opened to vehicular and pedestrian traffic on December 13, 2005, 29 days ahead of schedule.



Completed 17th Avenue Bridge.

Hunters Point Avenue Bridge over Dutch Kills (Queens)

December 14, 2005 marked the 95th anniversary of the opening of the bridge.



Hunters Point Avenue Bridge and Marker.
(Credit: Michele N. Vulcan)

Hamilton Avenue Asphalt Plant (Brooklyn)

On December 17, 2005, Division ironworkers repaired the plant's bins.

East Tremont Avenue Bridge over Hutchinson River Parkway (Bronx)

The component rehabilitation of this bridge was substantially completed on December 21, 2005.



Engineers Nasir Khanzada and Krishan Baweja Inspecting the Joint Repairs on the East Tremont Avenue Bridge.
(Baweja Credit: Nasir Khanzada) Repairs.



East Tremont Avenue Bridge Repairs.

Transit Strike

The Division of Bridges survived the 60-hour Transit Strike of 2005. The strike began on December 20, 2005, and ended on December 22, 2005. The overwhelming majority of the Division's employees made it to work and all critical functions were performed. On both the Manhattan and Williamsburg Bridges, Division staff coordinated and implemented lane reversals to accommodate the morning rush, and then again for the evening rush. In order to implement this, staff was at the bridges at 3:00 AM each morning. In addition, Division staff provided coverage at the Office of Emergency Management and at the ferry facilities at Whitehall Terminal, Pier 11, and 34th Street.



Commissioner Iris Weinshall, Mayor Michael Bloomberg, and OEM Commissioner Joseph Bruno Walking Across the Brooklyn Bridge on December 21, 2005. (Credit: Kristen Artz/Mayor's Office of Photography)

According to data collected during the strike, more than 34,000 pedestrians walked over one of the four East River bridges into Manhattan daily, compared with only 2,000 or so per day normally. In addition, an estimated 11,717 bicycles crossed the East River bridges on each day of the strike.



Brooklyn Borough President Marty Markowitz Greeting Commuters Walking and Cycling Across the Brooklyn Bridge on December 20, 2005. (Credit: John Heyer)
<http://www.brooklyn-usa.org/Press/2005/dec21b.htm>
(accessed January 11, 2006).

Pulaski Bridge over Newtown Creek (Brooklyn/Queens)

On December 23, 2005, Division ironworkers replaced the bridge's northwest warning gate, which had been struck by a vehicle on December 22, 2005.

New Year's Eve

On the night of December 28, 2005, at the request of the Mayor's Office of Special Events and the NYPD, Division ironworkers temporarily welded shut all manholes in the Times Square area in preparation for New Year's Eve. Celebrating the arrival of the New Year in Times Square started in 1904 by Adolph Ochs, owner of the *New York Times*. The ball dropping tradition began three years later.

Manhattan Bridge

December 31, 2005 marked the 96th anniversary of the opening of the bridge.



Manhattan Bridge at Twilight. (Credit: Michele N. Vulcan)

Astoria Boulevard (EB) over Brooklyn-Queens Expressway (WB) (Brooklyn)

Cleaning and painting of the bridge, which began in September 2005, was completed in December 2005.

Bulova Avenue Bridge over Brooklyn-Queens Expressway West Leg (Queens)

Cleaning and painting of the bridge, which began in October 2005, was completed in December 2005.

Greenpoint Avenue Bridge over Newton Creek (Brooklyn/Queens)

Cleaning and painting of the bridge operator house began and was completed in December 2005.



Greenpoint Avenue Bridge Operator House.
(Credit: Michele N. Vulcan)

Pennsylvania Avenue Bridge over Belt Parkway (Brooklyn)

Cleaning and painting of the bridge, which began in October 2005, was completed in December 2005.

3rd Street Bridge over Gowanus Canal (Brooklyn)

Cleaning and painting of the bridge operator house began and was completed in December 2005.

49th Street Bridge over BQE West Leg (Queens)

Cleaning and painting of the bridge, which began in October 2005, was completed in December 2005.

Riverside Drive over West 125th Street & Others (Manhattan) (a.k.a. 12th Avenue Viaduct) & West 155th Street Pedestrian Bridge (Manhattan)

In December 2005, the Mayor's Office of Film, Theatre, and Broadcasting named these bridges as "Locations of the Month."

The 12th Avenue viaduct, encompassing 12th Avenue between 125-135th Streets, is a favorite among New York City productions. The location's large open space, limited through traffic, plethora of available parking and easy access via the West Side highway make staging larger and more complicated scenes possible. The Viaduct offers picturesque views of the water and classic New York City streets, and has been used in numerous music videos and productions including the film *Made*, *The Apprentice* and *Third Watch*.

Location of the Month. (December 2005),

http://www.nyc.gov/html/film/html/locations/location_viaduct.shtml (accessed January 19, 2006).

CHRONOLOGY

The little-known pedestrian bridge connecting West 155th Street at Riverside Drive to Riverside Park offers the perfect opportunity for walking scenes across a bridge, with railroad tracks underneath. The location also features beautiful views along the Hudson River. Recently, it was featured in the Jennifer Lopez film *El Cantante*.

Location of the Month. (December 2005),
http://www.nyc.gov/html/film/html/locations/location_w155bridge.shtml (accessed January 19, 2006).



12th Avenue Viaduct & West 155th Street Bridge. (12th Avenue Viaduct Credit: NYSDOT)

INNOVATIONS & ACCOMPLISHMENTS

East River Bridges

A \$2.9 billion reconstruction program is underway to rehabilitate all four East River crossings. In 2004, these bridges carried some 507,589 vehicles per day. In 2002, working in coordination with the NYPD and other law enforcement agencies, the Division implemented enhanced security measures on these bridges. This work is ongoing.

BROOKLYN BRIDGE

The Brooklyn Bridge carried some 137,563 vehicles per day in 2004. The \$470 million reconstruction commenced in 1980 with Contract #1, and will continue with Contract #6, currently in the design phase and scheduled for completion in 2013. This contract will include the rehabilitation of both approaches and ramps, as well as the painting of the entire suspension bridge.



Engineering Landmark Plaque. (Credit: Russell Holcomb) Brooklyn Bridge Viewed From the Historic Tobacco Inspection Warehouse at the Empire-Fulton Ferry State Park. (Credit: Jonathan Smith)

In addition, the bridge is scheduled to be seismically retrofitted by the end of 2013. 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. The next work scheduled for the bridge is a project to replace the existing travelers with a state of the art technology system. Construction is scheduled to begin in the summer of 2006 and conclude in the summer of 2008.

INNOVATIONS & ACCOMPLISHMENTS



Pausing During a Saddle Inspection Atop the Bridge's Manhattan Tower: Oilers Samuel Garcia Jr., George Rivera, and Thomas Mcauliffe; Executive Director of Bridge Preventive Maintenance and Repair Thomas Whitehouse; Director of East River Bridges Preventive Maintenance Mohammed Sharif; and Deputy Director of Bridge Preventive Maintenance Paul Schwartz. (Credit: Anatoly Orlov)

MANHATTAN BRIDGE

The youngest of the three suspension bridges that traverse the East River, the Manhattan Bridge carries some 345,129 commuters – 79,129 vehicles and 266,000 mass transit riders - between Manhattan and Brooklyn daily. It was designed by Leon Moisseiff and completed in 1909. The bridge supports a subway transit line upon which four different train lines operate.



Manhattan Bridge. (Credit: Yuliy Zak). View From the Beach. (Credit: Jonathan Smith)

The \$817 million reconstruction commenced in 1982 with Contract #1, progressed with Contract #10, and continues with Contract #11, currently in construction and scheduled for completion in 2008. This work will be followed by Contract #14 to rewrap the cables and replace the suspenders and necklace lighting. Completion is expected in 2011. The reconstruction will end with a seismic retrofit of the bridge (Contract #15), slated for completion in 2012. Work completed on the bridge to date includes reconstruction and painting of the south and north spans, installation of a truss stiffening system to reduce twisting, restoration of the historic arch, colonnades and Manhattan Plaza structures, reconstruction of the south walkway, and installation of a new north bikeway. The reopening of the south walkway and north bikeway is notable in that it marks the first time in 40 years that pedestrians and bicyclists have access across the bridge between Brooklyn and downtown Manhattan.

INNOVATIONS & ACCOMPLISHMENTS



"The Spirit of Commerce" Sculpture and the Underside of the Arch. Part of the Colonnades.
The "Native American Buffalo Hunt" Sculpture Panel. (Credit: Peter Basich)

Contract #10

Begun in March 2001, and scheduled for completion in May 2006, **Contract #10** will bring the following improvements: rehabilitation of the north main span; refurbishment of the approach spans, tunnels and truss bearings; installation of a dedicated bicycle way on the bridge's north side, and painting. The Manhattan Bridge bicycle path was closed in the 1960's because it fell into such disrepair that it became unsafe. The restored south walkway and north bikeway reflect the original design of the bridge.



Contract #10 Temporary Truss Jacking Frame Used in the Work to Replace the Existing Truss Bearings.
Replacement of Steel Stringers and Floorbeams on the North Upper Roadway Main Span. Installing a New End Frame on the Main Span Side of the Brooklyn Tower.



Contract #10 Painting Containment Structures on the Cables of the Manhattan Approach Span. Construction of the New Bikeway Approach Ramp in Manhattan.

The scope of work includes a new Intelligent Transportation System (ITS). The ITS, providing coverage from Bowery Street in Manhattan to Tillary Street in Brooklyn, consists of Closed Circuit Televisions (CCTV), and Variable Message Signs (VMS). This provides full coverage for the Manhattan Bridge upper and lower roadways, including the south walkway and north bikeway. Ranging radar detectors determine the volume and occupancy of the traffic on the bridge, and the CCTV is utilized to confirm any incident. Operators at the Traffic Management Center in Long Island City obtain data and video from the ITS. This enhances the management of traffic on the bridge and its vicinity and improves response to incidents. A total of 19 cameras and 7 VMS are installed on the bridge.

INNOVATIONS & ACCOMPLISHMENTS

The north lane of the lower roadway was closed to traffic in June 2001 for use as a construction staging area. At the same time, the south lane of the lower roadway was reopened to traffic. Subway service was restored to the south tracks on July 22, 2001. On that same day, service was temporarily discontinued on the north tracks until February 22, 2004.

Effective August 1, 2002, the bridge's north upper roadway was closed for a scheduled 12-month period, and the north lane of the lower roadway was reopened during peak hours. The roadway was re-opened to traffic on June 1, 2003, 61 days ahead of schedule, thus earning the contractor a \$3 million incentive.



Contract #10 Removing an Existing North Upper Roadway Floorbeam on the Main Span of the Bridge. Installing the New Grid Deck for the North Upper Roadway on the Brooklyn Side Span. Preparing the Brooklyn Elevated Structure Grid Deck for Concrete Placement.



Contract #10 Placing Concrete on the Manhattan Side Span Grid Deck of the North Upper Roadway. Placing and Finishing Concrete on the Grid Deck of the Brooklyn Elevated Structure.



Contract #10 Placing the Microsurfacing Overlay on the Main Span. Placing the Asphalt Overlay on the Brooklyn Approach Span.

A Notice to Proceed for the additional work for NYCT on the bridge's north side tracks was issued to the contractor with a start date of September 9, 2002.

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Contract #10 Installation of New Floorbeams & Stringer Panels for the Subway Support Steel. Placing the Waterproof Protection Layer on the Anchorage Roof Inside the North Track Envelope.

Full access to the north tracks, originally scheduled in the MOU for January 11, 2004, was given to NYCT on December 15, 2003. Power to the third rail was energized on January 16. NYCT restored revenue service on the north tracks on February 22, 2004.



Contract #10 Installation of New Ties for the North Subway Track. Torquing the Bolts for the Installation of the Upper Laterals for the Truss Stiffening System. Installation of a Permanent Maintenance Platform Under the Bridge on the Brooklyn Approach Span.

During 2003, the replacement of truss C and D bearings on the approach spans in Brooklyn and Manhattan was completed. Also, permanent maintenance platforms below the North and South subway tracks on the approach spans were installed.



Placing Concrete for the New Interior of the Manhattan Colonnade and Arch. Preparing Subgrade for the Brooklyn Approach Ramp of the New North Bikeway and for the Path to the Bikeway Along Sands Street.



Placing Concrete on Manhattan Approach Ramp of New North Bikeway. Finishing Concrete for the Sidewalk Along Forsyth Street. Landscaping Work in Progress Along the Brooklyn Approach Ramp of the North Bikeway.

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Installing Protective Fencing for the Bikeway. 2005: Completing the Landscaping at the Brooklyn Approach Ramp for the North Bikeway.

Contract #11

A Notice to Proceed for the reconstruction of this bridge was issued to the contractor with a start date of January 14, 2005. **Contract #11** will include the following improvements: reconstruction of the lower roadway; rehabilitation of the anchorages; rehabilitation of the travelers; installation of new lighting on the north upper roadway and lower roadway; and upgrading of the lower roadway lane control signals. The work on the lower roadway is scheduled to begin in October 2006 and be completed in October 2007. The contractor will be paid an incentive of \$65,000 per calendar day for early completion with a maximum incentive of \$3.9 million. Late completion will carry a disincentive of \$65,000 per calendar day with no limit on the maximum amount. This \$148 million project is expected to be complete in 2008.

In 2005, the rehabilitation of the interior of the anchorages proceeded with the contractor repairing and replacing concrete slabs, patching spalled concrete areas, and performing vacuum-injected epoxy crack repairs to mitigate the problem of moisture seeping into the anchorage chambers. In addition, masonry cleaning work was performed on the exterior of the anchorages, as well as on all of the other substructures and retaining walls on the approach spans. This cleaning will be followed by masonry joint pointing and repairs to the damaged granite stones of these structures. Other significant tasks underway at the end of 2005 were the installation of new street lighting on the lower and north upper roadways, and the rehabilitation of the canopy and balcony areas at both towers.



Masonry Cleaning of the Brooklyn Granite Pier and of the North Face of the Brooklyn Anchorage. Installing Conduit for the New North Upper Roadway Street Lighting.

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Waterblasting to Remove Existing Microsurfacing From the South Upper Roadway.
Manually Removing the Microsurfacing.



Preparing the Deck for New Microsurfacing on the South Upper Roadway.



Placing the New Microsurfacing on the South Upper Roadway. Newly Resurfaced Roadway.



The Brooklyn Tower Canopy. Removing the Canopy.

In preparation for the major steel removal and replacement work on the lower roadway, which will begin in October of 2006, the contractor is proceeding with steel fabrication, has completed the installation of a temporary underdeck platform, and is preparing to commence abrasive blasting operations to remove the paint from the existing steel connection areas.

These upgrades will not only restore the structural integrity of the Manhattan Bridge, but will also allow it to carry an increasing number of pedestrians and bicyclists. This will reduce automobile congestion and its related air pollution in New York City.

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QUEENSBORO BRIDGE

At the time of its completion in March 1909, the Queensboro Bridge (popularly referred to as the 59th Street Bridge), was the longest continuous cantilever-truss bridge in the world. While its starring role in the hierarchy of bridges has since been eclipsed by longer and larger structures, the Queensboro Bridge's importance to the mobility and unity of New York City remains undimmed. The bridge was designated as a national landmark on November 23, 1973. The \$764 million reconstruction commenced in April 1981 with Contract #1, continues with Contract #6, which began on October 31, 2003, and is scheduled for completion by the end of 2006, and will end with a seismic retrofit of the bridge, slated for completion in 2012. Work completed on the bridge to date includes the rehabilitation of the lower inner roadways, the lower outer roadways, and the restoration of the Guastavino arches and Bridgemarket area. The south outer roadway is open to automobile vehicular traffic, and the north outer roadway is open to pedestrians and bicyclists. The work on this vital link between Manhattan and the outer boroughs will enable this 75,000-ton workhorse to better provide the citizens and commerce of New York City with a second century of reliable, prosperous transport. The Queensboro Bridge carried some 180,369 vehicles per day in 2004.



Queensboro Bridge. (Credit: Michele N. Vulcan)
Close-up of the 1909 Dedication Plaque. (Credit: Peter Basich)



Electricians Atop the Bridge. (Credit: Peter Basich)

Contract #6

Contract #6, which began on October 31, 2003, will include the following: condition investigation of the eyebar heads and pins, replacement of the protective screening and the aviation warning lights, drainage improvements, rehabilitation of the overhead sign structures in Manhattan, the upgrading of roadway lighting (by replacing all low-pressure sodium lights on the bridge and ramps with high-pressure sodium lights), cleaning and miscellaneous repairs of the anchor piers, the geometric improvement of Crescent Street, bikeway and walkway improvement, and repair of the south upper roadway concrete overfill and overlay, the promenade platform, the traveler platform, the sidewalk between 61st and 62nd Streets, and the underside of the 59th Street

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overpass. The work will also include the rehabilitation of the Sanitation Department area's arch infill, and modifications to the maintenance facility beneath the Manhattan approach plaza. In addition, the kiosk in the plaza on the Manhattan side of the bridge will be restored. This small historical structure is in an advanced state of disrepair and has been damaged by repeated vehicular impacts. This \$38 million project is expected to be complete by the end of 2006.



Views of the Queensboro Plaza Kiosk. Proposed Rehabilitation of the Arch Infill for the Sanitation Department.



Contract #6 in 2004: Repairing the Steel of the 59th Street Arch Ceiling. Starting Curb Replacement at 60th Street. Improving the Drains at the Vehicle Storage Area.



Contract #6 in 2004: Repairing Spalled Concrete at the 59th Street Overpass. Sanitation Arch Infill Work Progressing at 60th Street. Repaired Sidewalk Between 61st & 62nd Streets.



Contract #6 in 2004: Repaired Curb at 60th Street. Anchor Pier Granite Cleaning in Progress.

In 2004, work was completed at the retaining wall at York Avenue. In 2005, work was completed on the kiosk bollards on the Manhattan plaza, the sidewalk between 61st and 62nd Streets, the rehabilitation of the Sanitation Department area arch infill, and the modifications to the maintenance facility beneath the Manhattan approach plaza.

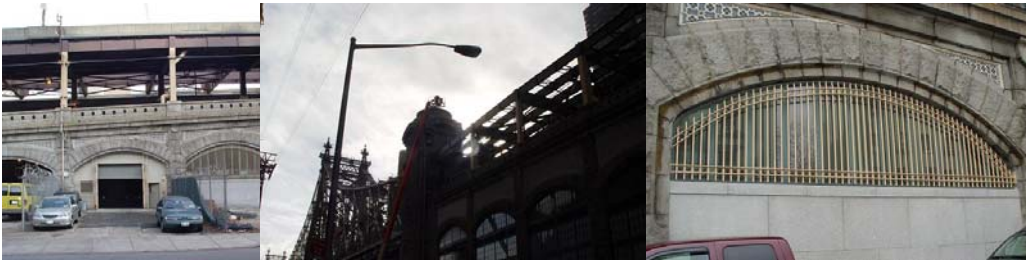
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Contract #6 in 2005: Bent Column Ready for Jacking. Decorative Fence. Repairing the Drainage Pipes.



Contract #6 in 2005: Manhattan Plaza Bollards. Full Width Deck Repair on South Inner Roadway. New Luminaire on North Upper Roadway.



Contract #6 in 2005: Rehabilitated Sanitation Department Arch Infill.



Contract #6 in 2005: Traveler Platform. New Window.

Protective Coating

The \$168 million Queensboro Bridge painting contract commenced in January 2004. The Department and its contractor strictly adhere 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.

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Platform Installed for Painting of the Queensboro Bridge. (Credit: Vadim Sokolovsky)
Working Inside the Containment.

The work is performed within an entirely sealed Class 1A containment system (under negative pressure) which prevents any materials from escaping into the air. Filtration of the enclosed air prevents paint waste dust from being released. The Department has placed several air monitoring stations in the area around the bridge. The Department performs 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.



Protected Roadway. View of Roadway Platform.

By the end of 2005, the contractor completed cleaning and painting the Manhattan and Queens anchor piers; the Manhattan approach; ramp A; the off ramp and ramp B over the Silver Cup Studio parking lot; the off ramp over Queens Plaza South towards 13th Street; approaches B and C from 23rd Street to Thompson Avenue (except over the railroad tracks); the Queens approach underside of the lower roadways (from 21st Street to Vernon Boulevard); the main bridge underside of the lower and upper roadways from PP123 to PP68; and the main bridge above the upper roadway from PP77 to PP109. Installation of cables and platform, on the inner roadway of the Queens approach, was also underway.



Painted Area.

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Newly Painted Section Along the Upper Roadway. Containment on the Queens Side Tower.
(Credit: Peter Basich)

On October 18, 2005, at approximately 1:00 PM, a street light's electrical wiring started a fire in the painting contractor's containment over the upper roadway. No injuries were reported. The containment was undergoing abrasive blasting at the time of the fire and all debris and blast media were continuously being vacuumed during the blasting operations. Declared a four-alarm blaze, the fire drew 168 firefighters and 39 units. It took firefighters about two hours to get the blaze under control, pumping water from ground hydrants through a series of bridge pipes to douse the flames. The fire caused burnt debris, blasting grit, and loose paint to fall onto the upper roadway. Until the fire was extinguished and the structure inspected for damage, all lanes of the bridge remained closed. Notifications were made to the regulatory agencies of the release to land, air and water. The contractor mobilized its work force and commenced clean-up of the roadway and the damaged containment upon clearance from the Fire and Police Departments. By approximately 5:00 PM, after the lower roadways were cleared of debris, traffic was restored. Clean-up operations of the upper roadways were completed by 10:00 PM. Structural steel repairs on the upper roadways continued through the night. Traffic was restored to the upper roadway by 5:00 AM on October 19, 2005. The painting work resumed on December 7, 2005, after the receipt of the contractor's safety plan and the hiring of a safety consultant.



Inspecting the Bridge After the Fire.

Scheduled work for spring 2006 in Manhattan includes the removal of old paint from the upper roadway from the Manhattan anchor pier to the Roosevelt Island west tower, and from the main span's inner and under lower roadways above Roosevelt Island; followed by the painting of these areas. Scheduled work in Queens includes the removal of old paint from the approach at the inner roadways, followed by painting of the approach.

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Active measures are taken to reduce noise at its source, such as the use of mufflers, sound screens, low noise producing equipment, and noise blankets. Light shields are utilized to reduce glare from work lights. By the end of 2005, approximately 46% of the contract work was complete. All staging areas are behind a screened fencing. This project is expected to be completed in January 2009, and will result in the total re-painting of the bridge.



Queensboro Bridge Work Platform. Painters Arriving at the Platform.
(Credit: Michele N. Vulcan)

WILLIAMSBURG BRIDGE

The largest of the three suspension bridges that traverse the East River, the Williamsburg Bridge carries some 210,000 daily commuters – 110,000 in vehicles and 100,000 via mass transit - on eight traffic lanes, two heavy rail transit tracks, and a pedestrian footwalk, between Manhattan and Brooklyn. The bridge supports a subway transit line upon which three different train lines operate (J, M, and Z). The \$989 million reconstruction commenced in 1983 with Contract #1, continues with Contract #8, which began in March 2003 and is scheduled for completion in 2006, and will end with a seismic retrofit of the bridge, slated for completion in 2011.



Williamsburg Bridge. Bridge Subway Structure. (Credit: Peter Basich).
Contract #8 Looking South at a Cable Band Retensioning Crew.

In order to minimize disruption to the riding public and ensure that traffic is maintained across the bridge, the rehabilitation of the Williamsburg Bridge was divided into several contracts. In the contracts completed to date, all four main cables have been completely rehabilitated, the south and north roadways of the bridge have been replaced and the BMT subway structure across the bridge was completely reconstructed.

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Contract #8

Contract #8 began on March 3, 2003, and is scheduled to finish in September 2006. This \$173 million project will see the rehabilitation of the tower bearings, the truss system, the steel structure of all eight towers, and the north comfort station houses, the replacement and/or adjustment of the cable suspenders, the installation of maintenance travelers (inspection platforms) under the main span, as well as painting of the stiffening trusses. Architectural work will include the restoration of decorative lights on the main towers and in the Manhattan Plaza. Work inside the anchorage houses on both the Manhattan and Brooklyn sides will include the construction of new stairs, a hoisting system, ventilation and lighting, and oiling platforms. The project will also include the installation of several Intelligent Transportation System (ITS) components, including variable message signs and closed circuit television cameras.

Painting of the south side stiffening trusses, which began on June 1, 2003, was completed on September 6, 2003. Painting of the north side stiffening trusses, which began on September 6, 2003, was completed on November 25, 2003. Steel replacement on both main towers began in 2003 and will continue through spring of 2006. Steel replacement on both the intermediate towers and the upper and lower chords of the stiffening trusses began in 2003 and was completed in 2005.



Contract #8 in 2003: North Stiffening Truss Containment Erection and Removal.
South Truss Bottom Chord Rehabilitation.



Contract #8 in 2004: Looking East at the Brooklyn Main Tower Temporary Work Platforms. Manhattan Main Tower Temporary Platform Erection. Strengthening Plate Operation on Brooklyn Main Tower.



Contract #8 in 2004: Pier Stationed & Barge Mounted Cranes at Brooklyn Main Tower Pier. Steel Arch Replacement. Looking West at the North Truss Top Chord Steel Rehabilitation.

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Contract 8 in 2005: Preassembling and Erecting Brooklyn Intermediate Tower Arch Steel.



Contract #8 in 2005: Rehabilitation of the Brooklyn Main Tower Steel. Torch Cutting on the Tower.



Contract #8 in 2005: Removing the Existing Steel of the Brooklyn Main Tower. Inspecting a Rebar Cage at the Manhattan Main Tower. Installing a Column at the Brooklyn Main Tower.

Installation of the strengthening plates on the four river-side column legs of each of the main towers was completed in 2004. This operation began with the hoisting of the plates from the roadway to the highest level of each tower and was completed during weekends on which the transit tracks were removed from service. This work included over 800,000 pounds of steel attached through over 30,000 individual bolt holes drilled into the existing steel.



Contract #8 in 2005: Torque Testing Bolts at the Brooklyn Intermediate Tower. Erecting a Leg of the Brooklyn Main Tower. Erecting Brooklyn Main Tower Leg Bearing Support Steel.

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During the fall of 2005 the work of replacing the footwalk expansion joint cover plates began and the 24 joints on the Manhattan approach and south foot walk were completed. The work on the seven joints on the north foot walk was completed in early 2006.

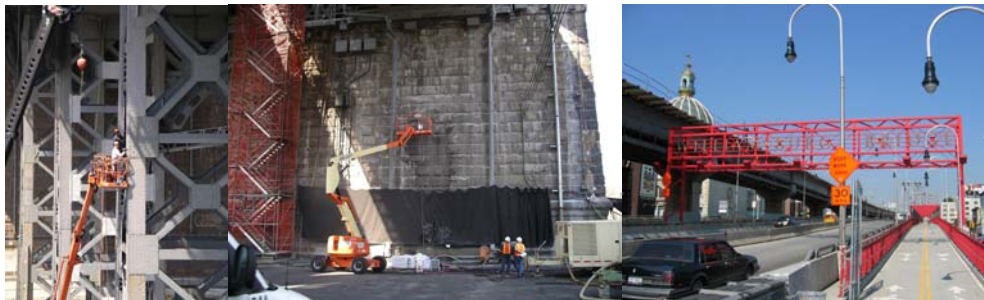


Replacing the Manhattan Approach Footwalk Expansion Joint Covers.

Twenty-eight wire rope cable suspenders and 56 tension rods were replaced during 2004 on the suspended main span. All of the suspenders were systematically adjusted in 2005 to optimize the profile of the bridge. In addition, the truss bearings at the anchorages were replaced in 2005.



Contract #8 in 2004: High Strength Bolt Torque Inspection. Cable Band Bolt Retensioning. Steel Bracing Replacement Operation at the Brooklyn Intermediate Towers.



Contract #8 in 2004: Ironworkers Bolting up New Steel on Intermediate Tower. Cleaning the Brooklyn Anchorage Exterior Granite Surface. Entrance to North Walkway.
(Walkway Credit: Peter Basich)

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Contract #8 in 2005: Adjusting the Suspender Cables. Cable Band Bolt Retensioning. (Cable Band Credit: Bojidar Yanev) Demolition of the Brooklyn South Comfort Station Balcony.

Work anticipated to be completed in 2006 includes the replacement of truss bearings at the main towers, the installation of the new maintenance traveler system, the implementation of a south inner roadway contra-flow system, and the replacement of the asphalt overlay system along the south outer roadway.



Installing Brooklyn Main Tower Aviation Lights. FHWA Engineering Intern River Hwang Inspecting the Cable Wrapping.

Such improvements will not only restore the structural integrity of the Williamsburg Bridge, but will also allow it to carry an increasing number of pedestrians and bicyclists, thereby reducing automobile congestion and its concomitant air pollution in New York City.

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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.

BELT PARKWAY BRIDGE OVER MILL BASIN (BROOKLYN)

When the Mill Basin Bridge was constructed during the first half of the 20th 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 2005, the number of openings declined further to a total of only 162 openings.

In addition, significant and costly traffic congestion results from the operation of this outmoded drawbridge. In 2004, the Mill Basin Bridge carried 145,760 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 2005, on a New York State-mandated scale from 1 to 7, this bridge had a condition rating of 3.22, 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 bridge is a 14 span structure, consisting of a double leaf steel bascule span. The substructure is made of reinforced concrete abutments and piers supported on precast concrete or timber piles.



Mill Basin Bridge

Under the Department's current proposal, the Mill Basin Bridge will be replaced with a new, 13 span, high-level, fixed bridge with a composite steel superstructure and reinforced concrete substructure on pile footings. The bridge will be constructed next to the existing structure so as to maintain traffic during the construction period. It will feature three lanes of vehicular traffic, as well as a 12-foot wide shoulder in each direction. A new sidewalk/bicycleway will also be constructed, and the stopping sight distance for the bridge and approach roadway will be improved.

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Currently in its final design phase, the reconstruction of the Mill Basin Bridge is scheduled to start in winter 2009, and to last approximately 4 years. The new bridge will be constructed off-line while maintaining three traffic lanes in each direction and a bike/pedestrian path on the eastbound side on the existing bridge during construction. The existing bridge will be demolished after the new bridge is fully opened to vehicular traffic.

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

This double leaf bascule bridge opened in 1953. In 2004, the bridge carried 60,908 vehicles per day. The 17 span structure carries five lanes of the Bruckner Boulevard Expressway service road traffic over Westchester Creek. Currently in its final design phase, the reconstruction of the bridge is scheduled to start in January 2007. The estimated construction duration will be a total of 36 months with approximately 18 months lead time. The project's scope of work includes rehabilitation of the existing bridge superstructure, substructure and approaches, replacement of the existing mechanical and electrical systems for the bascule span, and reconstruction of the bridge operator house.

Onsite construction will be carried out in five stages. Incentive and disincentives will be used to expedite the completion of the project. Construction is expected to be completed in January 2010.



Unionport Bridge in 1953.

HAMILTON AVENUE BRIDGE OVER THE GOWANUS CANAL

The Hamilton Avenue Bridge opened in 1942. In 2004, the bridge carried 60,240 vehicles per day. The \$55 million reconstruction of this bridge will use the "float out the old/float in the new" technique. The new bascule spans with trunnion towers will be shop-assembled and tested off-site, then will be floated in and erected on the rehabilitated piers. This will reduce the roadway closure time for the construction of each span from 14 months to only 2 months. Other reconstruction work will include: the rehabilitation and seismic retrofitting of the existing piers; the replacement of all electrical and mechanical and control equipment; the removal and replacement of the approach slabs of both sides of the bridge; the rehabilitation of the backwalls and abutments; and the renovation and extension of the bridge operator house.

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Hamilton Avenue Bridge. (Credit: NYSDOT)

The bridge's appearance will also be enhanced artistically. A permanent new lighting art structure will be installed on the bridge buildings that will be viewable by pedestrians, motorists, mariners and the general public as part of the Percent For Art Program administered by the Department of Cultural Affairs.



Mock-up of the Hamilton Avenue Light Sculpture. (Credit: Gholamali Mozaffari) Open Bridge. (Credit: NYSDOT)

In Stage I, the Manhattan-bound span will be closed from July 1, 2007 to August 31, 2007, and it will be replaced. In Stage 2, the Brooklyn-bound span will be closed from July 1, 2008 to August 31, 2008, and it will be replaced. Each of these two main stages of the contract includes an incentive for early completion of \$25,000 of per day with a cap of \$300,000. There is a disincentive of \$25,000 for each day the contractor is late in finishing a stage with no limit to the amount of penalty. A Notice to Proceed for the reconstruction of this bridge was issued to the contractor with a start date of August 4, 2005. The project is expected to be complete in January 2009.

MACOMBS DAM BRIDGE OVER THE HARLEM RIVER (BRONX/MANHATTAN)

The Macombs Dam Bridge, which has one of the longest swing spans in the world, was opened in 1895. In 2004, the bridge carried 40,558 vehicles per day. The \$145 million reconstruction of this landmark bridge includes the West 155th Street viaduct, the west approach plaza over the Harlem River Drive and Seventh Avenue, the swing span over the Harlem River, the deck and camelback trusses over Metro-North Railroad and Conrail, the Major Deegan interchange (consisting of the east approach and four ramps), and the Jerome Avenue viaduct. Each of the three stages of the contract included an incentive for early completion of \$50,000 of per day with a cap of \$2 million. There was a disincentive of \$100,000 for each day the contractor would be late in finishing a stage with no limit to the amount of penalty. The rehabilitation work will not only strengthen the structure, it will also return the bridge's appearance to its turn of the century grandeur.

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East View of Macombs Dam Bridge Swing Span and Camelback Truss. (Credit: Peter Basich)

Architectural Detail of the Bridge. (Credit: Michele N. Vulcan)

Closeup of a Gate House. (Credit: Peter Basich)

As part of this project, the historic John Hooper Fountain, which dates from 1894, was fully rehabilitated in 2000. After studying detailed old photographs, the globe and weather vane were recast and replicated. Cast aluminum was used with high impact glazing similar to the lanterns installed in Central Park in the 1980's. Just east of the fountain, a garden of rose bushes was added for the community's pleasure. Other additions included a new paved island, new curbs, and a steel fence. Bollards were installed at the western end of the island to protect the fountain from vehicular traffic.

The first stage of construction was completed on March 31, 2001. It included the installation of structural components, as well as the deck replacement of the northern one-third area of the bridge and the West 155th Street viaduct. This milestone date was met even though 31 calendar days were lost from the work period due to the post season play of the New York Yankees. Essentially twelve months' worth of work was compressed into the five worst weather months of the year.

The second stage of construction began on November 2, 2001, after the conclusion of World Series play at Yankee Stadium. It consisted of the installation of structural components as well as the deck replacement of the middle one-third area of the bridge. This stage was completed on February 20, 2002, 39 days ahead of schedule.

The third and final stage of construction began on October 7, 2002. Work included replacement of the structural deck, and rehabilitation of the superstructure steel and the concrete substructure members on the southern portion of the bridge. In addition, truss members in both the swing span and camelback portions of the bridge were reinforced. This stage was completed on March 31, 2003. In 2005, the contractor worked on window replacement, touch-up painting, restoration of park land, removal of actuators and replacement with temporary actuators, finishing the signage, sidewalk replacement, and the construction of a concrete wall at 161st Street. Expected completion of the project is July 2006.

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Close-up of the 1894 Dedication Plaque. (Credit: Hani Faouri)
View of the Swing Span Control House. (Credit: Michele N. Vulcan)



View of the Roadway From Above the Control House – Yankee Stadium is on the Right. (Credit: Peter Basich)
Bridge Protective Fencing and Staircase. (Credit: Michele N. Vulcan)

The bridge is also being assessed for seismic vulnerabilities. A seismic retrofit of this bridge will include strengthening the existing foundations and superstructure steel members. Retrofitting work will be completed throughout the length of the structure from the 155th Street Viaduct to the Jerome Avenue Approach. This will include installation of mini-piles in the existing piers that support the swing span, strengthening of the steel columns and floor beams of the 155th Street Viaduct and installation of lock-up devices to disseminate loads during a seismic event. The seismic retrofit project is currently scheduled to start in July 2013 and end in January 2016.

MADISON AVENUE BRIDGE OVER HARLEM RIVER (BRONX/MANHATTAN)

This rehabilitation project began in 1994. The work included rehabilitating the swingspan and approaches, and replacing the bridge's barriers, handrails, fencing, mechanical and electrical systems. The bridge's electrical system was vandalized in August 2000. Both submarine cables and most of the bridge wiring had to be replaced. More than \$2.5 million in damage was done by the vandals for the salvage value of the copper wiring they removed. A temporary drive was installed to make the bridge operational. In late June 2002, the bridge was successfully partially opened utilizing the interim drive machinery, except for the end lifts. This was the first time the bridge had opened under its own power in several years. The remaining work on the Bronx approach traffic signals and the submarine cables was completed in 2004. Test openings of the bridge in the counter-clockwise direction were performed in the summer of 2005, to check for any interference or binding in high temperatures.

A project for seismic retrofit, electrical, mechanical, masonry and miscellaneous work is scheduled to be performed between March 2012 and September 2013. A preliminary seismic assessment indicates that a new center pivot pier may need to be constructed to support the swing span to meet seismic demands. If this assessment is confirmed by a further detailed

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analysis, the construction duration will be longer since it will require construction of new foundations for the swing span located in the Harlem River. In 2004, the bridge carried 48,723 vehicles per day.



Madison Avenue Bridge in 1910. Bridge in 2005. (Credit: Peter Basich)

METROPOLITAN AVENUE BRIDGE OVER ENGLISH KILLS (BROOKLYN)

This bridge is a double leaf bascule constructed in 1931. The five span structure carries four lanes of traffic over the English Kills. In 2004, the bridge carried 38,529 vehicles per day. A \$39 million rehabilitation project began in October 2003. The estimated construction duration will be 33 months with approximately 5 months lead time. The project's scope of work includes rehabilitation of the existing bridge superstructure, substructure, and approaches, replacement of the existing mechanical and electrical systems for the bascule span, and reconstruction of the Bridge Operator House.



Previous Metropolitan Avenue Bridge in 1903. Current Metropolitan Avenue Bridge Before Reconstruction.

Stage I reconstruction of the bridge began on March 15, 2004. The bridge was divided in two distinct halves, north and south, with the first stage of rehabilitation commencing on the north half.

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Looking West at the Open Metropolitan Avenue Bridge Before Splitting of the Leaves. Looking North at the Demolition of the Bridge Operator House. Looking East at the Rebuilding of the Operator House.

The north half grid deck, the east and west approach spans, the existing operator house and the existing pier walls and wingwalls were demolished. An existing rest pier, cribbing, and contaminated soil were also removed to facilitate subsurface construction. Steel repairs were completed, as well as seismic retrofitting of the trunnion columns was completed. A new operator house was constructed and bridge control equipment was delivered and placed inside the house. A new submarine cable was placed, and the bridge's grid deck was replaced and filled with a lightweight concrete. New machinery and bedplates with a housing were installed in the pit areas. The flanking spans and on grade approach slabs were reconstructed. New pier walls and wingwalls were constructed on the east and west sides of the bridge, and new warning and barrier gates were installed on both approaches.



Demolition of the Northwest Flanking Span of the Metropolitan Avenue Bridge. Looking West at the Installation of Sheet Piles on the Northeast Approach Slab. Looking West at the Removal of the Northwest Sidewalk.



Working on the Approaches. Metropolitan Bridge Under Construction.

Stage II reconstruction of the bridge began on February 16, 2005. This stage included the demolition and reconstruction of the south half of the structure and mechanical systems. During the bridge rehabilitation, two of the four travel lanes were maintained and carried east and westbound traffic over the span. The bascule span was kept operational throughout the staged construction through the use of a temporary operating system. The bridge was re-opened to all lanes of traffic at 5 AM on November 18, 2005. The bascule span is currently operational under the newly installed machinery, control systems and new electric service. Staged construction

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was completed 60 days ahead of the contract schedule, making the contractor eligible for the full incentive for early completion.



Completion of the North Side of the Metropolitan Avenue Bridge. Stage II Construction.



Bridge Opening With New Machinery.

Onsite construction will be carried out in three stages. Incentives and disincentives are tied to the completion of Stage I and Stage II and the opening of each half of the bridge to traffic. The maximum project incentive is \$900,000. There is no maximum value associated with the disincentives. Construction is expected to be complete in mid-2006.

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

This lift bridge opened in 1955. In 2004, the bridge carried 9,100 vehicles per day. In 2005, the lift span opened 150 times for vessels. The 8 span structure carries two lanes of traffic over the East River/East Channel. It is the only vehicular access to Roosevelt Island from the Borough of Queens.



Roosevelt Island Bridge Under Construction in 1952.

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Currently in its final design phase, the reconstruction of the bridge is scheduled to start in December 2006. The estimated construction duration will be a total of 36 months with approximately 8 months' lead time. 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 into the southbound Vernon Boulevard in Queens, and the construction of a new back-up generator building under the Queens approach.



(Roosevelt Island Bridge. (Credit: Peter Basich) Bridge Tower. (Credit: Michele N. Vulcan)

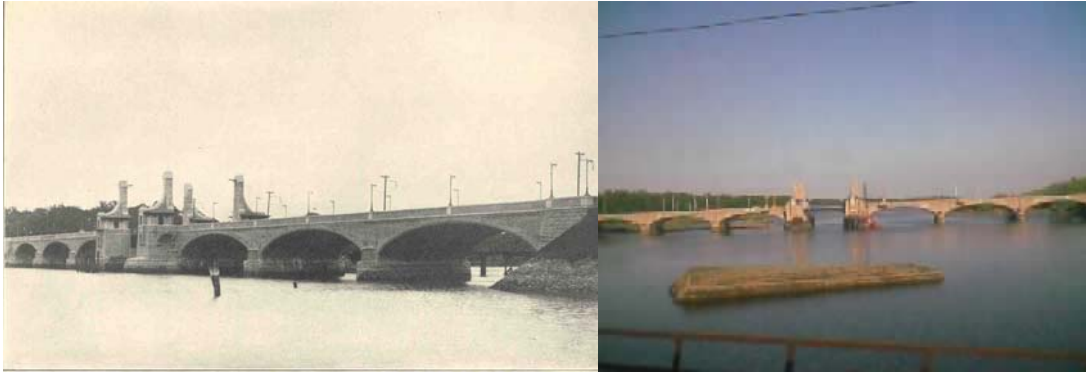
Onsite construction will be carried out in three stages. Vehicular traffic will be maintained during all of the stages. Incentives and disincentives will be used to expedite the completion of the project. Construction is expected to be completed in October 2009.

SHORE ROAD BRIDGE OVER THE HUTCHINSON RIVER (BRONX)

This bridge, built in 1908, was originally called the Pelham Parkway Bridge over Eastchester Bay. In 2004, the bridge carried 18,292 vehicles per day. The \$5 million interim rehabilitation of the existing bridge superstructure and substructure will enable 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.

As of the end of 2005, various alternatives for the new bridge were being evaluated for further design. An environmental impact study is expected to begin in 2006. The project to construct a new Shore Road Bridge is scheduled for construction between August 2011 and November 2015.

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Shore Road Bridge in 1909. Bridge in 2005. (Credit: Russell Holcomb)

THIRD AVENUE BRIDGE OVER THE HARLEM RIVER (BRONX/MANHATTAN)

The Third Avenue Bridge carried some 47,053 vehicles per day in 2004. The bridge was built in 1899 and was last rehabilitated in the 1950's. The design of the approximately \$120 million reconstruction project of this rim bearing swing bridge was completed in October 2000. Construction began in July 2001. Reconstruction will include complete replacement of the approaches and the swing span. Elimination of the center median on the main span will greatly improve the traffic flow on the bridge. This bridge will use a center spherical roller thrust bearing for supporting the span and for seismic loads. The bearing will be the largest of this type made for this purpose. The existing pivot pier will also be reinforced for seismic loads. A temporary bridge, adjacent to the current one, was in place for five months to maintain two lanes of traffic into Manhattan while the swing span was being replaced.



Third Avenue Bridge in 1914. Old Third Avenue Swing Span on Left, New Temporary Bridge on Right.
(Credit: Daniel Horn)

In 2004, the project's land work was advanced by the construction of a crossover ramp from Third Avenue in the Bronx to the existing swing span and into the staged ramp construction in Manhattan. This enabled the Bruckner Boulevard ramp to be reconstructed about four months early and concurrent with the work to demolish the existing swing span. Meanwhile, fabricated steel and machinery were shipped from northwest Alabama to the Port of Chickasaw in Mobile, where the new 4.8 million pound swing span was erected and prepared for a 1,800 mile journey to New York City.

By mid-2004, all of the river foundations were completed, the existing swing span was demolished and removed from the site, and a temporary bridge was erected and used for two lanes of Manhattan-bound traffic. This bridge was in service from June 13, 2004 through

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December 5, 2004. During the summer of 2004, all of the existing river piers were demolished and reconstructed on the new foundations for the new swing span, which was delivered to Harlem in July and parked along the Manhattan side of the Harlem River where final machinery and structural components were installed.



Starting the Removal of the Old Swing Span. (Credit: Daniel Hom) New Swing Span Passing Under the Williamsburg Bridge

On October 29, 2004, the new swing span was floated-into final position. Six tugboats pushed the span, which was supported on two barges, to within 2 inches of the center pier and bearings. Personnel worked with the rising tide and hydraulic jacks to position and then set the span. After positioning, and working with the now falling tide, 480,000 gallons of water were pumped into ballast tanks to sink the barges and lower the new span truss onto its bearings.



Preparing for the Float-in of the New Swing Span. (Credit: Keith Burrowes) New Swing Span in Position. (Credit: Michele N. Vulcan)



Finishing the New Deck. (Credit: Michele N. Vulcan) Almost Completed New Span and Temporary Bridge. (Credit: Daniel Hom)

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By December, the new span had received two of its five lanes of traffic, the temporary bridge was removed from service and floated out, the Bruckner Ramp was 90% completed and ready for opening in early 2005, and the auxiliary bridge machinery systems were installed and ready for turning the bridge for mariners through the hydraulic machinery. The vertical clearance restriction imposed during construction for the navigational traffic in the Harlem River ended as of early January 2005. The bridge was opened to five lanes of traffic at 5 AM on February 10, 2005.



Traffic on the Bridge. The Operator House. (Credit: Michele N. Vulcan)

The new 18 span bridge supports five traffic lanes (one more than the old one), and the horizontal clearance of each of the navigation channels was increased from 100 feet to 116 feet. In addition, the sidewalks on the new bridge are 8 feet wide rather than the old 6 feet.

During 2005, the contractor continued work on the mechanical and electrical systems, the new fenders, the pier's granite stones, the storage building, the Bronx and Manhattan approaches, and the submarine cable.



New Third Avenue Bridge.

If all construction work is completed five months ahead of schedule, the contractor will receive a maximum incentive of \$3.75 million for Milestone D. As a disincentive, the contractor will be penalized from \$25,000 to \$37,500 each day the milestone date is exceeded with no set maximum penalty. Completion of the project is scheduled for June 2006.

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

Measuring 3,212 feet in length and opened to traffic on August 23, 1901, the Willis Avenue Bridge remains one of New York City's most heavily traveled bridges. The bridge is a bowstring truss swing bridge which spans the Harlem River, and connects Manhattan's First Avenue and 125th Street to Willis Avenue and 132nd Street in the Bronx. Engineered by Thomas C. Clarke, the bridge was designed to relieve traffic congestion on the Third Avenue Bridge.



Willis Avenue Bridge in 1909. Bridge in 2005. (Credit: Reza Taheri)

A major hub between the FDR Drive in Manhattan, the Major Deegan Expressway and the Bruckner Expressway in the Bronx, the Willis Avenue Bridge carried approximately 74,700 vehicles per day in 2004. 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 which are present on the structure's approaches, the Willis Avenue Bridge has been 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. Under the Department's proposed reconstruction program, these substandard curves will be eliminated.

Because of the advanced age and condition of the Willis Avenue Bridge, the City of New York proposes to replace the existing bowstring truss swing bridge with a new swing span bridge constructed just to the south of the existing bridge. Elimination of the center median on the main span will greatly improve the traffic flow on the bridge. Due to begin in March 2007, this project is slated for completion in March 2012.



Willis Avenue Bridge

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145TH STREET BRIDGE OVER THE HARLEM RIVER (BRONX/MANHATTAN)

The existing 145th Street Bridge is a swing type bridge with three throughtrusses. An eight-span structure, it carries four lanes of vehicular traffic over the Harlem River Drive, the Harlem River and Oak Point Link Railroad. Spans one and two were constructed in 1957 when the bridge was extended to span the Harlem River Drive. Spans six, seven and eight were reconstructed in 1990 in place of the original Bronx flanking span to provide a right-of-way for the Oak Point Link. In 2004, the 145th Street Bridge carried approximately 25,994 vehicles per day. This makes it one of the most essential routes for vehicles and pedestrians traveling between Manhattan and the Bronx. Vehicles, which cross this rim bearing swing bridge each day between the two boroughs, include buses, trucks and cars.



Bridge Operator House in 1958. 145th Street Bridge.

A Notice to Proceed for the \$69.4 million reconstruction of this bridge was issued to the contractor with a start date of July 15, 2004. Fabrication of steel components for the approach and new swing span continued in Pennsylvania. Fabrication and assembly of mechanical and electrical components began in 2005. Installation of mini-piles at the rest and center piers of the bridge began in November 2004, and was completed in March 2005. In 2005, the contractor also completed the survey, the repairs of span #3, and the tieback borings. The new swing span is currently being assembled in Albany, New York and is scheduled to be barged down the Hudson River for a final float-in during November 2006.



Replacing Span #3. Swing Span Truss Assembly.



Precast Deck Units at the Fabrication Facility. Placing the Bottom Chord of the Swing Span on the Supporting Towers.

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The project will include the complete replacement of the swing span and six approach spans, seismic retrofitting, partial reconstruction of substructures and the reconstruction of the approach roadways. The design for the bridge utilizes elements pre-fabricated off-site so as to allow a very quick replacement of the existing bridge in 3 stages totaling 18 months. Traffic will only be impacted for the 15-month period of March 16, 2006 to June 18, 2007. The project is slated for completion in September 2007.

These upgrades will restore the structural integrity and extend the useful life of the 145th Street Bridge.

FLOAT OUT/FLOAT IN

A technique referred to as “float out the old/float in the new” is being incorporated into replacement schemes for many movable bridges. Under this scheme, the old spans are floated out in their entirety and the new spans are floated in. Having the new spans constructed off-site and barged to the project allows for quick and efficient replacement of the removed span. Current projects that will incorporate this technique are: 145th Street Bridge, Hamilton Avenue Bridge, Borden Avenue Bridge, and Grand Street Bridge. The float-in of the new swing span of the Third Avenue Bridge was successfully performed in October 2004.

THREE TUNNEL PROJECT

Rehabilitation work continued on the Battery Park Underpass, and the Park Avenue and First Avenue tunnels in Manhattan. The contract includes the rehabilitation of the mechanical and electrical systems, as well as the ventilation, fire, lighting and drainage systems. This project, (particularly the Battery Park Underpass, which was used as a route to remove debris), was greatly impacted by the World Trade Center disaster, and the subsequent default of the electrical subcontractor. The project is scheduled for completion in early 2006.



Looking Towards the Battery Park Underpass, and the Park Avenue and First Avenue Tunnels. (Credit: NYSDOT)

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 Weidlinger Associates to assemble an expert panel to develop recommendations

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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 workshops held in New York, where the senior officials from NYCDOT, NYSDOT, and the FHWA provided their input to the panel members. NYCDOT also invited other city agencies to participate in the process.

The expert panel came up with definitive recommendations regarding rock motions, time histories, ground motions and bridge performance criteria to be used for critical, essential or other bridges undergoing structural analyses. The panel detail findings 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. This will result in savings in bridge retrofit costs.

In 1997, the Division began a unique project aimed at conducting a seismic evaluation and subsequent retrofit of the Macombs Dam and 145th Street Bridges over the Harlem River. It is also intended to develop schemes for the strengthening of the unreinforced masonry piers on these movable bridges. The project's findings may be applied to other NYC bridges that have similar masonry substructures.

The 1998 Seismic Design Criteria generated by NYCDOT and adopted by all local bridge entities includes a requirement that they be revisited every 3-4 years. In 2002, a panel of seismologists prepared a report to update the existing 1998 criteria. This report was reviewed by NYCDOT, NYSDOT, FHWA, and also by a few consultants working on NYCDOT projects. A meeting was held on November 13, 2002, and was attended by NYCDOT, NYSDOT, and FHWA. It was unanimously agreed to continue to follow the existing 1998 seismic design criteria at least until the new USGS national hazard maps are finalized and incorporated in a national code.

On June 3, 2004, 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.

Data from geotechnical bridge studies performed within the five boroughs of NYC has been compiled. A series of generalized subsurface soil and bedrock profiles will now be developed to be representative of the range of soil profiles, overburden thickness, and rock types found within NYC. Free-field analyses of those profiles will be performed using the new hard rock motions. The goal is to determine possible revisions of the criteria defining soil and rock profile types, their generic amplification factors and design response spectra, for compatibility with NYC subsurface conditions. The last step in the review process will include a review of the seismic performance (bridge "survival") requirements; and establishing areas of design where revisions are necessary.

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.

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

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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 will save approximately \$976,956 annually. In addition, bridge operational capabilities, general maintenance, and debris and snow removal have been enhanced through the more efficient utilization of existing personnel.

The remaining task is the conversion of the three remaining bridges to "on demand" status. This will be achieved by the replacement of two of the bridges with new bridges built with higher clearances, thereby reducing the number of times the bridges must be opened.

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Summary of Vessel Openings 1991 - 2005

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Brdn Ave. (Q)	282	107	141	0	0	105	15	0	3	0	28	0	0	0	1
Brdwy (B/M)	12	3	10	6	7	24	7	2	0	6	27	83	49	16	2
Brcknr Expwy (Estrn Blvd) (B)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brcknr Expwy (Unnpnt Brdg) (B)	743	635	554	594	431	386	363	257	345	385	420	332	300	309	253
Carroll St. (K)	517	627	669	704	432	245	142	110	174	102	80	124	186	49	22
Grand St. (K/Q)	419	549	224	254	239	189	37	23	24	17	50	19	10	8	5
Gnpoint Ave. (K/Q)	1014	860	587	549	498	557	626	669	787	688	641	659	738	1093	1045
Hmltn Ave. (K)	1466	1331	1300	1336	1246	1191	1157	996	982	933	832	946	824	757	677
Hntrs Point Ave. (Q)	264	106	141	0	0	113	15	0	1	0	36	0	0	0	0
Htchnsn River PkwY (B)	8	0	0	0	37	31	32	75	46	5	120	30	5	37	10
Macombs Dam (B/M)	0	0	0	6	5	13	3	0	0	0	0	0	0	0	0
Mdsn Ave. (B/M)	3	1	5	5	0	0	0	0	0	0	0	0	0	7	0
Metrpntn Ave. (K)	301	356	225	310	272	407	423	448	513	279	366	339	342	153	0
Mill Bsn (K)	867	879	1151	1250	954	903	628	591	433	336	317	142	173	164	162
Pulaski (K/Q)	584	426	224	239	206	195	291	332	383	276	208	308	599	694	734
Rsvlt Islnd (M/Q)	0	0	0	0	0	0	0	4	0	58	48	125	63	669	150
Shore Rd (Pelham Pky) (B)	1968	1996	2138	2222	2190	2167	2158	2274	2162	2168	2222	1897	1910	2011	1683
Union St. (K)	502	547	657	713	432	236	144	103	144	85	101	62	24	21	11
Ward's Islnd Pdstrn (M)	0	0	2	0	1	0	2	1	0	0	279	0	0	7	2
Willis Ave. (B/M)	15	6	8	18	24	17	9	0	4	4	40	0	7	25	2
3 rd Ave. (B/M)	3	1	7	19	20	18	9	0	2	1	1	0	0	0	0
3 rd St. (K)	410	549	663	732	432	256	149	112	157	178	117	212	152	99	43
9th St. (K)	864	984	927	836	0	0	0	0	192	513	808	733	547	457	360
145 th St. (B/M)	2	0	0	9	24	24	3	0	0	1	6	0	0	9	0
W.207 th St. (B/M)	0	0	1	6	4	12	7	2	0	6	14	4	6	10	1
TOTAL	10244	9963	9634	9808	7454	7089	6220	5999	6352	6041	6761	6015	5935	6595	5163

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Roadway Bridges

INNOVATIONS

Innovations in the design and construction of Roadway Bridges continued in 2005. The continued use of weathered steel for bridges over railroads eliminates expensive costs involved in maintenance painting. Where feasible, the continued use of precast elements in bridge reconstruction reduces construction duration and the resulting negative impacts on the traveling public.

Stainless steel clad rebars and galvanized steel rebars, to reduce concrete deck deterioration, were utilized in pilot projects such as the Congress Street Bridge over the Brooklyn-Queens Expressway, and the East Third Street Bridge over the Bay Ridge LIRR.

ANDREWS AVENUE BRIDGE OVER LIRR (QUEENS)

The Andrews Avenue Bridge was built in 1937. A Notice to Proceed for the \$3.7 million replacement of this bridge was issued to the contractor with a start date of August 4, 2003. The bridge was completely closed beginning in winter 2004, and the new bridge was fully re-opened to traffic on November 24, 2004. The new bridge, designed by the Division's In-House Design Section, accommodates two 3.6-meter traffic lanes and two 2.5-meter wide sidewalks to better serve the community. The old four-span bridge was completely removed and replaced with a single span concrete-filled grid deck with multiple weathering steel stringers and girders supported by precast modules for the abutments and wing walls. This was the first use of this material in a NYCDOT bridge project. The proposed geometry of the south approach roadway required the construction of a retaining wall at the edge of a soccer field, lumber yard, and other private properties, due to the rise in profile. The precast wall required the excavation of only half a meter as compared to about two meters with the use of conventional cast-in-place concrete. The installation of these wall units greatly minimized the disturbance to the adjacent private properties, and enabled installation of the precast units in a relatively short time, even in winter. Precast wall units also improved the aesthetics of the playground and the area within the project limits. The use of precast concrete modules assured better quality concrete, and ease of installation reduced the total construction time from 15 months to 9 months. The use of weathered steel for bridges over railroads eliminates expensive costs involved in maintenance painting. This project was substantially completed on February 1, 2005.



Andrews Avenue Bridge Prior To Reconstruction. Installing Pre-Cast T-Wall for the Modular Abutments. Constructing the Third Level of the Pre-Cast Abutment. (Credit: Syed Alam)

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Installation of the Grid Deck. Newly Completed Andrews Avenue Bridge (Credit: Syed Alam)

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

On a New York State-mandated scale from 1 to 7, these six bridges possess a condition rating of “fair” (3.001 – 4.999). In 2005, the Fresh Creek Bridge was 3.22; the Gerritsen Inlet Bridge was 3.60; the Paerdegat Basin Bridge was 3.28; the Rockaway Parkway Bridge was 4.06; the Nostrand Avenue Bridge was 4.10; and the Bay Ridge Avenue Bridge was 3.67. 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.

Under the Department’s current proposal, the existing 5 span, 264.5 foot Fresh Creek Bridge will be replaced with a new 3 span, 309-foot bridge; the existing 11 span, 520-foot Gerritsen Inlet Bridge will be replaced with a new 3 span, 496-foot bridge; the existing 4 span, 150-foot Rockaway Parkway Bridge will be replaced with a new single span 95-foot bridge; the existing 3 span 140-foot Nostrand Avenue Bridge will be replaced with a new single span 98-foot bridge; and the existing single span 58-foot Bay Ridge Avenue Bridge will be replaced with a new single span, 58-foot bridge. The stopping sight distance for the bridge and approach roadways will be improved except for the Bay Ridge Avenue Bridge, where improvement is not needed.

The reconstruction of the Fresh Creek Bridge, currently in its final design phase, is scheduled to start in summer 2007, and will last for approximately 3 years. The bridge and the approach roadways will be constructed in four stages, while maintaining three traffic lanes in each direction and a bike path on the eastbound side during construction.

The reconstruction of the Gerritsen Inlet Bridge, currently in its final design phase, is scheduled to start in fall 2007, and will last for approximately 4 years. The bridge and the approach roadways will be constructed in four stages, while maintaining three traffic lanes in each direction and a bike/pedestrian path on the eastbound side during construction.

The reconstruction of the Rockaway Parkway Bridge, currently in its final design phase, is scheduled to start in summer 2008, and will last for approximately 3 years. The bridge and the approach roadways will be constructed in five stages, while maintaining three traffic lanes in each direction during construction.

The reconstruction of the Nostrand Avenue Bridge, currently in its final design phase, is scheduled to start in summer 2008, and will last for approximately 2½ years. The bridge and the approach roadways will be constructed in five stages, while maintaining three traffic lanes in each direction during construction.

The reconstruction of the Bay Ridge Avenue Bridge, currently in its final design phase, is scheduled to start in summer 2008, and will last for approximately 1½ years. The bridge will be constructed in five stages, while maintaining three traffic lanes eastbound and two traffic lanes westbound during Stage I, and two traffic lanes in both directions during Stages II, III, IV, and V during construction.

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Fresh Creek, Gerritsen Inlet & Bay Ridge Avenue Bridges in 2002. (Credit: NYSDOT)



Rockaway Parkway & Nostrand Avenue Bridges in 2002. (Credit: NYSDOT)

The Paerdegat Basin Bridge will be replaced by a new bridge (with complete replacement of the superstructure and substructure). It will be constructed on a new off-line alignment conforming to current standards. The new split bridge will be within the right-of-way of the parkway. This project is scheduled to begin construction in the spring of 2007, and to last for approximately four years.



Paerdegat Basin Bridge

A computerized traffic simulation model is under development in connection with the Division's plans to reconstruct seven bridges on the Belt Parkway. This model will serve as a useful tool to establish the impact of construction on the traveling public and to help determine appropriate construction schedules. In addition, it will enable us to rapidly evaluate the impact of a variety of combinations of construction staging. The final schedule of construction for these bridges will depend on the outcome of the traffic simulation model analysis.

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BROOKLYN-QUEENS EXPRESSWAY (WB) & (EB) OVER CADMAN PLAZA AND FULTON STREET (BROOKLYN)

The Brooklyn-Queens Expressway over Cadman Plaza and Old Fulton Street, oriented East to West, and located just west of the Brooklyn Bridge, consists of two separate two-span superstructures founded on concrete abutments and piers sharing a common footing on H piles. The bridge was constructed in 1948.

The westbound side is a two-span continuous steel stringer, concrete deck superstructure supported by concrete abutments and a solid concrete center pier. The stringers are supported by fixed bearings at the center pier and with expansion bearings at the abutments. The bridge deck is a reinforced concrete slab overlaid with an asphalt wearing surface.

The eastbound side is a two span continuous steel rigid frame structure of built-up riveted girders. The girders are concrete-encased and rigidly framed into the framing at both abutments and center pier. The existing railings are substandard, and the granite veneer on the substructures has been removed from both of the abutment stems and the south side wing walls.



BQE Bridge Over Cadman Plaza in 2002 – Upper Level is Eastbound, Lower Level is Westbound.
(Credit: NYSDOT)

The project will include removing the existing wearing surface, demolishing and removing the existing bridge railings, safety walks, concrete deck, deck expansion joints, concrete approach slabs, and the top portion of existing abutment and pier stems. Construction will include new top portions for the abutment stems and pier caps, new abutment expansion bearings and pier fixed bearings, new shear stud connectors on top flanges at existing stringers, new exodermic deck on steel stringers, new approach slabs, half-size permanent concrete barriers at both fascias, new deck plug joints, a new wearing surface, and a new waterproof membrane over the concrete deck surface.

The project is currently in its final design phase. Construction is expected to begin in November 2006, and is expected to be complete in November 2007.

BROOKLYN-QUEENS EXPRESSWAY (WB) OVER FURMAN STREET & BROOKLYN-QUEENS EXPRESSWAY (EB) OVER BROOKLYN-QUEENS EXPRESSWAY (WB) (BROOKLYN)

A Notice to Proceed for the \$1.1 million project to reconstruct the transverse expansion joints on the Brooklyn-Queens Expressway (BQE) in Brooklyn Heights between Orange and Joralemon Streets was issued to the contractor with a start date of May 3, 2004. The first (lower) cantilevered level carries the westbound vehicular traffic. The second (intermediate) cantilevered

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level carries the eastbound vehicular traffic, and the third (top) cantilevered level supports the Brooklyn Heights promenade.



BQE Bridge in 2003 – Upper Level is Eastbound, Lower Level is Westbound. (Credit: NYSDOT)

This section of the BQE was originally constructed approximately 50 years ago and due to the aging process, the original joint material is no longer capable of preventing water from infiltrating the structural concrete. If this situation continues unabated, the concrete will become severely damaged due to the water's freeze/thaw action and its corrosive effect on the reinforcing steel. Installing new joint material will reestablish the watertight seals while allowing for the necessary expansion of the superstructure, thus extending the useful life of the structural concrete that supports the westbound and eastbound roadways of the BQE. There are a total of 100 joints; 50 joints on the first cantilevered level, and 50 joints on the second cantilevered level within the project limits. Each joint is 33½ feet in length for a total 3,350 feet of joint replacement. The work will be performed only during the nighttime hours of 12:01 AM to 5:00 AM under two lane closures, with the third lane open to traffic. At all other times, all three lanes in both the westbound and eastbound directions will be open to traffic. The eastbound cantilevered level was completed in November 2004. Work on the westbound cantilevered level is scheduled to resume in spring 2006. The project is expected to be complete in November 2006.

CLAREMONT PARKWAY BRIDGE OVER METRO NORTH RR (BRONX)

The Claremont Parkway Bridge was built in 1889, with major reconstruction in 1938. This project, currently in its final design phase, 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 open in each direction at all times during construction. Construction is expected to begin in October 2006, and is expected to be complete by April 2008.

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Claremont Parkway Bridge. (Credit: NYSDOT)

CONCOURSE VILLAGE AVENUE BRIDGE OVER METRO NORTH (BRONX)

This project will include demolishing the existing bridge deck, removing loose encasement on the structural members, localized steel repairs, and restoring the encasement. A new concrete deck will be installed, and new approach slabs, an east parapet, steel faced curbs, and concrete sidewalks will be built. The existing granite blocks will be repointed as necessary. The bridge will be reconstructed in four stages, with one 4.3 meter wide southbound lane maintained during construction. Construction is expected to begin in June 2009, and is expected to be complete in November 2010.



Concourse Village Avenue Bridge. (Credit: NYSDOT)

CONGRESS STREET BRIDGE OVER BROOKLYN-QUEENS EXPRESSWAY, AND LINCOLN ROAD BRIDGE OVER BMT SUBWAY (BROOKLYN)

A Notice to Proceed for the reconstruction of these bridges was issued to the contractor with a start date of April 26, 2004. The project is expected to be completed in March 2007. The project originally contained three bridges, but the Seeley Street Bridge was removed from the contract in September 2004.

The existing Congress Street Bridge was a two span structure over the Brooklyn-Queens Expressway (BQE). The major substandard feature of the bridge was its vertical clearance over the BQE. There was evidence of vehicular impacts on the bridge superstructure. The rehabilitation included reconstructing a new bridge superstructure with high strength steel that added 12 inches of additional vertical clearance. Epoxy coated reinforcement was used for concrete deck reinforcement, and the bridge substructure was rehabilitated to conform to seismic

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requirements. The reconstruction of this bridge was accomplished in two stages. The existing bridge carried one-way east bound traffic, which was maintained for the duration of the construction. The reconstruction involved BQE lane closures at certain times. Traffic Enforcement Agents were posted for the duration of the BQE lane closures to ensure the smooth flow of traffic. The Congress Street Bridge was substantially completed on August 5, 2005, some two months ahead of schedule.



Old Congress Street Bridge. Bridge Deck Demolition. (Demolition Credit: Carlos Ramirez)



Congress Street Bridge Deck Demolition and Structural Steel Removal. (Credit: Carlos Ramirez)



Congress Street Bridge Structural Steel Removal. (Credit: Carlos Ramirez) Stage I Placement of Rebar for Concrete. Concrete Placement for Deck Slab.



Completed Congress Street Bridge.

The Lincoln Road Bridge project will include a replacement of a water trunk main under the railroad track which is within the limits of the bridge reconstruction. The replacement of the water

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trunk main will be funded by NYCDEP. The existing bridge is a four span structure with a steel pier bent and reinforced concrete abutments. The bridge spans over NYCTA Brighton Beach line. The rehabilitation will include removal of the existing bridge in its entity and the construction of a new bridge. The new bridge will be a single span flexible type integral abutment bridge built compositely with a steel stringer and a concrete deck. The project work will be accomplished in three stages. The water trunk main will be replaced during the first stage. Effective May 19, 2005, the bridge was fully closed to traffic, as agreed to by the community, in order to shorten the construction duration by 11 months. The Lincoln Street Bridge is expected to be completed in April 2006.



Lincoln Road Bridge in 2003. (Credit: NYSDOT)

CORTELYOU ROAD BRIDGE OVER NYCT (BROOKLYN)

This \$3.7 million project was constructed in three stages. Two-way traffic was maintained by providing one lane in each direction during construction, and no detours were required. The existing bridge was a one span steel through-girder, floorbeam and steel stringer bridge with very short approach spans. Two steel column bents, rising out of the passenger platforms, support each end of the main span. The reconstruction replaced the existing deck slab and steel stringers with modified floorbeams and through-girders. Construction began in April 2002, and was substantially completed on June 11, 2005.



Cortelyou Road Bridge in 2003. (Credit: NYSDOT)

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Reconstructing the Sidewalk Area & Approach Roadway During Stage I. Stage II Work in Progress.

CROOKE AVENUE AND NEWKIRK AVENUE BRIDGES OVER BMT SUBWAY (BROOKLYN)

The existing four span Crooke Avenue Bridge was constructed in 1916. A recent inspection revealed significant deterioration of the superstructure. This project, currently in its final design phase, will include removal of the superstructure in the right of way only, approaches and two piers. The new single span bridge will consist of pre-stressed concrete box beams supporting a reinforced deck and approach slabs, concrete sidewalks, reinforced parapet walls with protective fencing and reconstructed approach roadways. The top portion of the abutments will be removed and reconstructed. The utilities will be relocated within project limits. The new bridge will also meet current NYCT sight distance and horizontal clearance standards. The bridge will be constructed in two stages, with one vehicle lane and one sidewalk maintained. Construction is expected to begin in November 2006, and is expected to be complete in April 2008.

The Newkirk Avenue Bridge is a three span structure between East 16th Street and Marlborough Road. This project, currently in its final design stage, will include the removal of the entire superstructure, including pier caps, girders, deck slabs and approaches. The new three span bridge will consist of steel stringers and light weight concrete deck. The exterior and middle columns will be replaced with new steel columns. The existing steel caps on the steel pier columns will be replaced. The top portion of the abutments will be removed and reconstructed. New utilities will be installed. Pedestrian access to the Newkirk Avenue station will be maintained during the three stage construction. During Stage III of construction the bridge will be closed to vehicular traffic. Construction is expected to begin in November 2007, and is expected to be complete in May 2008.



Crooke & Newkirk Avenue Bridges. (Credit: NYSDOT)

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GLENMORE AVENUE, PITKIN AVENUE, SUTTER AVENUE, AND LIBERTY AVENUE BRIDGES OVER LIRR BAY RIDGE (BROOKLYN)

This \$12 million project reconstructed four bridges over the LIRR tracks in Bay Ridge. A Notice to Proceed for the reconstruction of the Glenmore Avenue, Pitkin Avenue, and Sutter Avenue Bridges over LIRR Bay Ridge was issued to the contractor with a start date of January 14, 2003. The reconstruction of Liberty Avenue over LIRR Bay Ridge commenced after the completion of these bridges. Glenmore Avenue, Sutter Avenue, and Liberty Avenue were fully closed to pedestrian as well as vehicular traffic during construction. The Pitkin Avenue bridge was constructed in two stages. One traffic lane in each direction and one sidewalk were open at all times during construction.



Glenmore & Pitkin Avenue Bridges in 2002. (Credit: NYSDOT)



Sutter Avenue Bridge in 2003. (Credit: NYSDOT) Liberty Avenue Bridge in 2004.

The reconstruction of the Glenmore Avenue Bridge was substantially completed on July 16, 2004. The reconstruction of the Sutter Avenue Bridge was substantially completed on October 19, 2004. The reconstruction of the Pitkin Avenue Bridge was substantially completed on October 27, 2005.



Demolishing the Old Glenmore Avenue Bridge. Installing Tiebacks at the East Abutment.

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New Bearings Installed at the Central Pier & East Abutment of the Glenmore Avenue Bridge. Erecting Structural Steel. Placing the Deck Slab Concrete.



Demolishing the Old Sutter Avenue Bridge. Erecting Structural Steel. Installing Stay-in-Place Forms.



Pitkin Avenue Bridge During Construction. Completed Pitkin Avenue Bridge (Completion Credit: Fred Arzideh)

Effective November 11, 2004, the Liberty Avenue Bridge was closed to traffic for rehabilitation, as agreed to by the community. In August 2005, an extended conveyer belt was used to pour concrete on the bridge because of height restrictions caused by the presence of trains overhead. This belt can transport materials such as concrete, sand, and backfill, and is convenient when height constrictions prohibit the use of a pump or crane. It has a horizontal reach of up to 130 feet and is operated by one person with a remote. The belt can move 360 cubic yards of material in one hour.



Concrete Pour on Liberty Avenue Bridge.

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Erection of Structural Steel at Liberty Avenue Bridge. View Under the New Bridge. Looking West at the New Bridge.

The reconstruction of the Liberty Avenue Bridge was substantially completed on November 15, 2005.

GRAND CONCOURSE BRIDGE OVER EAST 161ST STREET (BRONX)

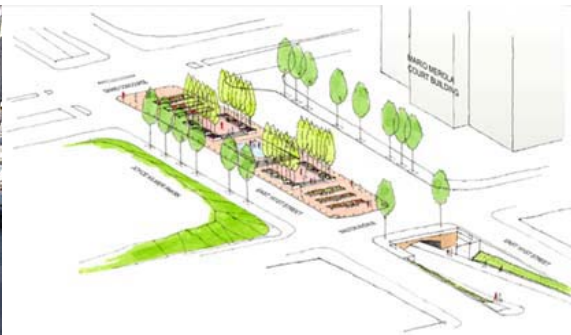
This \$52 million project will include the rehabilitation of the Lou Gehrig Plaza and the reconstruction of the Grand Concourse from East 161st Street to East 166th Street, as well as landscaping improvements. In addition, artwork will be included under the Percent For Art Program administered by the Department of Cultural Affairs. The underpass and its approaches will be closed to traffic during the Yankees' off season only. The reconstruction will be completed in 14 stages with two traffic lanes in each direction maintained at the Grand Concourse. A Notice to Proceed for the project was issued to the contractor with a start date of January 3, 2006. Construction of the bridge is scheduled to begin in November 2006, and is expected to be complete by September 2009.



Grand Concourse Bridge over East 161st Street. View of West Portal.



Existing Lou Gehrig Plaza



Rendering of New Plaza

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Existing Grand Concourse



Rendering of New Grand Concourse

GUN HILL ROAD BRIDGE OVER METRO NORTH RR (BRONX)

A recent inspection by the Division revealed that the superstructure of the bridge has outlived its useful service life. The effects of age and weather have rendered reconstruction necessary. This project will include the removal of the existing superstructure and the top portion of the existing concrete abutments, and the construction of new approach slabs, roadway, and sidewalks. The work will also include replacing the water and gas mains, as well as other utilities, erecting new steel girders, installing new utility supports, placement of a new reinforced concrete deck, constructing new concrete parapets with pedestrian fencing. The bridge will be reconstructed in three stages, with two lanes of traffic maintained during construction. A Notice to Proceed for the \$7.4 million reconstruction of this bridge was issued to the contractor with a start date of December 1, 2004.



Gun Hill Road Bridge in 2002. (Credit: NYSDOT) View of Bridge at the MPT Stage. Demolition of the Existing Bridge Deck. (Deck Credit: Muhammad Siddiqui)

Effective March 9, 2005, the southbound off ramp of the Bronx River Parkway at Gun Hill Road was closed to traffic for a three year duration. Stage II reconstruction of the bridge began on November 3, 2005. Construction is expected to be complete in December 2008.



Project Engineer Muhammad Siddiqui Inspecting the Stay-in-Place Formwork for the New Gun Hill Road Bridge Deck. Installing Deck Reinforcement. Concrete Placement.

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INSPECTION OF THE HIGH BRIDGE PEDESTRIAN BRIDGE OVER THE HARLEM RIVER (BRONX/MANHATTAN)

In support of the Department of Parks and Recreation (DPR), the Division prepared a detailed scope of work for the comprehensive in-depth inspection of this eleven span landmark structure, the oldest (circa 1848) bridge over the Harlem River. The bridge is under DPR's jurisdiction.

A Notice to Proceed was issued to the contractor with a start date of July 18, 2002. Engineering consultants are conducting this inspection, which is scheduled for completion in the summer of 2006, at an estimated cost of \$2.2 million. The Division administers and supervises this work.

The resultant report will be furnished to DPR to pursue rehabilitation of the structure. Its goal is to open the historic promenade level for public use by pedestrians and cyclists and, once again, link the Bronx and Manhattan portions of High Bridge Park.



High Bridge Pedestrian Bridge. (Credit: Michele N. Vulcan)

MANHATTAN COLLEGE PARKWAY, WEST 232ND STREET, WEST 239TH STREET, AND WEST 252ND STREET BRIDGES OVER HENRY HUDSON PARKWAY (BRONX)

This \$6.6 million project will reconstruct four bridges over the Henry Hudson Parkway. A Notice to Proceed was issued to the contractor with a start date of February 23, 2004. The reconstruction of the West 239th Street and West 252nd Street Bridges will commence after the substantial completion of the Manhattan College Parkway and West 232nd Street Bridges. Work on the Manhattan College Parkway, West 232nd Street, and West 239th Street Bridges will include the demolition and removal of the existing pavement and roadway slab down to the concrete arch of each bridge, and replacing it with a new deck on a protected membrane waterproofing system. In addition, the reconstruction of these bridges will include drainage, repointing the existing stone masonry, new signage and pavement markings, improving the under deck lighting systems, and private utility work.



Manhattan College & West 232nd Street Bridges in 2001. (Credit: NYSDOT)

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West 239th Street Bridge in 2001 & West 252nd Street Bridge in 2002. (Credit: NYSDOT)

On West 232nd Street, the work will be completed in three stages, with one lane of vehicular traffic maintained in each direction during construction. On Manhattan College Parkway, the work will also be completed in three stages, with one lane of vehicular traffic maintained in the westbound direction during construction.

The West 232nd Street Bridge re-opened to traffic on August 20, 2004, some three months ahead of schedule. The Manhattan College Parkway Bridge re-opened to traffic on October 29, 2004, some six weeks ahead of schedule. These two bridges are expected to be complete in late spring 2006.

On West 239th Street, the work will be completed in three stages, with one lane of vehicular traffic maintained in the each direction during construction. Stage I reconstruction (northern half) of the bridge began on April 25, 2005. Stage II reconstruction began on September 22, 2005. This bridge is expected to be completed by May 2006.

Work on the West 252nd Street Bridge will include the demolition of the existing concrete arch bridge deck, and replacing it with a new prestressed concrete box beam superstructure. In addition, the reconstruction of this bridge will include installing a new 300 mm diameter water main, improving the under deck lighting systems, private utility work, partial removal of the pier and abutments, new roadway lighting, and adjustment of the existing drain inlets, manholes, and catch basins. The work will be completed in four stages, with one lane of vehicular traffic maintained in the eastbound direction during construction. The work on this bridge began on January 3, 2006. The four bridge project is expected to be complete in February 2007.

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.

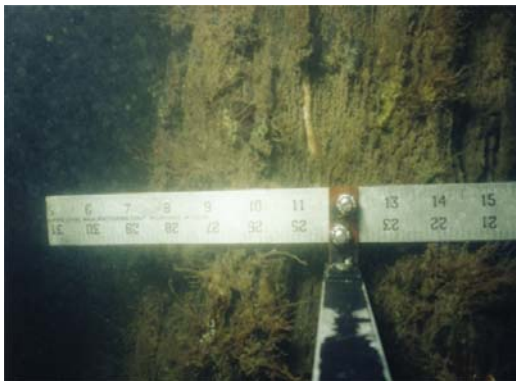
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Marine Borer – Limnoria Species



Marine Borer – Teredo Species



Medium Limnoria Infestation



Teredo Damage (holes up to 1/4" 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 and Harlem River Drives, and the timber piles and structures of the Carroll Street and Ocean Avenue bridges in Brooklyn. The underwater inspection of timber piles supporting the FDR Drive began on May 8, 2000. Inspection of the Brooklyn sites was conducted during the week of October 23, 2000. The inspections were completed in October 2000, and the Marine Borer Evaluation Report was published in June 2001. Using the results of the underwater inspections, preliminary plans were developed for the implementation of repairs and remediation measures to protect the structures from attack. These preliminary plans were completed in December 2001. The final design is in progress and is scheduled for completion by May 2006. The construction work is expected to commence in March 2007.

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. Construction is expected to begin in December 2006, and is expected to be complete in May 2008.

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Shore Road Circle Bridge in 2003. (Credit: NYSDOT)

STEINWAY STREET BRIDGES OVER GRAND CENTRAL PARKWAY WB & EB (BROOKLYN-QUEENS EXPRESSWAY) (QUEENS)

This \$16 million project will replace two bridges, originally built in 1937, that connect over the Grand Central Parkway. A Notice to Proceed for the reconstruction of these bridges was issued to the contractor with a start date of July 1, 2002.



Steinway Street Bridges in 2002. (Credit: NYSDOT) Temporary Bridges in Place in December 2004.

The contract provides for several NYPD Traffic Agents to maintain the flow of traffic at the Steinway Street intersections affected by the bridge for the duration of the replacement. Variable Message Signs (VMS) will be utilized to advise motorists of impending nightly lane closures on the Grand Central Parkway.

During 2004, the contractor completed all pre-stage construction activities and commenced Stage I construction activities. On July 23, 2004, during the demolition process to remove the first one-third of the existing bridge in preparation for installing the new bridge components, a portion of the existing north bridge collapsed onto the westbound roadway of the Grand Central Parkway. In a coordinated emergency effort by the NYPD, NYCFD, NYCDOT and the contractor, the Grand Central Parkway was completely closed for a period of twenty hours during which time the first one-third of the existing bridges' superstructures over the eastbound and westbound Grand Central Parkway was removed and carted away from the construction site.

In the interim period between August 2004 and December 2004 and as a precautionary measure, a decision was made by the Department to completely close the remaining two-thirds of the existing bridges to both vehicular and pedestrian traffic. As a result, traffic detour routes along north and south Astoria Boulevard were established with appropriate placement of signs, barricades and traffic control devices in an effort to facilitate the movement of traffic through the construction zone. NYPD Traffic Enforcement Agents were along deployed at critical location along the detour routes to assist in the smooth flow of traffic around the construction zone.

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Also during this period a decision was made by the Department to have the contractor install temporary vehicular bridges capable of carrying the Standard HS 20 Highway Loading (with a provision for a pedestrian walkway) in the location where the first one-third of the existing bridges were removed. These temporary bridges will be utilized to carry two lanes of traffic along the northbound direction on Steinway Street over the Grand Central Parkway and will result in the elimination of the northbound detour route that was established when the bridges were closed to traffic in July 2004.

The design and construction of these temporary bridges began in September 2004. The bridges were opened to two lanes of northbound traffic, as well as pedestrians, on January 10, 2005.



Erection of the South Temporary Bridge.



Erection of the North Temporary Bridge.



Aerial View of Steinway Street in January 2005.

The original contractor was defaulted by the City in March 2005. The surety then took over the responsibility for completing all of the remaining construction work, and, with the concurrence of the Agency, selected a replacement contractor. The new contractor re-started construction activities at the project site in September 2005, and is currently conducting preparatory work for the removal of the remaining two-thirds portion of the bridges.

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Utility Workers Excavating a Trench In Order to Deactivate the Feeder Cables in the Manholes Along Steinway Street. Driving a Sleeve for the Installation of Piles at the Center Fill Area.



Preparing to Install Piles at the Southern End of the South Bridge. Removing the Utility Conduit Pipes From the Western Side of the Steinway Street Bridges.

The bridge will be constructed in two stages. In the first stage, the remaining two-thirds of the bridges will be demolished and reconstructed. This stage is expected to be complete in October 2006. All traffic will then be shifted to the newly reconstructed portion, which will carry two lanes of vehicular traffic in each direction, as well as a pedestrian walkway. In the second stage the final one-third will be rebuilt after removal of the temporary bridges. The project is scheduled for completion in October 2007.

WESTCHESTER AVENUE BRIDGE OVER THE HUTCHINSON RIVER PARKWAY (BRONX)

This two span bridge supports a transit structure overhead and has substandard clearance over the highway below. In 2005, 13 unauthorized overheight vehicles struck the bridge's girders. 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. It also includes cameras that are activated by acoustics and that will document future damage to the bridge as well as the offending vehicles' descriptions and plate numbers for recoupment of costs by the City. The contractor is scheduled to perform extra work associated with landscaping, in the spring of 2006. A separate project is underway to reconstruct the bridge and lower the Parkway.

The early warning system is installed at strategic locations along the Hutchinson River Parkway north and south of the Westchester Avenue Bridge. This electronic sensor device uses a laser beam that scans horizontally at a predetermined height (9 feet for southbound and 10 feet for northbound). Once an over-height vehicle is detected by the sensor device, it then sends a signal to two successive variable message signs (i.e., warning and exit) to alert the driver to exit the

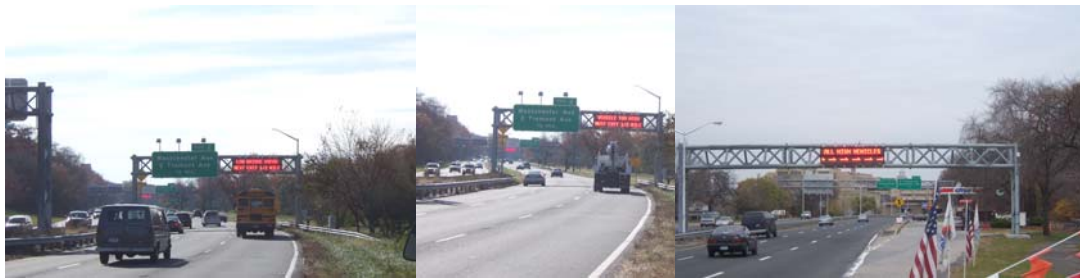
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parkway prior to the Westchester Avenue Bridge. In addition, ground mounted stationary signs are also installed to aid the electronic warning system.

If the over-height vehicle continues and hits the Westchester Avenue Bridge, a Bridge Damage Surveillance System (BDSS) installed on the bridge structure obtains records of the incident. The system consists of acoustic sensors that are installed at the lowest part of the bridge structure, infrared video cameras, and an on-site computer system. If an impact on the steel structure is detected by the acoustic sensors, the video information (i.e., license plate and side view images of the over-height vehicle) is stored into the system computer for analysis and evaluation by DOT.



Westchester Avenue Bridge in 2001. (Credit: NYSDOT) Overheight Sensor Unit on the Hutchinson River Parkway. (Credit: Roly Parroco)



New Vehicle Detection System



Video Stills From the Westchester Avenue Bridge BDSS.

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. The planned lowering of the

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parkway will make it possible to eliminate the existing sub-standard vertical clearance of the bridge over the parkway without adversely impacting the NYCT elevated structure and its transit train operations. The total length for the lowering of the parkway will be 1000 feet (north and south), with a maximum lowering of the parkway of 2.5 feet under the Westchester Avenue Bridge.

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.

Construction is expected to begin in the summer of 2007, and is expected to be complete in the summer of 2110.

WOODSIDE AVENUE OVER LIRR (QUEENS)

This project, currently in its final design phase, will include the removal of the existing three span bridge and the construction of a new single span structure. The superstructure and abutments will be completely redesigned to comply with current seismic requirements. The bridge will be reconstructed in six stages. Construction is expected to begin in November 2006, and is expected to be complete by November 2008.



Woodside Avenue Bridge. (Credit: NYSDOT)

EAST 3RD STREET AND 52ND STREET BRIDGES OVER LIRR (BROOKLYN)

This \$4 million project reconstructed these two bridges, built in 1906. The bridges span a railroad track owned by LIRR, and presently used by New York and Atlantic Railway for freight service. A Notice to Proceed for the reconstruction of these bridges was issued to the contractor with a start date of May 5, 2003. The work included building new superstructures of steel stringers, reinforced concrete decks, parapets with protective screenings, and steel faced curbs and concrete sidewalks. The bridges were constructed in two stages, with one traffic lane in each direction and one sidewalk open at all times during construction. The reconstruction of the East 3rd Street Bridge was substantially completed on October 25, 2004. The reconstruction of the 52nd Street Bridge was substantially completed on January 11, 2005.

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East 3rd Street Bridge Before Reconstruction. Removing the Stringer Encasements. Removing the West Side Bridge Deck.



Demolition of the East 3rd Street Bridge South Abutment. Installing Structural Steel. Placing Concrete for the Approach Slabs.



Installing Galvanized Rebar for the Approach Slab. East 3rd Street Bridge After Reconstruction.



52nd Street Bridge Before Reconstruction. Demolition of the Bridge Deck. Installation of Temporary Supports.

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Installation of Structural Steel on 52nd Street Bridge. Placing Concrete on the Bridge Deck.



New 52nd Street Bridge East Sidewalk.

EAST 8TH STREET ACCESS RAMP OVER BELT PARKWAY (BROOKLYN)

The East 8th Street access ramp 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 is 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 will include 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 will be modified by adding two columns on new steel piles, and underdeck and ramp lighting will be installed, as well as new catch basin frames. The ramp will be closed to both vehicular and pedestrian traffic for the duration of the reconstruction. Traffic will be diverted to local streets. Construction is expected to begin in March 2007, and is expected to be complete in November 2008.

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East 8th Street Bridge in 2002. (Credit: NYSDOT)

15TH AVENUE, 18TH AVENUE, 17TH AVENUE, AND 20TH AVENUE BRIDGES OVER NYCT (BROOKLYN)

The 15th Avenue Bridge is an arch barrel bridge, constructed in 1912-1913 between 63rd and 64th Streets. Age, weather and increased traffic had affected the bridge. The roadway slab, concrete abutments and concrete piers were severely deteriorated. The bridge had outlasted its useful life. The scope of this project included the removal of the existing pavement, sidewalk, piers, columns, roof beams, portions of the abutments and the concrete arches over the NYCT tracks. The reconstruction included portions of the abutments, installation of precast reinforced concrete pier wall and deck panels, construction of a reinforced concrete deck on top of precast deck panels, and the installation of a 300 mm water main, 408 mm gas main and electric facilities. The approach slabs and bridge joints were replaced. In addition, new roadways, sidewalks, steel faced curbs, and a concrete parapet with pedestrian fencing and street lighting were constructed. The 15th Avenue Bridge was substantially completed on February 8, 2005.



15th Avenue Bridge in 2002. (Credit: NYSDOT). Final Touches on Completed Bridge.

The 18th Avenue Bridge is also an arch barrel bridge, constructed in 1912-1913 between 63rd and 64th Streets. Age, weather and increased traffic had affected the bridge. The roadway slab, concrete abutments and concrete piers were severely deteriorated. The bridge had outlasted its useful life. The scope of this project included sewer work, the removal of a portion of the existing abutments, columns, roof beams, piers and the arches over the NYCT tracks. Cast-in place concrete piles, a steel superstructure, and new integral abutments were installed. The water main, gas main, and sewer were removed and relocated. A new concrete deck, approach slabs, and sidewalks were also part of this reconstruction project. The bridge was constructed in four stages, with one lane open in each direction at all times, as well as pedestrian access to local businesses. The 18th Avenue Bridge was substantially completed on May 16, 2005.

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18th Avenue Bridge in 2003. (Credit: NYSDOT) Bridge Nearing Completion. Completed Bridge.

Similar construction at the 17th Avenue and 20th Avenue Bridges began after the completion of the 15th and 18th Avenue Bridges. The reconstruction of the 17th Avenue Bridge began on May 17, 2005. Effective July 13, 2005, the bridge was closed to vehicular traffic. The bridge was re-opened to vehicular and pedestrian traffic on December 13, 2005, 29 days ahead of schedule. The 17th Avenue Bridge was substantially completed on February 24, 2006.



17th Avenue Bridge in 2002. (Credit: NYSDOT) Prior to Reconstruction in 2005.



Demolition of the 17th Avenue Bridge Deck. Casting the New East Abutment Wall.



Installing Precast Concrete Footings and Pier Walls for the 17th Avenue Bridge.

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Installing Precast Deck Panels for the 17th Avenue Bridge. Placing the Reinforced Concrete Bridge Deck.



Completed 17th Avenue Bridge and Fence.

Work on the 20th Avenue Bridge began in winter 2006 after the utility company performed extensive work on the gas main. The bridge is expected to be complete in June 2007.



20th Avenue Bridge in 2002. (Credit: NYSDOT)

A Notice to Proceed for the \$17.7 million reconstruction of these four bridges was issued to the contractor with a start date of September 29, 2003. The project is scheduled for completion in December 2007.

EAST 78TH STREET PEDESTRIAN BRIDGE OVER FDR DRIVE (MANHATTAN)

The current bridge is a nine span reinforced concrete structure over the FDR Drive. This project, currently in its final design phase, 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 will include steel piers with caisson foundations, a ramp retaining wall, and new superstructure using welded structural tubing, steel railing, and hand rails, as well

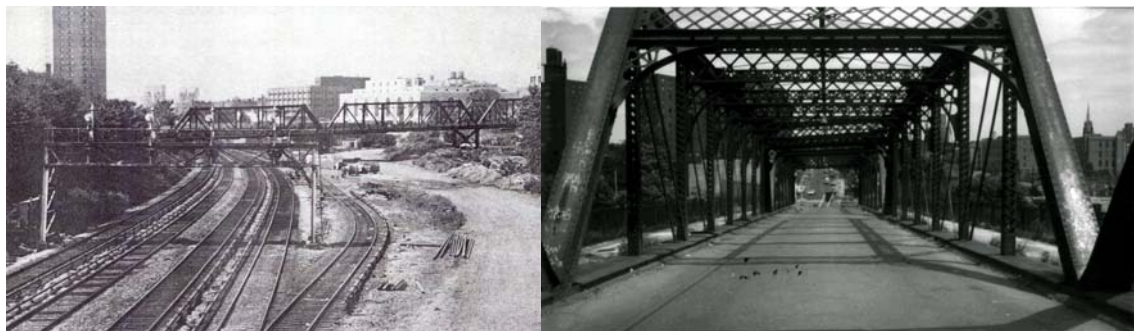
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as hand-protective screening. A new cast-in-place reinforced concrete deck will be installed. The proposed west ramp will be enclosed with a stone masonry wall to match the existing park wall. The new bridge will comply with ADA regulations.

During construction, pedestrian traffic will be detoured to the 71st and 81st Street pedestrian bridges. Construction is expected to begin in March 2007, and is expected to be complete in November 2007.

153RD STREET BRIDGE OVER METRO NORTH (BRONX)

This project, currently in the design and environmental impact assessment stage, will include a two-span, single tower, cable stayed vehicular bridge. It will be the first of its kind in New York City. The new four lane bridge will extend East 153rd Street in the Bronx across the Mott Haven rail yards from Morris Avenue to the Grand Concourse just north of Hostos Community College in the Melrose Section of the Bronx. This bridge will complete a link the street lost in the early 1980's when the old turn-of-the-century bridge was closed and demolished because of its age and deterioration. Construction of the new bridge is tentatively scheduled to begin in December 2006 and be completed in December 2009.



Original 153rd Street Bridge. Bridge in Early 1980's.

The new bridge will significantly ease congestion on the current east-west streets in the South Bronx, along 149th and 161st Streets as well as on the local streets in this neighborhood. With this bridge, East 153rd Street will be a continuous east-west thoroughfare from the commercial hub of Third Avenue to the Civic Center area of the Grand Concourse. It will serve the new revitalization projects of Melrose Commons, the Concourse Shopping Plaza and the Bronx Criminal Court Complex.

The bridge's graceful design, similar to the Tampa Bay Bridge in Florida, will create a very prominent landmark for this neighborhood. The cable-stayed structure will contain a tower rising above East 153rd Street to add to the Bronx skyline, with ribbons of steel cables holding up the roadway structure. The roadway will run between the two towers, and the sidewalk and bicycle lanes will be located on cantilever sections outside of the towers. This will reduce the overall depth of the superstructure by reducing the floor beam depths.

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Rendering of New 153rd Street Bridge

EAST 183RD STREET BRIDGE OVER METRO NORTH (BRONX)

This project will include the removal of the existing single 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 rehabilitation of existing abutments and wing walls. The bridge will be closed during construction and will be reconstructed in a single stage. Construction is expected to begin in February 2007 and is expected to be completed in April 2008.



East 183rd Street Bridge in 2002. (Credit: NYSDOT)

INNOVATIONS & ACCOMPLISHMENTS

Design-Build

In 2005 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.

RIKERS ISLAND BRIDGE OVER RIKERS ISLAND CHANNEL (QUEENS)

This project, currently in the preliminary engineering phase, involves replacing the superstructure of this rapidly deteriorating bridge. Cores taken from the bridge deck in 2003 revealed that the estimated useful life of the deck will soon expire, thus making bridge rehabilitation necessary. In 2004, the bridge carried approximately 14,979 vehicles per day.



Rikers Island Bridge in 2001. (Credit: NYSDOT)

The Division had previously completed the replacement of the bridge's substructure in 1998. The salty environment of the channel significantly contributes to the deterioration of the superstructure. This continued deterioration could also negatively impact the recently completed substructure work. The Division considered Design-Build to be the best project delivery method for this project, as it can expeditiously bring projects to the construction stage, and is the preferred method in all cases where time is of the essence. As the bridge exclusively serves the Rikers Island Correctional Facility, this project will require coordination with the Department of Corrections. Construction is expected to begin in 2012.

As an interim measure, a project was planned to rehabilitate the bridge deck. The Notice to Proceed was issued to the contractor with a start date of August 24, 2005. One lane of traffic is being maintained at all times. Repairs are expected to be complete by the end of 2006.

INNOVATIONS & ACCOMPLISHMENTS

HARLEM RIVER DRIVE AT EAST 127TH STREET (MANHATTAN)

This project, currently in its final design phase, 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, and allows at-grade access for a future Park/Promenade to be developed by the Department of Parks at 127th Street between the Harlem River Drive and the Harlem River. The viaduct currently carries two northbound and three southbound traffic lanes and serves approximately 79,000 vehicles per day. This area currently has 40 times the State average number of accidents. The bridge will be reconstructed in six stages. During construction, two southbound lanes and three northbound lanes of traffic will be maintained. Construction is expected to begin in summer 2011, and is expected to be complete in summer 2014.



Harlem River Drive at East 127th Street.

SEVEN RAMPS 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. 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 seven ramps carry bus and passenger car traffic in and out of the facility. Six of the seven ramps were constructed in 1948, with the seventh dating back to the early part of the 20th century. The last major structural work on these bridges was a deck replacement project in 1985 that only addressed three of the seven bridge structures. The planned design-build project will upgrade these seven structures and provide a design life of 75 years. The project will provide new decks and eliminate joints where feasible, retrofit poorly detailed steel connections, and rehabilitate/replace deteriorated steel super and substructure members, as well as install new paint systems. In addition, the existing load-restricted north ramp adjacent to the Richmond County Bank Stadium 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. Construction is expected to begin in summer 2007, and is expected to be complete by late summer 2009.

INNOVATIONS & ACCOMPLISHMENTS



Aerial View of the Staten Island Ferry Terminal Ramps.

BELT PARKWAY BRIDGE OVER MILL BASIN (BROOKLYN)

The next significant work on this bridge will consist of the replacement of the rapidly deteriorating bridge grid deck. A Notice to Proceed for this project was issued to the contractor with a start date of October 25, 2005. The design is complete, and grid panel fabrication is underway. Construction is expected to be complete by September 2007. The contract provides incentives/disincentives of \$10,000 per calendar day, with a maximum incentive amount of \$300,000, to ensure timely completion of the construction activities that impede traffic. The new deck will serve traffic needs until April 2012. At that time, a new bridge carrying the Belt over Mill Basin will have been built and the existing one will be demolished.



Mill Basin Bridge Deck. Contractors, Tamara Berlyavsky, and Ronald Rauch Inspecting the Deck.

When and Where Unit

In 2005, the following structures were worked on under the Division's When and Where contracts: Belt Parkway Bridge over Fresh Creek, Belt Parkway Bridge over Paerdegat Basin, Belt Parkway Bridge over Rockaway Parkway, Boston Post Road Bridge over Hutchinson River, Access Ramp to Brooklyn Bridge from FDR Drive Southbound over Frankfort Street, Brooklyn-Queens Expressway over Nassau Street, Bruckner Expressway over Amtrak, Central Drive Bridge over Transverse Road #1 (at 65th Street), Delancey Street Pedestrian Bridge over FDR Drive, Promenade over FDR Drive from East 79th to East 91st Streets, Flushing Meadow Park Bridge over College Point Boulevard, Grand Concourse over East 161st Street, Gun Hill Road Bridge over Bronx River Parkway, Harlem River Drive Northbound Ramp over Harlem River (ramp to Trans-Manhattan Expressway), Henry Hudson Parkway Viaduct over West 72nd to West 79th

INNOVATIONS & ACCOMPLISHMENTS

Street, Henry Hudson Parkway Bridge between 94th and 98th Streets over Amtrak, Hill Drive Bridge over Prospect Park Lake, Houston Street Bridge over FDR Drive, Hutchinson River Parkway Bridge over Hutchinson River, Jackie Robinson Parkway Bridge over Metropolitan Avenue, Jamaica Avenue Bridge over Cross Island Parkway, Linden Boulevard over BCIP, Matthewson Road Bridge over MacCracken Avenue, Motor Parkway Pedestrian Bridge over Springfield Boulevard, Motor Parkway Pedestrian Bridge over 73rd Avenue, Pelham Parkway Bridge over Amtrak & Metro North, Riverside Drive over West 125th Street and Others, Roosevelt Avenue over Van Wyck Expressway, Roosevelt Island Bridge over East River/East Channel, Rust Street Bridge over Flushing Avenue, Shore Road over Hutchinson River (Bronx) (a.k.a. Pelham Bay Bridge), Wards Island Pedestrian Bridge over Harlem River, West Drive over Transverse Road #4, Willis Avenue Bridge over Harlem River, East 6th Street Pedestrian Bridge over FDR Drive, East 10th Street Pedestrian Bridge over FDR Drive, 14th Avenue Bridge over Cross Island Parkway, East 78th Street Pedestrian Bridge over FDR Drive, West 79th Street Rotunda Complex, 80th Street Bridge over 71st to 77th Avenues, 145th Street Bridge over Harlem River, 149th Street Bridge over Cross Island Parkway, West 173rd Street Pedestrian Bridge over Amtrak 30th Street Branch, West 181st Street Pedestrian Bridge over Henry Hudson Parkway NB, 191st Underground Street between St. Nicholas Avenue to Broadway IRT, and 236th Street Pedestrian Bridge over Henry Hudson Parkway.



Installing Timber Shielding and Pigeon Netting at the Belt Parkway Over Rockaway Parkway Bridge.



Installing Mesh Cover Strips Over the Drainage Gratings Along the Sides of the 191st Underground Street to Broadway.



236th Street Pedestrian Bridge over Henry Hudson Parkway: Repairing the Abutment Walls.

INNOVATIONS & ACCOMPLISHMENTS



236th Street Pedestrian Bridge over Henry Hudson Parkway: Epoxy Grout Repairs of Cracks and Between the Stones. Waterproofing the Deck.



Reinforcing A Flagged Stringer Web at the Brooklyn-Queens Expressway Bridge Over Nassau Street.



Completing the Repairs at the BQE Bridge Over Nassau Street.



Central Drive Bridge Over Transverse Road #1: Preparing Bracing and Mesh to Protect the Bridge From Falling Debris.



Central Drive Bridge: Installing Arch Stone Bracing and Expanded Metal Mesh. Completed Repairs.

INNOVATIONS & ACCOMPLISHMENTS



Riverside Drive Bridge Over West 125th Street: Rebuilding the Beginning Abutment East Corner Parapet Wall.

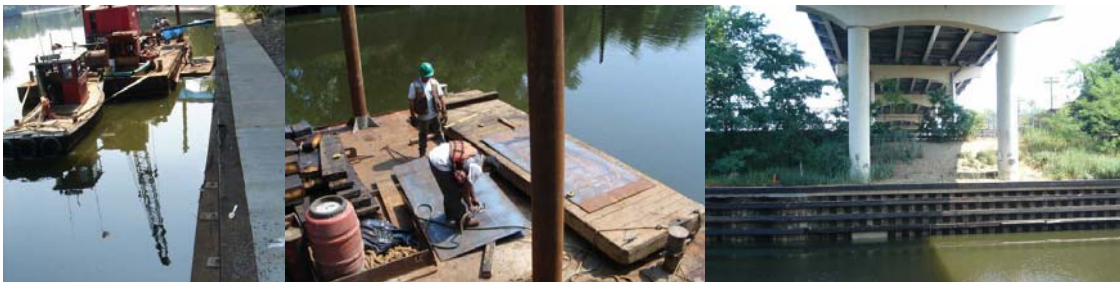


Riverside Drive Bridge: Completed Repairs.

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. The work 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 underwater-licensed inspectors 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. A Notice to Proceed for this project was issued to the contractor with a start date of April 18, 2005.

Marine bridge repairs already completed include 145th Street Bridge over the Harlem River, Hutchinson River Parkway Bridge over the Hutchinson River, Shore Road Bridge over the Hutchinson River, Boston Post Road over the Hutchinson River, Depot Place Bridge over Conrail Hudson Division, Belt Parkway Bridge over Mill Basin, Roosevelt Island Bridge over the East River East Channel, and Hamilton Avenue Bridge over the Gowanus Canal.



Working on a Barge to Repair the Damaged Fender System at the Boston Post Road Bridge over the Hutchinson River. (Credit: Thomas Leung)

INNOVATIONS & ACCOMPLISHMENTS



Director of the When and Where Unit Sudhir Jariwala Measuring the Diameter of Holes Drilled Through the 4-Foot Thick Walls of the Shore Road Over Hutchinson River Bridge Operator House. Drilling the Holes for Threaded Steel Rods. Working From the Barge.

Some of these locations experience repeated damage due to heavy marine traffic and/or a narrow channel. The issuance of new flags necessitates new visits to even recently completed projects. Timber fender systems are subject to recurring hits by barge traffic, and consequently require periodic restoration. 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.

Currently scheduled projects include the Belt Parkway Bridge over Fresh Creek, and the Belt Parkway Bridge over Paerdegat Basin, as well as newly flagged conditions at the East 78th Street Pedestrian Bridge over FDR Drive, and the Roosevelt Island Bridge over the East River East Channel.

Engineering Review and Support

IN-HOUSE DESIGN

In-House Design staff prepares plans and specifications for bridge replacement/reconstruction 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.

Projects underway in 2005 included the Belt Parkway Bridge over Paerdegat Basin in Brooklyn, which is in the final design stage. The existing bridge with its nest of thirteen piers will be replaced by two split bridges, one each for eastbound and westbound traffic. The bridge for eastbound traffic shall have four piers whereas the bridge for westbound traffic shall have two piers. This is the first bridge to be designed by NYCDOT with trapezoidal steel box girders utilizing high performance steel and seismic isolation sliding bearings. In addition, the aesthetics of the bridge will be enhanced by its nightly illumination utilizing light emitting diodes on both fascias and piers.

Other projects under include the Hempstead Avenue Bridges over Cross Island Parkway and Cross Island Parkway Service Road, Springfield Boulevard Bridge over Belt Parkway, Union Turnpike Bridge over Cross Island Parkway (and Creedmoor Center Road), Hillside Avenue Bridge over Cross Island Parkway, Linden Boulevard Bridge over Cross Island Parkway, and Sunrise Highway (Westbound) over Belt Parkway (Westbound) in Queens.

INNOVATIONS & ACCOMPLISHMENTS



Rendering of New Belt Parkway Bridge Over Paerdegat Basin. (Credit: Alexander Berens)

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 2005 included the Willis Avenue, Broadway, 145th Street, Third Avenue, and Wards Island Pedestrian Bridges over Harlem River; Third Street, Carroll Street, and Hamilton Avenue Bridges over Gowanus Canal; Metropolitan Avenue Bridge over English Kills, and Belt Parkway Bridge over Paerdegat Basin in Brooklyn; Roosevelt Island Bridge over East River Channel; Bruckner Expressway NB & SB Service Road (Unionport Bridge) over Westchester Creek in the Bronx; and the Williamsburg and Brooklyn Bridges.

ENVIRONMENTAL ENGINEERING

The Environmental Engineering staff of the Quality Assurance Section provides environmental oversight on all capital projects in the Division. Lead paint abrasive cleaning projects underway or completed in 2005 included the Queensboro Bridge, the Metropolitan Avenue Bridge, and the Williamsburg Bridge. In addition, the unit continued to provide emergency response related to environmental issues. During the October 2005 Queensboro Bridge containment fire, unit staff reported to the site and provided guidance and direction during the cleanup of the post-fire environmental contamination to ensure the timely opening of the bridge to traffic.

As part of the Environmental Committee for the Office of Environmental Assessment and Compliance, the unit assisted in developing environmental procedures such as spill prevention, control and countermeasures protocols, roadway spill clean-up protocols, RCRA contingency plans and the disposal of universal waste.

The unit performs quarterly water monitoring in compliance with the pending NYSDEC SPDES system for seven bridges that cross waterways such as the Gowanus Canal, English Kills Creek and the Newtown Creek. Environmental oversight was provided to emergency work-over-water projects on the Brooklyn Bridge, Mill Basin Bridge, Roosevelt Island Bridge, Willis Avenue Bridge, Borden Avenue Bridge, Greenpoint Avenue Bridge, and Metropolitan Avenue Bridge. This environmental oversight ensured that there was no environmental impact to the city's waterways during emergency repair projects.

The unit ensures compliance with storm water regulations, hazardous waste management, Clean Air Act requirements, Clean Water Act requirements, asbestos regulations, lead paint removal protocols, and health and safety on NYCDOT bridge projects.

In addition, the staff continued the implementation of a new quality assurance plan for coating inspection and application on Division bridge structures. Services are implemented through the use of consultant contracts. Coating inspection services and engineering were provided on numerous projects such as the Queensboro Bridge Painting Project; rehabilitation of the Liberty, Pitkin and Sutter Avenue Bridges; and the Metropolitan Avenue Bridge.

INNOVATIONS & ACCOMPLISHMENTS

BRIDGE PROJECT SPECIFICATIONS

In 2005, the Engineering Support Section prepared and/or reviewed specifications for 22 bridge rehabilitation and reconstruction contracts which included nine combined or multiple-bridge contracts. Three of these contracts totaling approximately \$105 million in construction costs were bid and are currently in different stages of award and registration. One contract with an estimated construction cost of \$28 million that was approved by the Law Department in 2004 will have to be resubmitted for approval as its advertisement has been delayed and some changes have been made to it. Another Contract is in the Law Department approval process. The specifications for the remaining seventeen contracts are in various stages of preparation.

Notable among the bridge contracts prepared and/or reviewed are the Belt Parkway Bridge over Gerritsen Inlet; East 153rd Street Bridge over Metro North; Rehabilitation of the Grand Concourse Bridge over 161st Street (includes the Grand Concourse from 161st to 166th Streets); Belt Parkway Bridge over Bay Ridge Avenue; Belt Parkway Bridge over Nostrand Avenue; Belt Parkway Bridge over Rockaway Parkway; Roosevelt Island Bridge over East River/East Channel; Hamilton Avenue Bridge over the Gowanus Canal; Rikers Island Bridge; Belt Parkway Bridge over the Fresh Creek Basin; Woodside Avenue Bridge over LIRR; and Belt Parkway Bridge over Paerdegat Basin.

CONVERSION OF DIVISION ENGINEERING ARCHIVES

Since the first digitizing contract of engineering records began six years ago, we have converted over 58,000 full-size drawings and 20,000 construction photographs into digitized image and data formats, a total of 43 CD-ROMs.

The next phase of the project will consist of the digitizing of the microfilm collection. Since we began microfilming contract and other drawings in the early 1980s, we have accumulated more than 360 microfilm rolls. Microfilming of records is rapidly becoming an obsolete technology as it cannot be used to perform rapid searches, sorting of information, or sending and sharing files via the Internet and/or copying electronic files to CDs.

While we await the award of this contract, we upgraded our microfilm reader/printer. This newer model has the following features and capabilities: standard PC/network connectivity to send and print images over the Agency network; digital image convertibility -- once images are scanned, they may be conveyed electronically via fax and E-mail, uploaded onto the Internet, or stored on CD-ROM; compatibility with all microfilm formats, including aperture cards submitted to us by NYSDOT; automatic switching between negative or positive film images; productivity enhancements -- automatic focusing and exposure, background erasure, automatic skew correction; and high-quality (600-dpi) resolution printing with automatic enlargement for large-format, ledger-size (11" x 17") printouts.

EMERGENCY MONITORING OF RETAINING WALL ALONG HENRY HUDSON PARKWAY

On May 12, 2005, a privately owned 100-foot retaining wall above Riverside Drive and Henry Hudson Parkway (near 181st Street) collapsed in Washington Heights, burying cars under rocks, dirt and tree, and shutting down one of Manhattan's busiest arteries during rush hour. The retaining wall, built in 1908, buttresses the land surrounding the apartment buildings. Water building up behind the nearly century-old retaining wall likely caused it to crumble.

INNOVATIONS & ACCOMPLISHMENTS



The Collapsed Retaining Wall Near 181st Street.

Near the collapsed wall, there is an approximately 1,500 foot long gravity stone retaining wall owned by the City, which is also in aged condition. A surveying group was assigned to perform periodic monitoring of movement of the wall until a hired consulting firm takes over the job.



Survey Crew (Mariya Zhurakhinskaya, Aleksandr Kotlyanskiy, Alfred Lee, and Thee-Shiun Ken)
Conducting Periodic Monitoring of the Retaining Wall.
(Credit: Eric Ken)

The survey crew from DDC installed forty-one reference points along the wall. Division personnel utilized surveying equipment to obtain the necessary information for calculating the coordinates for each reference point. By comparing the coordinates of the most recent reading with the initial reading on each reference point, we can determine the movement of the wall.

RETAINING WALL INSPECTION

In 2001, a study was completed that identified, located, determine the ownership, and made condition assessments of the retaining walls under the City's jurisdiction, and inventoried the retaining walls associated with the arterial highways and streets within the City's five boroughs, as well as the retaining walls associated with the City-owned bridges. The walls were photographed and located on a GIS map.

After the May 2005 retaining wall collapse on the Henry Hudson Parkway, the Bureau began an urgent project to manage the inspection and condition assessment of the City-owned retaining walls. The Engineering Review Section assembled a scope and task description for the inspection of 622 walls by a consultant. The inspection identified the poorly rated walls which will need immediate repair to prevent their collapse. Seventeen such walls were identified, and their rehabilitation will be handled by DDC.

INNOVATIONS & ACCOMPLISHMENTS



Carpenters Ruben Urena, Thomas Gilmore, and Adam Muhleisen Preparing Forms to Temporarily Shore Up the Damaged Retaining Wall at Decatur Avenue and 197th Street. (Credit: Michele N. Vulcan) The Completed Shoring.

TRUMP/NEW WORLD PROJECT

The Trump/New World project (Riverside Drive between 59th and 72nd Streets) includes the construction of seven new bridges, a ramp, and connector roads along Riverside Drive as a part of the residential and commercial development over the former Penn Central Rail Yard. 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 project is now in its second stage, and is 75 percent complete overall.

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 the Queensboro and Williamsburg 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.

In the winter of 2004-2005, a total of 52,000 gallons of anti-icing chemicals were applied on the roadways of all four East River Bridges.

INNOVATIONS & ACCOMPLISHMENTS

INSPECTIONS

In 2005, Inspections covered 114 bridges and 627 spans. Emphasis was placed on ensuring public safety through the monitoring of potentially hazardous conditions and temporary repairs. The unit performed 339 monitoring inspections, and 366 special winter monitoring inspections of cellular structures, shorings, and potential fire hazards. In addition, 288 emergency inspections were conducted in response to hot line calls, in-house requests, or citizen complaints.

The unit also completed the preparation of a software and hardware upgrade of the system for bridge inspections using portable computers. The new Bridge Data System (BDS) will allow inspection reports to be generated and transmitted electronically. It will also provide access to data from the latest inspection reports on all bridges to all Division units. In addition, when an emergency arises, our inspectors will be able to send photographs and other information to the main office via a wireless connection to the internet. This feature will enable bridge repair engineers to assess the condition and dispatch repair crews with the appropriate equipment in a timely manner. The test version of the system is being prepared for field verification in early 2006, along with the selected portable computers.



Substantial Completion Inspection of Pitkin Avenue Bridge Over LIRR. (Credit: Fred Arzideh)
Division Personnel Inspecting Paerdegat Bridge Utilizing a Barge. (Credit: Avelino Leyco Jr.)

In 2002, the Division began to receive State DOT bridge inspection reports in CD-ROM 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.

STRAIN GAUGE TESTING

The monitoring of cracks in the Manhattan Bridge anchorages utilizing displacement gauges by Strain Monitoring Systems continued in 2005. In a demonstration project provided at no cost to the City, the reduction in the main span torsion on the Manhattan Bridge under train loads was monitored with fiber-optic strain gauges as the stiffening of the structure approached conclusion. The displacement gauges at the Manhattan Bridge Brooklyn anchorage were removed in early December 2005, in order to begin the rehabilitation of the repairs of the cracks they were monitoring. Certain cracks in the Manhattan side anchorage will remain under monitoring, as the results so far indicate that repairs are not warranted.

CLEANING

In 2005, 9,279 cubic yards of debris were removed from bridges and their surrounding areas, and 869 drains were cleaned.

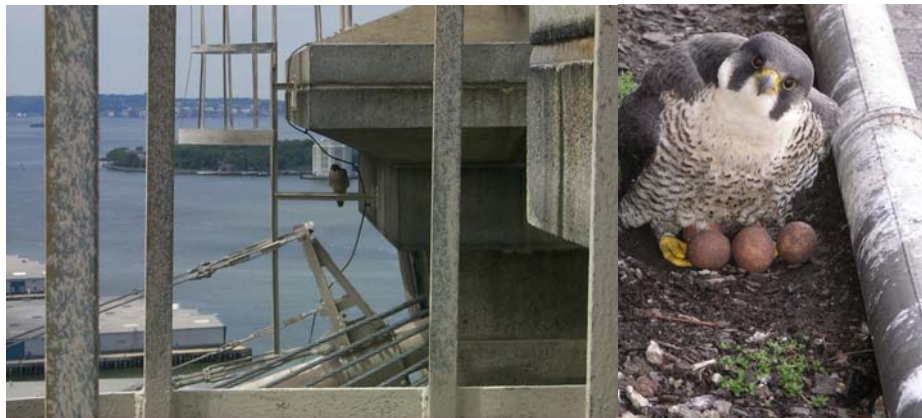
INNOVATIONS & ACCOMPLISHMENTS

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. Chicken wire or heavier wire fabric is attached to metal studs to create panels which are used, much like a drop ceiling, to keep the pigeons out. The panels rest horizontally on top of the bottom flanges of the steel beams, and vertically along the top of the abutment walls. The pigeons are caged out. This method is currently in use under the Brooklyn Bridge approach (over Cadman Plaza East), Shore Parkway over Bay Ridge Avenue, the Pulaski Bridge approach (over Clay Street), the Belt Parkway Bridge over Bay Parkway, and the Belt Parkway Bridge over Bay Ridge Avenue. In addition, a pigeon deterrent system involving low voltage wires was installed 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 a year 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 2005, pigeon dropping removal and/or pigeon proofing were performed at the Park Avenue Tunnel over East 34th Street, the Livonia Avenue Pedestrian Bridge over LIRR, the Roosevelt Island Bridge over the East River and East Channel, the Broadway Bridge over the Harlem River, the 207th Street (University Heights) Bridge over the Harlem River, Cadman Plaza and Pearl Street Arch at the Brooklyn Bridge, Belt Parkway Bridge over Mill Basin, Belt Parkway Bridge over Bay Parkway, Belt Parkway Bridge over Bay Ridge Avenue, Cadman Plaza over the Brooklyn-Queens Expressway, the Hutchinson River Parkway Bridge over the Hutchinson River, Queens Boulevard Bridge over the Long Island Expressway, and the 80th Street Bridge over the Long Island Expressway.



Nature's Pigeon Deterrent—A Falcon on the Brooklyn Bridge South Side Tower.
Falcon Family on the Williamsburg Bridge. (Family Credit: Russell Holcomb).

INNOVATIONS & ACCOMPLISHMENTS

PAINTING

In 2005, the following bridges were painted: Astoria Boulevard Bridge (Eastbound) over BQE (Westbound), Belt Parkway Bridge over Bedford Avenue, Belt Parkway Bridge over Fresh Creek, Belt Parkway Bridge over Rockaway Parkway, Braddock Avenue Bridge over Cross Island Parkway, Brooklyn-Queens Expressway over Prospect Street, Brooklyn-Queens Expressway over Washington Street, Bruckner Boulevard Overpass over 133rd to 135th Streets, Bulova Avenue Bridge over BQE West Leg, Carroll Street Bridge over the Gowanus Canal, Clintonville Street Bridge over Cross Island Parkway, Cropsey Avenue Bridge over Belt Parkway, Cross Island Parkway Bridge over Dutch Broadway – 115th Avenue, East Tremont Avenue Bridge over Bronx River, Elliot Avenue Bridge over Queens Boulevard, Grand Concourse Bridge over Burnside Avenue, Grand Concourse Bridge over East 167th Street, Grand Concourse Bridge over East 204th Street, Hempstead Avenue Bridges over Cross Island Parkway, Highland Boulevard Bridge (NB) over Vermont Avenue, Hunters Point Avenue Bridge over Dutch Kills, Knapp Street Bridge over Belt Parkway, Northern Boulevard Bridge over Alley Creek, Pennsylvania Avenue Bridge over Belt Parkway, Queens Boulevard Bridge over Access Road to BQE (SB), Queens Boulevard Bridge over Jackie Robinson Parkway, South Conduit Boulevard Bridge over Southern Parkway, Union Turnpike Bridge over Austin Street, Whitelaw Pedestrian Bridge over Conduit Avenue, Winchester Boulevard Bridge over Cross Island Parkway, Woodhaven Boulevard Bridge over Queens Boulevard, Yankee Stadium Pedestrian Bridge over East 153rd Street and Metro North, 3rd Avenue Bridge over Gowanus Canal, 3rd Avenue Bridge over LIRR Bay Ridge, 3rd Street Bridge over Gowanus Canal, East 12th Street Bridge over Belt Parkway, 14th Avenue Bridge over Cross Island Parkway, 25th Street Pedestrian Bridge over FDR Drive, 49th Street Bridge over BQE West Leg, 65th Place Bridge over Brooklyn-Queens Expressway, Pedestrian Bridge over East 128th Street, 147th Street Bridge over Cross Island Parkway, and 149th Street Bridge over Cross Island Parkway.



Supervisor Bridge Painter Osvaldo Lima Checking the Progress of Bridge Painters Brian Kavanagh, Thomas Jones, and Michael Scohi on the East 12th Street Bridge Over Belt Parkway. (Credit: Sergiy Parayev)
Queensboro Bridge Work Platform & Containment. (Queensboro Credit: Daniel Lima)

INNOVATIONS & ACCOMPLISHMENTS



Director of Bridge Painting Leon Levit (in White Hard Hat), Supervisor Bridge Painter Hughie Flood, and Bridge Painters Frank Hollen, Robert Avellino, Willie Tyler, and Andrew Law Discussing the Completion of the Painting Project at the Pedestrian Bridge over East 128th Street.
(Credit: Sergiy Parayev)

During 2005, the following structures were also painted: Borden Avenue Bridge Operator House, DEP Plant at Bowery Bay, Linden Place Pumping Station at 31st Street, DEP Plant at Port Richmond (Staten Island), DEP Plant at Red Hook, Greenpoint Avenue Bridge Operator House, Riverside Drive Facility at West 158th Street, Railings of Rust Street Bridge over Flushing Avenue, Triborough Bridge Pumping Station at Astoria Boulevard and East 31st Street, Union Street Bridge Operator House, and 3rd Street Bridge Operator House.

GRAFFITI REMOVAL

In 2005, 4,403,955 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.



Pressure Washing Machine Used for Graffiti Removal. It is Set to 2500 psi and 212° F. Removing Graffiti From the Base of the Manhattan Bridge Facing the FDR Drive. (Manhattan Credit: Cesar Pazmino)

INNOVATIONS & ACCOMPLISHMENTS



Removing Graffiti From the Shore Road Circle Bridge & the Williamsburg Bridge Plaque.
(Credit: Cesar Pazmino)



Bridge Painters Frank Duic and Russell Newme Feeding the Spray Pump
And Preparing the Paint.

During 2005, graffiti was also removed from the following structures: Annadale Road Overpass at Richmond Parkway, Belt Parkway Bridges, Belt Parkway Bridge over 26th Avenue, Belt Parkway overpasses between Exit 1 and Exit 3, Brooklyn Bridge Park, Brooklyn-Queens Expressway at the 48th Street Exit, Bronx Boulevard between East 240th Street and East 241st Street, Bruckner Boulevard between Pugsley Avenue and Chatterton Avenue, Canterbury Avenue/Loop Road, Cross Bay Boulevard Bridge over Conduit Avenue, Cross Island Parkway, Horace Harding Boulevard between 136th and Lawrence Streets, Horace Harding Expressway, Hutchinson River Parkway Bridge over Hutchinson River, Jerome Avenue, Long Island Expressway Overpass at 136th Street, Long Island Expressway Overpass at 148th Street, Markwood Road Bridge over Jackie Robinson Parkway, Mosholu Parkway, Prospect Avenue between Terrace Place and Seeley Street, Pulaski Bridge over Newtown Creek, Seeley Street Bridge over Prospect Avenue, Westchester Avenue Overpass at Bronx River Parkway, Westside Highway, Woodhaven Boulevard between Union Turnpike and Metropolitan Avenue, East 3rd Street between Foster Road and Elmwood Avenue, 4th, 5th, 6th, 7th, 8th, and 13th Avenue Bridges between 61st and 65th Streets, 27th Avenue Pedestrian Bridge over Belt Parkway, 59th Avenue and Seabury Street, 102nd Street Bridge over Hawtree Basin, 163rd Street Pedestrian Bridge over Hawtree Basin, 174th Street Underpass between Walton and Selwyn Avenues, and 191st Underground Street to Broadway.

INNOVATIONS & ACCOMPLISHMENTS



Bridge Painters Vlatko Zic, Frank Duic, and Drago Milin Removing Graffiti From Woodhaven Boulevard.



Bridge Painter Drago Milin Removing Graffiti From the Grand Central Parkway at 27th Avenue.

RESEARCH AND PRESENTATIONS

In 2005, research work and/or case histories of the Division were presented in the following proceedings:

ASCE Metropolitan Section Construction Group Winter Seminar: Transportation Projects, New York City, 7 – 8 February 2005. Norrish III, C., and Liebowitz, J. *NYCDOT Belt Parkway/Ocean Parkway Design Build Project*.

ASCE Metropolitan Section Construction Group Winter Seminar: Transportation Projects, New York City, 7 – 8 February 2005. Sklavounakis, C. *NYCDOT Design-Build Experience*.

2005 ASCE Structures Congress: Metropolis & Beyond, New York City, 20 – 24 April 2005. Dr. Bojidar Yanev, the Division's Executive Director of Inspections and Bridge Management, was member of the organizing committee and chaired the session on bridge rehabilitation.

22nd Annual International Bridge Conference, Pittsburgh, Pennsylvania, 13 – 15 June 2005. Norrish III, C., Sklavounakis, C., Novak, A., and Atkins, P. *Replacement of the Belt Parkway over Ocean Parkway*.

4th KISTEC International Seminar on Safety of Infrastructures: Smart Structure Technologies for Maintenance of Infrastructures, Gyeong-ju, Korea, 22 July 2005. Yanev, B. *From Emergency Management to Health Monitoring of the New York City Bridges*. Dr. Yanev also co-chaired the session on monitoring and maintenance of bridges and buildings.

Third New York City Bridge Conference, New York City, 12 – 13 September 2005. Perahia, H. *City Island Cable-Stayed Bridge in New York City*.

Third New York City Bridge Conference, New York City, 12 – 13 September 2005. McGuire, R., Toro, G., Kishore, K., Patel, J., Jain, S., Fanjiang, G., and Gajer, R. *Seismic Hazard Analysis for New York City Bridges*.

INNOVATIONS & ACCOMPLISHMENTS

Third New York City Bridge Conference, New York City, 12 – 13 September 2005. Sklavounakis, C., Atkins, P., Norrish III, C., and Liebowitz, J. *Replacement of the Belt Parkway Bridge Over Ocean Parkway*.

Coates, A., Bluni, S., Connolly, P., Patel, J., and Chandiramani, B. "Swinging Into Action," Civil Engineering, December 2005.

Dr. Yanev wrote Chapter 11, "Bridges" in "Part III: Survey and Assessment of Structural Conditions" of the manual *Structural Condition Assessment*. John Wiley & Sons, 2005.

Dr. Yanev made a presentation on bridge life-cycle management to the committee for the construction of the bridge at the Messina Straits, Rome, 26 May 2005.

Dr. Yanev was the invited keynote speaker and presented papers at the SPIE 12th Annual International Symposium on Smart Structures and Materials in San Diego, California, 6 - 10 March 2005; and at the Le Pont International Colloquium on bridge management in Toulouse, France, 24 October 2005.

In addition, Dr. Yanev continued his participation on the technical advisory panels of the National Council for Highway Research (NCHR) for the following projects: FHWA DTFH61-98-C-00094 *Seismic Vulnerability of the Highway System* and NCHRP 10-57 *Strength Evaluation of Parallel Wire Suspension Bridge Cables*. The results of the latter work were published in NCHRP Report 534 "Guidelines for Inspection and Evaluation of Suspension Bridge Parallel-Wire Cables." The experimental part of the project, consisting of controlled tests at Columbia University and field tests at the East River Bridges is now underway.

Dr. Yanev serves on the ASCE Committee working on revising the NYC Building Code. He continues to serve on the advisory panel of the NYC Department of Buildings for emergency response after citywide disasters.

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 2005 included: skid-resistant coatings to steel substrates, comprehensive surface condition management systems, blue shield waterproofing membrane, pavement preservation materials and equipment, and SPS bridge deck.



Director of Bridge Management Unit Kevin McAnulty and Engineering Intern Devin Plantamura Conducting Ultrasonic Testing of the Pins and Eyebars on the Queensboro Bridge. (McAnulty Credit: Devin Plantamura)
(Credit: Kevin McAnulty)

INNOVATIONS & ACCOMPLISHMENTS



Consultant Conducting Ultrasonic Testing on the Queensboro Bridge. (Credit: Kevin McNulty) Engineer-in-Charge Bala Nair Atop the Bridge. (Credit: Peter Basich)



Bridge Repairer and Riveter David Collins Participating in the Demonstration of Heat Straightening Techniques for Damaged Steel Bridges at a FHWA Workshop in New Hartford, New York. (Credit: George Klein) Director of Bridge Inspection Jyotish Shah, Engineering Intern Devin Plantamura, and Executive Director of Inspections and Bridge Management Dr. Bojidar Yanev Atop the Brooklyn Tower of the Brooklyn Bridge. (Credit: Avelino Leyco)

Appendix A

BRIDGE CAPITAL PROGRAM

East River Bridge Rehabilitation Plans **A-1**

Bridges Under Construction **A-2**

Component Rehabilitation **A-3**

Bridges Under Design **A-4**

MANHATTAN BRIDGE 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. (2009)	87.80***
• 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 deck. 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"> 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. (Present) 	185.00**
<ul style="list-style-type: none"> 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) 	148.39**
<ul style="list-style-type: none"> Seismic Retrofit (2009) 	33.00***

TOTAL: \$ 817.01

- * Construction Complete
- ** In Construction
- *** In Design
- **** Research and Development (completed)

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 Ave.) (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)	221.55*
• Cleaning and painting main bridge upper trusses. (In Progress)	167.75**
• Miscellaneous Items (In Progress)	38.10**
• Seismic Retrofit	30.00***
TOTAL:	\$ 763.90

* Construction Complete

** In Construction

*** In Design

WILLIAMSBURG BRIDGE 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*

WILLIAMSBURG BRIDGE REHABILITATION ITEMS TOTAL ESTIMATED COST	
	Est. Cost (\$ in millions)
<ul style="list-style-type: none"> Portion of Contract #6 BMT track structure work transferred to Contract #5 south approach roadway reconstruction work. (1998) 	65.00*
<ul style="list-style-type: none"> Paint main and intermediate towers. (2001) 	14.90 *(1)
<ul style="list-style-type: none"> Reconstruct BMT Subway structure; install new signals, tracks and communication system. (2000) 	166.65*
<ul style="list-style-type: none"> Miscellaneous rehabilitation work: rehabilitation of towers, replace bearings, travelers, architectural work, painting of north and south trusses, suspender adjustment, tower jacking, construction of colonnades. 	172.90**
<ul style="list-style-type: none"> Replace north approach structures (Manhattan / Brooklyn), and rehabilitate north half of bridge. (2002) 	233.00*
<ul style="list-style-type: none"> Seismic Retrofit 	10.00***
TOTAL: \$ 989.56	

* 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.

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) and Rehabilitate Manhattan approaches and remaining ramps (A,B,C,F,G,I,J). (In Progress)	115.00**
• Painting	85.00**
• Seismic Retrofit	25.00**
• • Replacement of Travelers	18.00**
TOTAL: \$	488.27

* Construction Complete

** In Design

*** In Construction

BRIDGES UNDER CONSTRUCTION

CALENDAR YEAR 2005

CONTRACT # BRIDGE

HBX663	3 rd Avenue Bridge over Harlem River (& 3 rd Avenue Ramp to Bruckner Boulevard)
HBX1029	145 th Street over Harlem River
HBX1155	Manhattan College Parkway over Henry Hudson Parkway
HBX1156	West 239 th Street Bridge over Henry Hudson Parkway
HBX1157	West 252 nd Street Bridge over Henry Hudson Parkway
HBX1158	West 232 nd Street Bridge over Henry Hudson Parkway
HBK1034	Liberty Avenue over LIRR
HBK1039	15th Avenue Bridge over NYCT
HBK1040	18th Avenue Bridge over NYCT
HBK1095	Cortelyou Road Bridge over BMT Subway
HBK1097	Pitkin Avenue Bridge over LIRR
HBK1140	Hamilton Avenue Bridge over Gowanus Canal
HBK1149	Metropolitan Avenue Bridge over English Kills
HBX1163	Gun Hill Road Bridge over Metro North RR
HBK1168	Congress Street over Brooklyn-Queens Expressway
HBK1216	Lincoln Road Bridge over BMT Subway
HBKC063	52 nd Street Bridge over LIRR
HBKC1144	Brooklyn-Queens Expressway (WB) over Furman Street & Brooklyn-Queens Expressway (EB) over Brooklyn-Queens Expressway (WB)
HBQ1181/1182	Steinway Street Bridges over Grand Central Parkway WB & EB (Brooklyn-Queens Expressway)
HBQ1199	Andrews Avenue Bridge over LIRR
BRC156C	Manhattan Bridge – Contract #10
BRC156A	Manhattan Bridge (Contract #11)
BRC231C	Queensboro Bridge – Contract #6
BRC253CC	Williamsburg Bridge – Contract #8
BRC289D	Rikers Island Bridge over Rikers Island Channel
BRX287R	Macombs Dam Bridge over Harlem River
HB1023D	Belt Parkway over Mill Basin
HBMC023	Rehabilitation of electrical/mechanical components for First Avenue Tunnel, Park Avenue Tunnel, and Battery Park Underpass

BRIDGE CONSTRUCTION	
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<i>Projects Completed in Calendar Year 2005</i>	
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CONTRACT #	BRIDGE
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HBK1034	Liberty Avenue over LIRR
HBK1039	15 th Avenue Bridge over NYCT
HBK1040	18 th Avenue Bridge over NYCT
HBK1095	Cortelyou Road Bridge over BMT Subway
HBK1097	Pitkin Avenue Bridge over LIIR
HBK1168	Congress Street Bridge over BQE
HBKC063	52 nd Street Bridge over LIIR Bay Ridge
HBQ1199	Andrews Avenue Bridge over LIRR

Component Rehabilitation

The following table illustrates the program's performance over the last eight years:

	FY 98	FY 99	FY 00	FY 01	*FY 02	**FY 03	#FY 04	FY 05
Number of Bridges	13	21	24	16	0	0	12	9
Construction Cost	\$8.8 M	\$15.7 M	\$5.26 M	\$13.2 M	\$0	\$0	\$8.25	\$5.63

*No contracts were bid during the 2002 calendar year.

**One contract was bid during the 2003 calendar year, but was not registered until February 2005.

One contract was bid during the 2004 calendar year, but was not registered until February 2005.

In 2005, work was completed at the following bridges, in the indicated boroughs, at the final cost shown, in millions:

East Tremont Avenue Bridge over Hutchinson River Parkway (BX)	\$1.025
Grand Concourse Bridge over East 170 th Street (BX)	\$1.104
Grand Concourse Bridge over East 175 th Street (BX)	\$0.681
Bedford Park Boulevard Bridge over Metro North (BX)	\$0.218
East 168 th Street Bridge over Metro North (BX)	\$0.281
Jamaica Avenue Bridge over Cross Island Parkway (M)	\$0.254

TOTAL	<u>\$3,563 M</u>
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During calendar year 2005, work commenced at the following bridges.

East 149 th Street Bridge over Metro North (BX)
East 173 rd Street Bridge over Metro North (BX)
Fort Tryon Place over Entrance from Riverside Drive (M)

Component Rehabilitation

There are no projects “still under construction” since the 2004 *Annual Report* was issued.

27 component rehabilitation projects are slated to continue, commence or be completed in the 2006 calendar year. They are:

- Riverdale Avenue/HHP (BX)
- 3rd Avenue/Conrail Port Morris (BX)
- East 149th Street/Metro North (BX)
- East 156th Street/Conrail Port Morris (BX)
- East 173rd Street/Metro North (BX)
- East 238th Street (Nereid Avenue)/Bronx River Pkwy. & Metro North (BX)
- West 246th Street/HHP (BX)
- Cypress Hills Cemetery Road (E)/JRP (Q) (demolition)
- Cypress Hills Cemetery Road (W)/JRP (Q) (demolition)

- 3rd Avenue over Gowanus Canal (K)
- 49th Street over Grand Central Parkway (Q)
- Metropolitan Avenue Bridge over Conrail (Q)
- Bronx Boulevard N.B. over Bronx River (BX)
- Bronx Boulevard S.B. over Bronx River (BX)
- Fort Tryon Place over Entrance from Riverside Drive (M)
- Unionport Road over Amtrak (BX)
- E. 149th Street over Amtrak (BX)

BRIDGES UNDER DESIGN BY NEW YORK CITY

BIN NO.	CAPIS NO.	FEATURE CARRIED	FEATURE CROSSED	FY CNST	PHASE	BORO
206672A	HBCREPL00	E 174 TH ST (NORTH) PED BRIDGE	SHERIDAN EXPRESSWAY	2009	PD	B
206672B	HBCREPL00	E 174 TH ST (SOUTH) PED BRIDGE	SHERIDAN EXPRESSWAY	2009	PD	B
2241570	HBX199	E 153RD ST.	METRO NORTH RR	2007	FD	B
2075837	HBX1086	WESTCHESTER AVENUE	HRP	2007	FD	B
2241590	HBX1103	CONCOURSE VILL AVE	METRO NORTH RR HAR	2009	FD	B
1066510	HBX1131	BRUCKNER EXP.	WESTCHESTER CREEK	2007	FD	B
2241800	HBX1139	E 183RD ST	METRO NORTH RR HAR	2007	FD	B
NEW 2240200	HBX1148B	SHORE ROAD (NEW)	HUTCHINSON RIVER	2012	PD	B
2241210	HBX1152	BRYANT AVE	AMTRAK	2008	PD	B
2241710	HBX1160	CLAREMONT PKWY	METRO NORTH RR HAR	2007	FD	B
2240210	HBX1164	CITY ISLAND ROAD	EASTCHESTER BAY	2008	FD	B
2241810	HBX1172	E 188TH ST	METRO NORTH RR HAR	2012	FD	B
2241409	HBX1190	GRAND CONCOURSE	METRO NORTH RR HUD	2008	PD	B
2242319	HBX1191	GRAND CONCOURSE	E 174 TH ST	2011	PD	B
2241390	HBX1195	SHORE RD CIRCLE	AMTRAK	2007	FD	B
2240137	HBM1147	BROADWAY	HARLEM RIVER	2011	PD	BM
2240079	HBX644S	MADISON AVE	HARLEM RIVER	2012	PD	BM
1240090	BRX287S	MACOMBS DAM BRIDGE	HARLEM RIVER	2014	PD	BM
2240027	BRC156R	MANHATTAN BRIDGE (LL)	EAST RIVER	2009	PD	KM
2240028	BRC156R	MANHATTAN BRIDGE (UL)	NYCTA TRACKS-BMT	2009	PD	KM
2240028	BRC156S	MANHATTAN BRIDGE (UL)	NYCTA TRACKS-BMT	2011	PD	KM
2240039	BRC253S	WILLIAMSBURG BRIDGE	EAST RIVER	2011	PD	KM
2240019	BRC270C	BROOKLYN BRIDGE	2781 (B.Q.E.)	2009	FD	KM
2240019	BRC270S	BROOKLYN BRIDGE	2781 (B.Q.E.)	2011	PD	KM
2240019	BRC270T	BROOKLYN BRIDGE	2781 (B.Q.E.)	2007	FD	KM
VARIOUS	HBCBORERS-R	VARIOUS	VARIOUS	2007	FD	KM
2231419	HBCREPL99B	BSHP	OCEAN AVENUE	2007	FD	K
2243480	HBCREPL99B	OCEAN AVE	LIRR	2007	FD	K
2243340	HBCREPL00	15 TH AVE	LIRR BAY RIDGE	2009	PD	K
2243640	HBCREPL00	13 TH AVE	LIRR & SEA BEACH	2009	PD	K
2244040	HBCREPL00	EAST DRIVE	EAST WOOD ARCH	2009	PD	K
2243710	HBKC062	19TH AVE	BMT SEA BEACH	2011	FD	K
2243100	HBKC064	BEVERLY ROAD	BMT SUBWAY, BRIGHTON	2008	FD	K
2243020	HBK530	PARKSIDE AVE	BMT SUBWAY, BRIGHTON	2010	FD	K
2243050	HBK531	CATON AVE	BMT SUBWAY, BRIGHTON	2012	FD	K
2243820	HBK548	21ST AVE	BMT SEA BEACH	2011	FD	K
2231450	HBK643	BSHP	GERRITSEN INLET	2008	FD	K
2231370	HBK668	E 8 TH ST ACCESS RMP	BSHP	2007	FD	K
2231479	HBK1023	BSHP	MILL BASIN	2010	FD	K
2231489	HBK1024	BSHP	PAERDEGAT BASIN	2007	FD	K
2243080	HBK1032	CHURCH AVE	BMT SUBWAY, BRIGHTON	2012	FD	K
2243510	HBK1046	FLATBUSH AVE	LIRR BAY RIDGE	2008	FD	K
2231509	HBK1072	BSHP	FRESH CREEK	2007	FD	K
2231249	HBK1089	BSHP	BAY RIDGE AVE	2008	FD	K
2231439	HBK1090	BSHP	NOSTRAND AVE	2008	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
2231499	HBK1091	BSHP	ROCKAWAY PKWY	2008	FD	K
2230887	HBK1151	278I W.B. (B.Q.E.)	CADMAN PLAZA	2007	FD	K
2230888	HBK1151	2781 E.B. (B.Q.E.)	CADMAN PLAZA	2007	FD	K
2243140	HBK1153	NEWKIRK AVE	BMT SUBWAY, BRIGHTON	2007	FD	K
2243040	HBK1154	CROOKE AVE	BMT SUBWAY, BRIGHTON	2007	FD	K
2243569	HBK1201	ATLANTIC AVE	LIRR ATLANTIC AVE	2014	FD	K
2240270	HBK1213	UNION STREET BRIDGE	GOWANUS CANAL	2015	PD	K
2240390	HBK1161	GRAND ST BRIDGE	NEWTON CREEK	2013	PD	KQ
2231319	HBK1202	BELT PARKWAY	BAY PARKWAY	2008	PD	K
2243400	HBK1204	50 TH STREET	LIRR BAY RIDGE	2008	FD	K
2243580	HBK1205	5 TH AVENUE	LIRR & SEA BEACH	2009	PD	K
2244120	HBK1206	HILL DRIVE	PROSPECT PARK LAKE	2007	FD	K
2243150	HBK1208	FOSTER AVENUE	BMT SUBWAY BRIGHTON	2008	FD	K
2240047	BRC231S	QUEENSBORO BRIDGE (LL)	EAST RIVER	2011	PD	MQ
2240048	BRC231S	QUEENSBORO BRIDGE (UL)	EAST RIVER	2011	PD	MQ
2240640	HBC1117	ROOSEVELT ISLAND	E. RIVER E. CHANNEL	2007	FD	MQ
2246570	HBCREPL99B	UNITED NATIONS PLAZA	1 ST AVE TUNNEL	2007	FD	M
2246489	HBCREPL00	W 181 ST ST	RAMP TO WASHINGTON BRIDGE	2009	PD	M
2245230	HBCREPL00	W 148 TH ST PED BRIDGE	AMTRAK 30 TH ST BRANCH	2009	PD	M
2245300	HBCREPL00	INWOOD HILL PARK FOOTBRIDGE	AMTRAK 30 TH ST BRANCH	2009	PD	M
2245090	HBM032	W 43 RD ST	AMTRAK 30 TH ST BRANCH	2012	PD	M
2245130	HBM033	W 47 TH ST	AMTRAK 30 TH ST BRANCH	2008	FD	M
2245150	HBM034	W 49 TH ST	AMTRAK 30 TH ST BRANCH	2014	PD	M
2245340	HBM035	W 50 TH ST	AMTRAK 30 TH ST BRANCH	2014	PD	M
2245180	HBM036	W 53 RD ST	AMTRAK 30 TH ST BRANCH	2012	PD	M
224501C	HBM037	W 33 RD ST	LAND ADJ TO AMTRAK	2013	PD	M
2246540	HBM551	E 34TH ST	PARK AVE TUNNEL	2010	PD	M
2233059	HBM1027	HARLEM RIVER DRIVE	RAMP TO HRD N.B.	2012	DB	M
2245010	HBM1120	11 th AVE VIADUCT	LIRR WEST SIDE YARD	2013	PD	M
2240059	HBM1124	WILLIS AVENUE	HARLEM RIVER	2007	FD	BM
224005A	HBM1124	FROM FDR DRIVE	HARLEM RIVER DRIVE	2007	FD	M
224005B	HBM1124	TO BRUCKNER BLVD (WILLIS)	RELIEF	2007	FD	M
2246490	HBM1145	A.C. POWELL BLVD N.B.	A.C. POWELL BLVD	2008	FD	M
2246710	HBM1145B	W 153 ST	A.C. POWELL BLVD	2008	FD	M
2240620	HBM1159	WARDS ISLAND PED BRDG	HARLEM RIVER	2012	PD	M
2246720	HBM1165	RIVERSIDE DRIVE	W 158TH ST	2014	FD	M
226672A	HBM1171	W 31 ST ST	AMTRAK LAYUP TRACKS	2007	FD	M
2245070	HBM1174	W 38 TH ST	AMTRAK 30 TH ST BRANCH	2008	FD	M
2245080	HBM1175	W 39 TH ST	AMTRAK 30 TH ST BRANCH	2008	FD	M
2245100	HBM1176	W 44 TH ST	AMTRAK 30 TH ST BRANCH	2012	PD	M
2245120	HBM1177	W 46 TH ST	AMTRAK 30 TH ST BRANCH	2014	PD	M
2245140	HBM1178	W 48 TH ST	AMTRAK 30 TH ST BRANCH	2008	FD	M
2245210	HBM1179	W 42 ND ST	AMTRAK 30 TH ST BRANCH	2008	FD	M
2245440	HBM1180	W 40 TH ST	AMTRAK 30 TH ST BRANCH	2014	PD	M
2245330	HBM1183	W 41 ST ST	AMTRAK 30 TH ST BRANCH	2014	PD	M

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
224501B	HBM1184	W 33 RD ST	AMTRAK 30 TH ST BRANCH	2013	PD	M
224501D	HBM1185	W 34 TH ST	AMTRAK 30 TH ST BRANCH	2013	PD	M
224501E	HBM1186	W 35 TH ST	AMTRAK 30 TH ST BRANCH	2013	PD	M
224501F	HBM1187	W 36 TH ST	AMTRAK 30 TH ST BRANCH	2013	PD	M
2245209	HBM1188	11 TH AVE	AMTRAK 30 TH ST BRANCH	2012	PD	M
2229290	HBM1189	W 79 TH ST	AMTRAK	2012	PD	M
2267717	HBM1189	79 TH ST PED PLAZA	79 TH ST BOAT BASIN	2012	PD	M
			GARAGE			
2267718	HBM1189	79 TH ST TRAFFIC CIRCLE	79 TH ST PED PLAZA	2012	PD	M
226771A	HBM1189	79 TH ST RAMP TO HHP	79 TH ST BOAT BASIN	2012	PD	M
			GARAGE			
226771B	HBM1189	79 TH ST RAMP TO GARAGE	79 TH ST BOAT BASIN	2012	PD	M
			GARAGE			
226771C	HBM1189	GARAGE RAMP TO 79 TH ST	79 TH ST BOAT BASIN	2012	PD	M
			GARAGE			
226771D	HBM1189	SB HHP RAMP TO 79 TH ST	79 TH ST BOAT BASIN	2012	PD	M
			GARAGE			
2231710	HBCREPL99B	MERRICK BLVD	LAURELTON PKWY NB	2007	FD	Q
2231720	HBCREPL99B	MERRICK BLVD	LAURELTON PKWY SB	2007	FD	Q
224004F	HBCREPL99B	TO NY FROM 21 ST ST	21 ST ST (QUEENS)	2007	FD	Q
224004G	HBCREPL99B	TO NY FROM 11 TH St	TERRAIN (CHAMBER)	2007	FD	Q
2231730	HBCREPL99B	130 TH AVE	LAURELTON PKWY NB	2007	FD	Q
2231740	HBCREPL99B	130 TH AVE	LAURELTON PKWY SB	2007	FD	Q
2247080	HBCREPL99B	149 TH ST	LIRR	2007	FD	Q
2248299	HBCREPL00	JACKIE ROBINSON PKWY & UNION TURNPIKE	AUSTIN STREET	2009	PD	Q
2231800	HBCREPL00	SUPERIOR ROAD	CROSS ISLAND PKWY	2009	PD	Q
2230620	HBCREPL00	37 TH STREET	BQE	2009	PD	Q
2240660	BRC289A	RIKERS ISLAND BRIDGE	RIKERS ISLAND CHANNEL	2012	DB	Q
1247560	HBQ1112	METRO AVE (FRESH POND)	LIRR MONTAUK DIV	2009	FD	Q
2231780	HBQ1114	HEMPSTEAD AVE	BCIP	2012	FD	Q
2266149	HBQ1114	HEMPSTEAD AVE	RAMP TO BCIP NB	2012	FD	Q
2231850	HBQ1115	UNION TPKE	BCIP	2010	FD	Q
2247120	HBQ1130	WOODSIDE AVE	LIRR MAIN LINE	2007	FD	Q
2248159	HBQ1134	WOODHAVEN BLVD	QUEENS BLVD	2008	FD	Q
2248160	HBQ1137	ELLIOT AVE	QUEENS BLVD	2011	PD	Q
2240410	HBQ1162	BORDEN AVE	DUTCH KILLS	2013	PD	Q
2231760	HBQ1173	BCIP	DUTCH BRDWAY-115 AVE	2013	PD	Q
2231630	HBQ1200	SPRINGFIELD BLVD	BSOP	2013	FD	Q
2266129	HBQC063	WINCHESTER BLVD SB	BCIP	2011	PD	Q
2266160	HBQC064	WHITESTONE EXPRY/VAN WYCK EXPRY SB TO BCIP EB	ACCESS ROAD FROM WHITESTONE EXPRY/VAN WYCK EXPRY	2011	PD	Q
2249320	HBCREPL00	ALBEE AVENUE	SIRT SOUTH SHORE	2009	PD	R
2249820	HBRC1149	ARTHUR KILL ROAD	ARTHUR KILL STREAM	2009	FD	R
2249330	HBR1166	ANNADALE ROAD	SIRT SOUTH SHORE	2007	FD	R

PD=Preliminary Design; FD=Final Design; DB=Design Build

Appendix B

FLAG CONDITIONS

Definitions and Procedures	B-1
2001-2005 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.



Flag Engineers Inspecting a Red Flag (Floor Beam Web) on the Tower Structure of the Manhattan Bridge. Closeup of the Location. (Credit: Bojidar Yanev) Flag Engineers Inspecting a Red Flag on the Central Drive Bridge over Transverse Road #1-- the West Fascia Had a Long Crack Running From the South Abutment Wall to the North Abutment Wall. (Credit: Peter Basich)

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.

FLAG DEFINITIONS AND PROCEDURES

(Source: NYSDOT *Engineering Instruction 94-002*)



Flag Engineer Inspecting a Yellow Flag (Loose Masonry Panel) on the BQE under the Brooklyn Bridge. (Credit: Andy Hoang)

Flag Engineer Inspecting a Yellow Flag (Bottom Flanges are Corroded and Loose) at the Inwood Hill Park Footbridge (Credit: Tiffany Yau)

Safety Flag is used to report a condition that presents a clear and present vehicle or pedestrian traffic hazard, but there is no danger of structural failure or collapse.



72nd Street Cross drive Near Concert Grounds – The Posts Were Missing, Leaving the Bases Protruding Above the Sidewalk. This was a Tripping Hazard. Gun Hill Road over Bronx Boulevard – the Asphalt Surrounding the Catch Basin Had Settled, Causing the Grating to Deflect Under Heavy Traffic Loads. This was a Safety Hazard to Vehicles. (Description & Credit: NYSDOT)

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.

FLAG CONDITIONS BY CALENDAR YEAR						
----------------------------------	--	--	--	--	--	--

Citywide

	2001*	2002*	2003*	2004*	2005*	% increase (2001-2005)
FLAGS ROUTED	1,150	1,179	1,117	1,198	1,138	-1%
RED	24	36	20	20	21	-13%
YELLOW	399	137	215	157	121	-70%
SAFETY	727	1,006	882	1,021	996	37%
TTL FLGS ELIMINATED	1,369	1,319	940	1,042	1,072	-22%
RED	32	42	21	33	22	-31%
YELLOW	452	307	192	233	151	-67%
SAFETY	885	970	727	776	899	-2%
TTL FLGS OUTSTANDING	1,653	1,513	1,690	1,846	1,912	16%
RED	26	20	19	6	5	-81%
YELLOW	798	628	654	578	548	-31%
SAFETY	829	865	1,017	1,262	1,359	64%

Division of Bridges Workload

FLAGS ROUTED	1,039	959	935	976	953	-8%
RED	23	35	13	19	21	-9%
YELLOW	399	137	211	154	121	-70%
SAFETY	617	787	711	803	811	31%
FLAGS ELIMINATED	1,230	1,140	764	918	923	-25%
RED	31	41	14	32	21	-32%
YELLOW	451	305	183	233	150	-67%
SAFETY	748	794	567	653	752	1%
FLAGS OUTSTANDING	1,397	1,237	1,389	1,435	1,457	4%
RED	26	20	19	6	5	-81%
YELLOW	783	615	625	540	509	-35%
SAFETY	588	602	745	889	943	60%

*The number of flags routed, eliminated, and outstanding has been revised since the 2004 Annual Condition Report.

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 the Maintenance Section for in-house or contractor 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 the Maintenance Section for in-house or contractor 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 the Maintenance Section for in-house or contractor repair, or
 - ♦ assign flags to the Construction Section for Capital contractor repair.
6. When flag conditions are eliminated, the database is updated.

Appendix C

2005 INVENTORY

Inventory Summary	C-1
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Inventory Summary

In Calendar Year 2005, the total number of bridge and tunnel structures under the jurisdiction of the New York City Department of Transportation (NYCDOT) remained at 790. In 1999, a Memorandum of Understanding between NYCDOT and the New York City Department of Environmental Protection (NYCDEP) added 67 culverts 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 790 elevated bridge structures (including six tunnels), as measured by the City's general condition rating, are as follows: 4 structures were rated *Poor*, 458 structures were rated *Fair*, 210 structures were rated *Good*, and 118 structures were classified *Very Good*.

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 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 fifteen (40%) of the Division's structures consist of one span (the portion of a bridge between two supports). One hundred seven (13 ½ %) bridges carry pedestrian traffic. Of the 790 structures in the City's inventory, 100 (13%) cross waterways; of these, 19 connect the boroughs of the Bronx, Brooklyn, Manhattan and Queens. Three hundred nineteen (40%) structures cross the City's labyrinthine system of railroad and subway tracks. Two hundred fifty-two (32%) 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.

The State inspected 672 (85%) bridge structures. The balance of 117 (15%) were inspected by the City, with the exception of the High Bridge over the Harlem River, which was inspected 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 2005 Structure Conditions

Rating	Number of Structures	Percent	Number of Spans	Percent	Deck Area Sq Ft	Percent
Poor	4	0.51%	68	1.50%	73,904	0.51%
Fair	458	57.97%	3422	75.52%	11,301,174	77.75%
Good	210	26.58%	677	14.94%	1,726,021	11.87%
Very Good	118	14.94%	364	8.03%	1,434,629	9.87%
Total	790	100%	4531	100%	14,535,728	100%

As of December 31, 2005, the condition of the City's bridges and tunnels indicated that 0.51% were rated as *Poor*, 57.97% were classified as *Fair*, 26.58% were awarded ratings of *Good*, and 14.94% as *Very Good*. Those structures given ratings of *Poor* and *Fair* encompassed 77.02% of bridge spans.

Rating	2002		2003		2004		2005	
Poor	8	1.06%	4	0.53%	6	0.76%	4	0.51%
Fair	451	59.74%	429	56.97%	456	57.72%	458	57.97%
Good	202	26.75%	209	27.76%	212	26.84%	210	26.58%
Very Good	94	12.45%	111	14.74%	116	14.68%	118	14.94%
Total	755	100%	753	100%	790	100%	790	100%

During 2005, Manhattan had the second highest percentage of bridge structures rated *poor* – 1.13% - as well as the highest percentage of bridge structures rated *fair* – 70.62%. Staten Island had the highest percentage of bridge structures classified as *good* – 32.31%, and the highest percentage of bridge structures rated *very good* – 24.62%, for a total of 56.93%. In 2004, Brooklyn had no bridges rated as *poor*, and the second highest percentage of bridge structures rated as *very good* – 22.86%. The Bronx had no bridges rated as *poor*, and the second highest percentage of bridge structures classified as *fair* – 60.53%. Queens had the third highest percentage of bridge structures rated as *good* – 27.72%.

Borough*	Poor	% of Boro	Fair	% of Boro	Good	% of Boro	Very Good	% of Boro	Total
Bronx	0	0.00%	92	60.53%	43	28.29%	17	11.18%	152
Brooklyn	0	0.00%	90	51.43%	45	25.71%	40	22.86%	175
Manhattan	2	1.13%	125	70.62%	42	23.73%	8	4.52%	177
Queens	1	0.50%	109	53.96%	56	27.72%	36	17.82%	202
Staten Island	1	1.54%	27	41.54%	21	32.31%	16	24.62%	65
Total	4	0.52%	443	57.46%	207	26.85%	117	15.18%	771

* Does not include borough-crossing bridges (see next table).

Summary of 2005 Structure Conditions

Approximately seventy-nine percent (78.95%) of the 19 bridge structures that service the five boroughs were rated in either *poor* or *fair* condition in 2005, and 21.05% 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	66.67%	2	22.22%	1	11.11%	9
Brooklyn-Manhattan	0	0.00%	4	100.00%	0	0.00%	0	0.00%	4
Queens-Manhattan	0	0.00%	3	100.00%	0	0.00%	0	0.00%	3
Brooklyn-Queens	0	0.00%	2	66.67%	1	33.33%	0	0.00%	3
Total	0	0.00%	15	78.95%	3	15.79%	1	5.26%	19

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 2005, the total number of closed or partially closed bridge structures was four, with two closed and two 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
2-23145-0	BROOKLYN	BELT SHORE PKWY.	GERRITSEN INLET		2008	5	CONDITION OF PAERDEGAT BASIN BRIDGE
2-23147-9	BROOKLYN	BELT SHORE PKWY.	MILL BASIN CREEK		2008	5	CONDITION OF PAERDEGAT BASIN BRIDGE
2-23148-9	BROOKLYN	BELT SHORE PKWY	PAERDEGAT BASIN		2008	5	
2-23149-9	BROOKLYN	BELT SHORE PKWY.	ROCKAWAY PKWY.		2008	5	PASSENGER CARS ONLY
	MANHATTAN	FDR DRIVE (NB & SB)	23 RD TO 63 RD STREET			4	PASSENGER CARS ONLY
2-23304-0	MANHATTAN	EAST 60 TH STREET	FDR DRIVE			7	TO BE LET BY NYSDOT
2-24001-9	BROOKLYN & MANHATTAN	BROOKLYN BRIDGE	EAST RIVER	INCLUDING RAMPS	2009	3	NO COMMERCIAL TRAFFIC NO TRUCKS, NO BUSES; 11'0" CLEARANCE
2-24003-9	BROOKLYN & MANHATTAN	WILLIAMSBURG BRIDGE	EAST RIVER				INNER ROADWAYS, NO TRUCKS
2-24004-7	MANHATTAN & QUEENS	QUEENSBORO BRIDGE	EAST RIVER			7.5	LOWER OUTER ROADWAYS POSTED AS H-7.5 (PASSENGER CARS ONLY FOR SOUTHBOUND; PEDESTRIANS AND BICYCLES ONLY FOR NORTHBOUND); UPPER ROADWAYS DESIGNED FOR H- 15, <u>NO TRUCKS</u>
2-24026-0	BROOKLYN	CARROLL STREET BRIDGE	GOWANUS CANAL	CARROL STREET	2010	10	
2-24064-0	MANHATTAN & QUEENS	ROOSEVELT ISLAND	EAST CHANNEL OF THE EAST RIVER		2007	36	
2-24066-0	QUEENS	RIKERS ISLAND BRIDGE	RIKERS ISLAND CHANNEL			36	
2-24655-0	MANHATTAN	PARK AVENUE VIADUCT	42 ND STREET			15	NO COMMERCIAL TRAFFIC
2-24759-0	QUEENS	FOREST PARK DRIVE	LIRR			18	
2-24310-0	BROOKLYN	BEVERLY ROAD	BMT SUBWAY			7	FROM 12/2005 UNTIL 4/2008

15 COUNT

* - CONSTRUCTION CONTRACT LETTING

Partially Closed Bridges

NEW YORK CITY DEPARTMENT OF TRANSPORTATION

BIN	BOROUGH	LOCATION FEATURE-1	LOCATION FEATURE-2	LOCATION FEATURE-3	FISCAL YEAR*	REMARKS
2-07664-0	BRONX	DEPOT PLACE	CONRAIL HUDSON DIVISION			ONE LANE CLOSED TO TRAFFIC AND ONE LANE OPEN
2-23087-0	BROOKLYN	COLUMBIA HEIGHTS	B.Q.E.	MIDDAGH ST.		CLOSED TO TRAFFIC OPEN TO PEDESTRIANS (TO BE DONE BY NYS W/B.Q.E)

2 COUNT

* - CONSTRUCTION CONTRACT LETTING

Closed Bridges

NEW YORK CITY DEPARTMENT OF TRANSPORTATION

BIN	BOROUGH	LOCATION FEATURE-1	LOCATION FEATURE-2	LOCATION FEATURE-3	FISCAL YEAR*	REMARKS
2-23007-0	QUEENS	CYPRESS HILLS CEMETERY ROAD EAST	JACKIE ROBINSON PARKWAY			CLOSED TO TRAFFIC AND PEDESTRIANS
2-24032-0	BROOKLYN	OCEAN AVENUE	SHEEPSHEAD BAY			PEDESTRIAN BRIDGE. TEMPORARY BRIDGE INSTALLED FOR PEDESTRIAN USE AS DETOUR ROUTE

2 COUNT

* - CONSTRUCTION CONTRACT LETTING

Revised 11/14/05

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
AVE:	Avenue
BLVD:	Boulevard
BR:	Bridge
CPK:	Central Park
DR:	Drive
EB:	Eastbound
EXPWY:	Expressway
I:	Interstate
LN:	Lane
NB:	Northbound
PED BR:	Pedestrian Bridge
PKWY:	Parkway
PL:	Place
RD:	Road
SB:	Southbound
ST:	Street
TPKE:	Turnpike
WB:	Westbound
X:	No State accepted mileage markers exist on this route

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 Inventory 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 - Conrail	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	W - Waterway
O - Off-System	M - Movable
PED - Pedestrian	E - East River
- **Rating Source:**

(C)	City Inspection
(S)	State 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

2005 Bridge Inventory Adjustments

There were no bridges removed from or added to the City's inventory since the 2004 *Annual Report* was issued.

REV. DATE February 10, 2006

INVENTORY SORTED BY B.I.N.														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD

1065210	Q	WHITESTONE EXP NB	BCIP (2065210)			A	1	S	7/8/2004	4.683	F	2500	\$3,600,000.00	7
1066510	B	BRUCKNER EXP.(2066510)	WESTCHESTER CREEK			WMA	17	S	10/14/2004	3.821	F	39400	\$56,736,000.00	9
1067150	B	NEREID AVE (2241880)	BRONX RIVER PKWY	M		O	10	S	7/8/2005	4.211	F	57750	\$83,160,000.00	12
1240090	B M	MACOMBS DAM BRIDGE	HARLEM RIVER			WMO	52	S	6/13/2005	4.169	F	211788	\$304,974,720.00	10
1247010	Q	91 PLACE (2247010)	LIRR PT WASH BRANCH	L		O	1	S	9/27/2005	6.833	V	2760	\$3,974,400.00	4
1247200	Q	67 AVE PED BR 2247200	LIRR MAIN LINE	L		O- PED	3	C	8/5/2004	4.414	F	1300	\$1,872,000.00	6
1247280	Q	51 AVE PED BR.2247280	LIRR MAIN LINE	L		O- PED	5	C	8/4/2004	3.091	F	700	\$1,008,000.00	2
1247560	Q	METROPOLITAN AVE	LIRR MONTAUK DIV	L		O	2	S	6/23/2005	3.762	F	20900	\$30,096,000.00	5
2055801	Q	NORTHERN BLVD W.B.	FLUSHING RIVER			WO	40	S	8/30/2004	4.817	F	71900	\$103,536,000.00	7
2055802	Q	NORTHERN BLVD E.B.	FLUSHING RIVER			WO	40	S	8/30/2004	4.507	F	78894	\$113,607,360.00	7
205580A	Q	N.BLVD WB TO 678I SB	VACANT LAND			AR	16	S	9/2/2004	5.571	G	8600	\$12,384,000.00	7
2065629	B	BRONX RVR PKWY	BOSTON RD BX ZOO			A	1	S	7/29/2005	5.000	G	6300	\$9,072,000.00	27
2065930	Q	HAMILTON PLACE	495I (L.I.E.)			A	2	S	6/4/2004	6.347	V	11111	\$15,999,840.00	5
2065940	Q	GRAND AVE	495I (L.I.E.)			A	2	S	9/1/2004	5.264	G	12850	\$18,504,000.00	5
2065950	Q	69TH STREET	495I (L.I.E.)			A	2	S	5/24/2005	5.417	G	10336	\$14,883,840.00	5
2066002	Q	495I (2066000)	WOODHAVEN BLVD			A	2	S	7/14/2005	6.197	V	25200	\$36,288,000.00	6
2066100	K	5TH AVE	27 X PROSPECT EXPWY			A	1	S	4/2/2004	5.208	G	8800	\$12,672,000.00	7
2066671	B	BRUCKNER EXPWY SB	BRONX RIVER			WMA	3	S	7/7/2005	5.222	G	12400	\$17,856,000.00	2
2066672	B	BRUCKNER EXPWY NB	BRONX RIVER			WMA	8	S	7/13/2005	4.716	F	22300	\$32,112,000.00	2
2066720	B	E 174TH ST	SHERIDAN EXPWY/AMTRAK	A		A	13	S	10/28/2004	4.375	F	47430	\$68,299,200.00	9
206672A	B	174TH ST-NTH PED BRDG	895I - SHERIDAN EXPWY			A- PED	4	C	12/28/2005	4.958	F	1800	\$2,592,000.00	9
206672B	B	174TH ST-STH PED BRDG	895I - SHERIDAN EXPWY			A- PED WO	4	C	2/9/2004	5.056	G	1900	\$2,736,000.00	9
2066919	B M	WASHINGTON BRIDGE	HARLEM RIVER			WO	9	S	11/16/2004	4.821	F	128339	\$184,808,160.00	12
2075351	B	BRUCKNER EXPWY SB	AMTRAK	A		A	1	S	8/9/2004	3.625	F	11600	\$16,704,000.00	2
2075352	B	BRUCKNER EXPWY NB	AMTRAK	A		A	1	S	8/9/2004	3.547	F	10900	\$15,696,000.00	2
2075820	B	E TREMONT AVE	HUTCHINSON RVR PKWY			A	2	S	11/18/2005	4.472	F	10200	\$14,688,000.00	10
2075837	B	WESTCHESTER AVE	HUTCHINSON RVR PKWY			A	2	S	4/5/2004	4.389	F	15858	\$22,835,520.00	10
2075849	B	BRONX PELHAM PKWY	HUTCHINSON RVR PKWY			A	2	S	9/20/2004	4.184	F	17600	\$25,344,000.00	10
2075859	B	HUTCHINSON RVR PKWY	HUTCHINSON RIVER			WMA	7	S	11/11/2005	4.922	F	60500	\$87,120,000.00	10
2076109	B	BE NB SERVICE RD	HUTCHINSON RVR PKWY			A	2	S	11/4/2005	4.632	F	7800	\$11,232,000.00	10
2076129	B	BE SB SERVICE RD	HUTCHINSON RVR PKWY			A	2	S	2/19/2004	5.105	G	7100	\$10,224,000.00	10
2076640	B	DEPOT PLACE	CONRAIL HUDSON DIV	C		O	11	S	6/3/2005	5.139	G	30192	\$43,476,480.00	4
2076929	B	BRUCKNER EXPWY	AMTRAK	A		A	1	S	6/6/2005	4.833	F	3800	\$5,472,000.00	2
2229289	M	HHP VIADUCT	W 72 ST TO W 79 ST	A		A	145	S	12/7/2004	3.478	F	236100	\$339,984,000.00	7
222928C	M	PED BR AT 73RD ST	HHP - AMTRAK		P	A- PED	3	C	6/8/2002	4.000	F	3480	\$5,011,200.00	7
2229290	M	W 79 ST	AMTRAK	A		A	1	S	10/13/2004	4.559	F	4500	\$6,480,000.00	7
2229309	M	HHP	RIVERSIDE PARK			A	1	S	2/20/2004	5.267	G	2400	\$3,456,000.00	7
2229311	M	HHP SB	RAMP TO 96 ST			A	1	S	2/26/2004	4.273	F	2000	\$2,880,000.00	7
2229312	M	HHP NB	RAMP TO 96 ST			A	1	S	2/27/2004	4.364	F	2000	\$2,880,000.00	7
2229321	M	HHP SB	RAMP TO 96 ST			A	1	S	3/8/2004	5.200	G	2000	\$2,880,000.00	7
2229322	M	HHP NB	RAMP TO 96 ST			A	1	S	3/8/2004	5.300	G	2000	\$2,880,000.00	7
2229349	M	HHP	W 158 ST	A		A	44	S	8/12/2004	4.268	F	140000	\$201,600,000.00	12
222934A	M	RAMP TO N.B. HHP	AMTRAK WEST SIDE	A		AR	26	S	9/1/2004	3.875	F	10800	\$15,552,000.00	12
2229400	M	W 181ST ST PED BRDG	HHP N.B.		P	A- PED	6	C	2/5/2003	4.652	F	1500	\$2,160,000.00	12
2229440	B	HHP	KAPPOCK ST			A	1	S	9/30/2005	5.069	G	3900	\$5,616,000.00	8
2229450	B	232ND ST	HHP			A	2	S	10/3/2005	4.921	F	4900	\$7,056,000.00	8
2229460	B	236TH ST PED BRDG	HHP			A- PED	3	C	8/24/2004	5.106	G	2500	\$3,600,000.00	8
2229470	B	239TH ST	HHP			A	2	S	5/13/2005	4.263	F	6100	\$8,784,000.00	8
2229480	B	MANHATTAN COLL PKWY	HHP			A	3	S	4/25/2005	5.368	G	6200	\$8,928,000.00	8
2229490	B	246TH ST	HHP			A	2	S	4/21/2005	4.842	F	5600	\$8,064,000.00	8
2229500	B	252ND ST	HHP			A	2	S	2/25/2004	4.184	F	4500	\$6,480,000.00	8
2229510	B	RIVERDALE AVE	HHP			A	2	S	9/14/2005	4.000	F	5200	\$7,488,000.00	8
2229520	B	FIELDSTON ROAD	HHP			A	1	S	9/26/2005	5.500	G	6600	\$9,504,000.00	8
2229530	B	HHP	BROADWAY			A	1	S	9/27/2005	4.574	F	7500	\$10,800,000.00	8
2229540	B	VAN CRTLDT PARK	HHP		P	A- PED	2	C	9/17/2004	4.742	F	3900	\$5,616,000.00	26
2229550	B	VAN CRTLDT EQUES	HHP		P	A- PED	2	C	9/17/2004	5.178	G	2100	\$3,024,000.00	26
2229560	B	BRONX PELHAM PKWY	AMTRAK,METRO NORTH	MA		A	3	S	11/16/2004	4.778	F	24591	\$35,411,040.00	11
2229579	B	BOSTON POST ROAD	HUTCHINSON RIVER			WO	14	S	6/24/2005	4.583	F	95700	\$137,808,000.00	12
2230000	K	HIGHLAND BLVD E.B.	JACKIE ROBINSON PKWY			A	1	S	4/22/2004	4.667	F	4900	\$7,056,000.00	5
2230010	K	HIGHLAND BLVD W.B.	JACKIE ROBINSON PKWY			A	1	S	4/22/2004	4.933	F	3500	\$5,040,000.00	5
2230020	K	HIGHLAND BLVD W.B.	JACKIE ROBINSON PKWY			A	2	S	4/22/2004	4.974	F	4700	\$6,768,000.00	5

INVENTORY SORTED BY B.I.N.														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD

2230040	Q	CYPRESS HILLS ST	JACKIE ROBINSON PKWY			A	1	S	5/7/2004	5.611	G	5000	\$7,200,000.00	5
2230050	Q	CYP HILLS CEM WEST	JACKIE ROBINSON PKWY			A	3	S	4/13/2005	3.955	F	4400	\$6,336,000.00	5
2230070	Q	CYP HILLS CEM EAST	JACKIE ROBINSON PKWY			A	3	S	4/15/2005	4.114	F	4400	\$6,336,000.00	5
2230099	Q	JACKIE ROBINSON PKWY	CYPRESS HILLS CEMTRY			A	1	S	1/7/2004	5.483	G	4200	\$6,048,000.00	5
2230120	Q	MYRTLE AVE	JACKIE ROBINSON PKWY			A	1	S	3/5/2004	5.611	G	6400	\$9,216,000.00	82
2230179	Q	JACKIE ROBINSON PKWY	METROPOLITAN AVE			A	2	S	1/29/2004	5.321	G	8673	\$12,489,120.00	82
2230180	Q	UNION TPKE	JACKIE ROBINSON PKWY			A	1	S	2/25/2004	5.984	G	5359	\$7,716,960.00	82
2230190	Q	MARKWOOD ROAD	JACKIE ROBINSON PKWY			A	1	S	3/23/2004	5.389	G	4400	\$6,336,000.00	82
2230209	Q	QUEENS BLVD	JACKIE ROBINSON PKWY	T		A	5	S	4/23/2004	4.857	F	90000	\$129,600,000.00	9
2230220	K	HIGHLAND BLVD NB	VERMONT AVE			A	1	S	6/16/2005	6.127	V	3995	\$5,752,800.00	5
2230250	B	MOSHOLU PARKWAY	BRONX RIVER			A	5	S	2/26/2004	4.263	F	16300	\$23,472,000.00	27
2230260	B	MOSHOLU PARKWAY	METRO NORTH	M		A	1	S	4/20/2004	6.203	V	8880	\$12,787,200.00	27
2230270	B	MOSHOLU PARKWAY	WEBSTER AVE			A	1	S	4/20/2005	5.703	G	8480	\$12,211,200.00	27
2230287	B	JEROME AVE	MOSHOLU PARKWAY	T		A	3	S	4/28/2005	4.921	F	11800	\$16,992,000.00	7
2230290	B	MOSHOLU PARKWAY	EQUESTRIAN PATH			A	1	S	2/12/2004	4.724	F	4300	\$6,192,000.00	26
2230300	B	MOSHOLU PARKWAY	CONRAIL (ABANDONED)	C		A	1	S	11/16/2004	4.229	F	5200	\$7,488,000.00	26
2230310	B	MOSHOLU PARKWAY	SB RAMP TO HHP			A	2	S	12/6/2005	5.135	G	7400	\$10,656,000.00	26
2230350	K	SUMMIT ST PED BRDG	278I (B.Q.E.)			A-PED	2	S	3/8/2004	4.671	F	1400	\$2,016,000.00	6
2230360	K	UNION ST	278I (B.Q.E.)			A	2	S	3/9/2004	4.486	F	5000	\$7,200,000.00	6
2230370	K	SACKETT ST	278I (B.Q.E.)			A	2	S	3/23/2004	4.694	F	5000	\$7,200,000.00	6
2230380	K	KANE ST	278I (B.Q.E.)			A	2	S	3/25/2004	4.236	F	5000	\$7,200,000.00	6
2230390	K	CONGRESS ST	278I (B.Q.E.)			A	2	S	4/29/2005	4.456	F	5000	\$7,200,000.00	6
2230410	K	278I (B.Q.E.)	WASHINGTON ST			A	1	S	4/14/2004	4.563	F	2500	\$3,600,000.00	2
2230420	K	278I (B.Q.E.)	WASHINGTON ST			A	1	S	4/14/2004	4.781	F	2500	\$3,600,000.00	2
2230430	K	278I (B.Q.E.)	PROSPECT ST			A	1	S	2/2/2004	5.267	G	1100	\$1,584,000.00	2
2230440	K	278I (B.Q.E.)	ADAMS ST N.B.			A	1	S	2/5/2004	5.200	G	2700	\$3,888,000.00	2
2230450	K	278I (B.Q.E.)	ADAMS ST S.B.			A	1	S	2/6/2004	4.933	F	2500	\$3,600,000.00	2
2230460	K	278I (B.Q.E.)	PEARL ST			A	1	S	2/27/2004	5.333	G	4500	\$6,480,000.00	2
2230470	K	278I (B.Q.E.)	JAY ST			A	1	S	4/14/2004	4.900	F	5100	\$7,344,000.00	2
2230480	K	278I (B.Q.E.)	PROSPECT ST			A	1	S	3/11/2004	5.241	G	8400	\$12,096,000.00	2
2230490	K	278I (B.Q.E.)	SANDS ST			A	1	S	3/15/2004	5.093	G	12600	\$18,144,000.00	2
2230500	K	278I (B.Q.E.)	RAMP TO BQE EB			A	1	S	3/1/2004	5.567	G	1300	\$1,872,000.00	2
2230510	K	278I (B.Q.E.)	NASSAU ST			A	6	S	4/7/2004	4.444	F	51200	\$73,728,000.00	2
2230520	Q	65TH PLACE	278I (B.Q.E.)			A	2	S	2/4/2004	4.338	F	11600	\$16,704,000.00	2
2230530	Q	QUEENS BLVD	278I (B.Q.E.)			A	2	S	8/25/2004	4.625	F	23500	\$33,840,000.00	2
2230540	Q	WOODSIDE AVE	278I (B.Q.E.)			A	1	S	1/5/2004	5.266	G	7500	\$10,800,000.00	2
2230550	Q	69TH ST	278I (B.Q.E.)			A	2	S	3/11/2004	4.842	F	12600	\$18,144,000.00	2
2230560	Q	70TH ST	278I (B.Q.E.)			A	2	S	3/11/2004	5.125	G	8500	\$12,240,000.00	2
2230570	Q	41ST AVE	278I (B.Q.E.)			A	3	S	2/13/2004	4.931	F	8800	\$12,672,000.00	2
2230587	Q	ROOSEVELT AVE	278I (B.Q.E.)			A	2	S	2/13/2004	4.559	F	6600	\$9,504,000.00	2
2230590	Q	BROADWAY	278I (B.Q.E.)			O	2	S	4/27/2004	3.842	F	16000	\$23,040,000.00	2
2230600	Q	STEINWAY ST	278I W.B. (B.Q.E.)			A	1	S	1/13/2004	4.167	F	4200	\$6,048,000.00	1
2230610	Q	STEINWAY ST	278I E.B. (B.Q.E.)			A	1	S	1/13/2004	4.028	F	4200	\$6,048,000.00	1
2230620	Q	37TH ST	278I (B.Q.E.)			A	2	S	4/8/2004	4.667	F	5300	\$7,632,000.00	1
2230630	Q	35TH ST	278I (B.Q.E.)			A	4	S	7/16/2004	4.819	F	9000	\$12,960,000.00	1
2230640	Q	32ND ST	278I (B.Q.E.)			A	2	S	5/6/2005	4.986	F	8100	\$11,664,000.00	1
2230657	Q	31ST ST	278I (B.Q.E.)			A	2	S	7/16/2004	4.917	F	9500	\$13,680,000.00	1
2230669	Q	278I (B.Q.E.)	35TH AVE			A	1	S	9/8/2005	6.831	V	13135	\$18,914,400.00	2
2230679	Q	278I (B.Q.E.)	34TH AVE			A	1	S	5/20/2005	6.898	V	9500	\$13,680,000.00	2
2230680	Q	278I (B.Q.E.)	NORTHERN BLVD			A	1	S	3/24/2004	6.683	V	27011	\$38,895,840.00	2
2230690	Q	BQE EAST LEG NB	32ND AVE			A	1	S	6/3/2004	7.000	V	4080	\$5,875,200.00	1
2230700	Q	BQE EAST LEG	TO BQE WEST LEG			A	8	S	11/8/2004	6.915	V	31600	\$45,504,000.00	1
2230710	Q	278I S.B. (B.Q.E.)	32ND AVE			A	1	S	9/6/2005	6.695	V	5240	\$7,545,600.00	1
2230720	Q	BQE EAST LEG	BQE NB WEST LEG			A	3	S	4/26/2005	6.515	V	20896	\$30,090,240.00	1
2230730	Q	31ST AVE	278I (B.Q.E.)			A	1	S	8/15/2005	6.517	V	5800	\$8,352,000.00	1
2230740	Q	BQE WEST LEG SB	31ST AVE			A	1	S	9/9/2005	6.545	V	5246	\$7,554,240.00	1
2230750	Q	BQE EAST LEG SB	31ST AVE			A	1	S	9/9/2005	6.407	V	2900	\$4,176,000.00	1
2230760	Q	BQE WEST LEG NB	31ST AVE			A	1	S	10/5/2004	7.000	V	4020	\$5,788,800.00	1
2230770	Q	BQE WEST LEG	30TH AVE			A	1	S	5/24/2005	7.000	V	6199	\$8,926,560.00	1
2230780	Q	BQE EAST LEG	30TH AVE			A	1	S	5/25/2005	7.000	V	7071	\$10,182,240.00	3
2230790	Q	BULOVA AVE	BQE WEST LEG			A	2	S	3/22/2004	5.667	G	3300	\$4,752,000.00	1
2230800	Q	49TH ST	BQE WEST LEG			A	2	S	3/22/2004	5.333	G	4900	\$7,056,000.00	1
2230810	Q	ASTORIA BLVD E.B.	BQE WEST LEG			A	4	S	3/22/2004	4.221	F	8200	\$11,808,000.00	1
2230820	Q	47TH ST	GCP			A	2	S	4/20/2004	4.944	F	5700	\$8,208,000.00	1

INVENTORY SORTED BY B.I.N.														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD

2230830	Q	BQE WEST LEG	GCP			A	2	S	7/14/2004	4.861	F	7600	\$10,944,000.00	1
2230840	Q	44TH ST	GCP			A	2	S	4/16/2004	4.847	F	5000	\$7,200,000.00	1
2230857	K	278I (B.Q.E.)	JORALEMON ST			A	1	S	5/4/2004	5.030	G	2100	\$3,024,000.00	2
2230858	K	278I (B.Q.E.)	JORALEMON ST / BQE WB			A	2	S	5/4/2004	4.177	F	5900	\$8,496,000.00	2
2230869	Q	QUEENS BLVD	ACCESS RD BQE S.B.			A	1	S	6/18/2004	4.205	F	7900	\$11,376,000.00	2
2230870	K	COLUMBIA HEIGHTS	278I (B.Q.E.)			A	1	S	4/26/2004	4.583	F	16500	\$23,760,000.00	2
2230887	K	278I W.B. (B.Q.E.)	CADMAN PLAZA			A	2	S	5/11/2004	4.309	F	4500	\$6,480,000.00	2
2230888	K	278I E.B. (B.Q.E.)	CADMAN PLAZA / 278I WB			A	2	S	5/11/2004	5.053	G	4500	\$6,480,000.00	2
2230890	Q	49TH ST	GCP			A	2	S	6/11/2004	4.778	F	6350	\$9,144,000.00	1
2231249	K	BSHP	BAY RIDGE AVE			A	1	S	4/9/2004	3.667	F	4900	\$7,056,000.00	10
2231250	K	81ST ST PED BR	BSHP		P	A- PED	5	C	10/1/2004	4.483	F	3100	\$4,464,000.00	10
2231260	K	92ND ST PED BR	BSHP		P	A- PED	6	C	9/7/2004	4.016	F	3000	\$4,320,000.00	10
2231270	K	4TH AVE	BSHP			A	2	S	3/24/2004	4.842	F	6100	\$8,784,000.00	10
2231290	K	BAY 8TH ST	BSHP			A	1	S	5/2/2005	5.984	G	4950	\$7,128,000.00	11
2231300	K	17TH AVE PED BRDG	BSHP		P	A- PED	1	C	2/5/2004	3.846	F	2100	\$3,024,000.00	11
2231319	K	BSHP	BAY PKWY			A	1	S	4/6/2004	4.395	F	7200	\$10,368,000.00	11
2231329	K	BSHP	26TH AVE			A	1	S	4/8/2004	4.800	F	6700	\$9,648,000.00	13
2231330	K	27TH AVE PED BRDG	BSHP		P	A- PED	1	C	7/1/2003	4.000	F	2100	\$3,024,000.00	13
2231340	K	CROPSEY AVE	BSHP			A	2	S	4/12/2004	5.000	G	13100	\$18,864,000.00	13
2231360	K	BSHP	OCEAN PKWY			A	3	S	12/6/2004	7.000	V	29637	\$42,677,280.00	13
2231370	K	GUIDER AV RAMP TO BSHP	BSHP			A	4	S	5/10/2004	3.903	F	12800	\$18,432,000.00	13
2231380	K	CONEY ISLAND AVE	BSHP			A	4	S	9/19/2005	6.292	V	19866	\$28,607,040.00	13
2231390	K	E 12TH ST	BSHP			A	4	S	4/16/2004	4.764	F	17200	\$24,768,000.00	15
2231409	K	BSHP	SHEEPSHEAD BAY ROAD			A	1	S	4/20/2004	4.807	F	6500	\$9,360,000.00	15
2231419	K	BSHP	OCEAN AVE			A	3	S	4/19/2004	4.486	F	14000	\$20,160,000.00	15
2231429	K	BSHP	BEDFORD AVE			A	3	S	4/21/2004	4.278	F	12000	\$17,280,000.00	15
2231439	K	BSHP	NOSTRAND AVE			A	3	S	5/10/2004	4.097	F	13000	\$18,720,000.00	15
2231449	K	KNAPP ST	BSHP			A	1	S	4/28/2004	4.469	F	9500	\$13,680,000.00	15
2231450	K	BSHP	GERRITSEN INLET			WA	11	S	7/25/2005	3.597	F	46400	\$66,816,000.00	56
2231460	K	FLATBUSH AVE	BSHP			A	2	S	9/15/2005	6.441	V	14058	\$20,243,520.00	56
2231479	K	BSHP	MILL BASIN			WMA	14	S	7/25/2005	3.224	F	73500	\$105,840,000.00	18
2231489	K	BSHP	PAERDEGAT BASIN			WA	15	S	9/14/2005	3.278	F	58300	\$83,952,000.00	18
2231499	K	BSHP	ROCKAWAY PKWY			A	4	S	8/12/2005	4.056	F	11500	\$16,560,000.00	56
2231509	K	BSHP	FRESH CREEK			WA	5	S	8/8/2005	3.222	F	23000	\$33,120,000.00	56
2231519	K	PENNSYLVANIA AVE	BSHP			A	2	S	4/28/2005	6.181	V	6640	\$9,561,600.00	56
2231559	Q	CROSS BAY BLVD	BSHP			A	4	S	4/6/2004	5.278	G	23205	\$33,415,200.00	10
2231560	Q	S CONDUIT BLVD	BSOP			A	2	S	4/6/2004	5.690	G	15776	\$22,717,440.00	10
2231570	Q	COHANCY ST	BSOP			A	2	S	4/6/2004	4.636	F	6400	\$9,216,000.00	10
2231580	Q	AQUEDUCT RCTK RAMP	BSOP			A	4	S	6/24/2004	4.264	F	14000	\$20,160,000.00	10
2231590	Q	130TH ST	BSOP			A	2	S	2/20/2004	4.750	F	6800	\$9,792,000.00	10
2231610	Q	GUY R. BREWER BLVD	BSOP			A	2	S	4/22/2005	6.569	V	12342	\$17,772,480.00	13
2231620	Q	FARMERS BLVD	BSOP			A	2	S	5/10/2005	4.568	F	6400	\$9,216,000.00	13
2231630	Q	SPRINGFIELD BLVD	BSOP			A	2	S	4/15/2004	4.682	F	8500	\$12,240,000.00	13
2231640	Q	225TH ST	BSOP			A	2	S	5/6/2004	4.727	F	7000	\$10,080,000.00	13
2231650	Q	SUNRISE HWY W.B.	BLP E.B.			A	1	S	4/7/2004	4.623	F	4100	\$5,904,000.00	13
2231660	Q	SUNRISE HWY W.B.	BLP W.B.			A	2	S	4/7/2004	4.531	F	5350	\$7,704,000.00	13
2231670	Q	N CONDUIT AVE W.B.	BLP E.B.			A	1	S	1/8/2004	4.917	F	4000	\$5,760,000.00	13
2231680	Q	N CONDUIT AVE WB	BLP W.B.			A	2	S	1/8/2004	4.932	F	6500	\$9,360,000.00	13
2231690	Q	FRANCIS LEWIS BLVD	BLP E.B.			A	1	S	3/26/2004	5.333	G	6000	\$8,640,000.00	13
2231700	Q	FRANCIS LEWIS BLVD	BLP W.B.			A	1	S	3/26/2004	4.867	F	6000	\$8,640,000.00	13
2231710	Q	MERRICK BLVD	BLP N.B.			A	1	S	3/26/2004	4.533	F	6000	\$8,640,000.00	13
2231720	Q	MERRICK BLVD	BLP S.B.			A	1	S	3/26/2004	4.200	F	6000	\$8,640,000.00	13
2231730	Q	130TH AVE	BLP N.B.			A	1	S	1/7/2004	5.267	G	4400	\$6,336,000.00	13
2231740	Q	130TH AVE	BLP S.B.			A	1	S	1/7/2004	4.667	F	4400	\$6,336,000.00	13
2231750	Q	LINDEN BLVD	BCIP			A	2	S	2/10/2004	4.295	F	6700	\$9,648,000.00	13
2231760	Q	BCIP	DUTCH BROADWAY-115 AVE			A	1	S	3/12/2004	4.442	F	7300	\$10,512,000.00	13
2231770	Q	BELMONT PARK RAMP	BCIP		P	A	1	S	3/12/2004	4.781	F	3200	\$4,608,000.00	13
2231780	Q	HEMPSTEAD AVE	BCIP			A	2	S	4/22/2004	4.210	F	14200	\$20,448,000.00	13
2231790	Q	BELMONT PARK RAMP	BCIP		P	A	1	S	1/7/2004	4.656	F	3400	\$4,896,000.00	13
2231800	Q	SUPERIOR ROAD	BCIP			A	2	S	3/22/2004	4.364	F	7000	\$10,080,000.00	13
2231819	Q	JAMAICA AVE	BCIP			A	2	S	2/11/2004	4.773	F	11500	\$16,560,000.00	13
2231829	Q	BRADDOCK AVE	BCIP			A	2	S	2/11/2004	4.909	F	10600	\$15,264,000.00	13
2231840	Q	HILLSIDE AVE	BCIP			A	2	S	4/30/2004	4.079	F	9672	\$13,927,680.00	13

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2231850	Q	UNION TPKE	BCIP			A	2	S	5/9/2005	4.318	F	13600	\$19,584,000.00	13
2231860	Q	W ALLEY ROAD	BCIP			A	2	S	8/18/2005	5.579	G	7200	\$10,368,000.00	11
2231870	Q	NORTHERN BLVD	BCIP			A	2	S	8/17/2004	6.431	V	9400	\$13,536,000.00	11
2231880	Q	CROCHERON PK PED	BCIP		P	A-PED	9	C	10/5/2004	4.750	F	2300	\$3,312,000.00	11
2231890	Q	28TH AVE PED BRDG	BCIP		P	A-PED	24	C	9/21/2004	5.150	G	7600	\$10,944,000.00	11
2231900	Q	BCIP	FORT TOTEN ENTRANCE			A	1	S	6/15/2004	4.672	F	4900	\$7,056,000.00	7
2231910	Q	UTOPIA PKWY	BCIP			A	2	S	2/5/2004	5.136	G	7200	\$10,368,000.00	7
2231920	Q	160TH ST	BCIP			A	2	S	4/11/2005	5.861	G	5550	\$7,992,000.00	7
2231930	Q	FRANCIS LEWIS BLVD	BCIP			A	3	S	1/14/2004	4.773	F	9100	\$13,104,000.00	7
2231940	Q	CLINTONVILLE ST	BCIP			A	2	S	1/14/2004	4.727	F	7400	\$10,656,000.00	7
2231950	Q	150TH ST	BCIP			A	2	S	1/14/2004	4.773	F	5900	\$8,496,000.00	7
2231960	Q	149TH ST	BCIP			A	2	S	1/27/2004	4.977	F	6210	\$8,942,400.00	7
2231970	Q	14TH AVE	BCIP			A	2	S	1/27/2004	4.750	F	8100	\$11,664,000.00	7
2231980	Q	147TH ST	BCIP			A	2	S	1/27/2004	4.773	F	6300	\$9,072,000.00	7
2232000	M	BATTERY PLACE	FDR DRIVE			AT	2	C	7/19/2004	4.500	F	75000	\$108,000,000.00	1
223201A	M	FDR DR N.B. OFF RMP	FDR DR & SOUTH ST			AR	17	S	2/18/2004	3.776	F	102225	\$147,204,000.00	1
223201B	M	STH ST RMP TO FDR S.B.	SOUTH ST			AR	10	S	2/23/2004	3.821	F	44625	\$64,260,000.00	1
223201C	M	STH ST RMP TO FDR	SOUTH ST			AR	8	S	2/19/2004	4.701	F	39150	\$56,376,000.00	1
223201D	M	RAMP TO N.B. FDR DRIVE	FDR & SOUTH ST.			AR	22	S	3/22/2004	5.393	G	15825	\$22,788,000.00	1
2232029	M	CORLEARS PARK ROAD	FDR DRIVE		P	A	4	S	2/10/2004	4.156	F	4100	\$5,904,000.00	3
2232030	M	DELANCEY ST PED BRDG	FDR DRIVE		P	A-PED	9	C	8/15/2004	4.449	F	2900	\$4,176,000.00	3
2232040	M	HOUSTON ST	FDR DRIVE			A	2	S	4/12/2005	3.318	F	11010	\$15,854,400.00	3
223204A	M	FDR NB TO HOUSTON ST	RELIEF			AR	4	S	6/15/2004	4.100	F	6150	\$8,856,000.00	3
223204B	M	HOUSTON ST RAMP TO FDR	RELIEF			AR	4	S	2/5/2004	4.417	F	7642	\$11,004,480.00	3
2232050	M	E 6TH ST PED BRDG	FDR DRIVE		P	A-PED	22	C	3/14/2004	4.431	F	2200	\$3,168,000.00	3
2232070	M	25TH ST PED BRDG	FDR DRIVE			A-PED	4	C	3/14/2004	4.594	F	1700	\$2,448,000.00	6
2232100	M	E 51ST ST PED BRDG	FDR DRIVE		P	A-PED	10	C	3/7/2004	4.188	F	2800	\$4,032,000.00	6
2232110	M	E 64TH ST PED BRDG	FDR DRIVE		P	A-PED	13	C	3/7/2004	5.141	G	2100	\$3,024,000.00	8
2232120	M	E 71ST ST PED BRDG	FDR DRIVE		P	A-PED	19	C	3/21/2004	6.182	V	1800	\$2,592,000.00	8
2232140	M	E 78TH ST PED BRDG	FDR DRIVE		P	A-PED	9	C	3/21/2004	3.000	P	1700	\$2,448,000.00	8
2232158	M	FDR DRIVE S.B.	FDR DRIVE N.B.			AT	32	S	5/26/2005	4.712	F	54302	\$78,194,880.00	8
2232167	M	PROMENADE OVER FDR	FDR/E79TH ST-E91ST ST		P	A-PED	53	S	8/3/2005	3.571	F	93000	\$133,920,000.00	8
2232180	M	E 103RD ST PED BRDG	FDR DRIVE			A-PED	20	C	7/29/2003	5.000	G	6000	\$8,640,000.00	11
2232190	M	E 111TH ST PED BRDG	FDR DRIVE		P	A-PED	14	C	2/2/2004	3.800	F	2600	\$3,744,000.00	11
2232200	M	E 120TH ST PED BRDG	FDR DRIVE		P	A-PED	23	C	10/24/2004	4.500	F	2500	\$3,600,000.00	11
2233020	M	E 10TH ST PED BRDG	FDR DRIVE		P	A-PED	22	C	12/16/2004	6.326	V	1632	\$2,350,080.00	3
2233038	M	FDR DRIVE SB	FDR NB / E 62ND ST			AT	46	S	9/15/2005	2.415	P	70113	\$100,962,720.00	8
2233040	M	E 60TH ST	FDR DRIVE			A	17	S	7/1/2005	4.687	F	24480	\$35,251,200.00	6
2233059	M	HARLEM RIVER DRIVE	RAMP TO HRD N.B.			A	11	S	4/13/2005	3.522	F	51000	\$73,440,000.00	11
2233080	K	E 14 ST PED BR	BSHP			A-PED	14	C	7/19/2004	4.588	F	4700	\$6,768,000.00	15
2240019	K M	BROOKLYN BRIDGE	278I (B.Q.E.)			WEO	75	S	11/2/2004	3.153	F	503788	\$725,454,720.00	3
224001A	M	PARK ROW TO BKLN	WILLIAM ST N.B.			OE	4	S	4/6/2005	4.250	F	10167	\$14,640,480.00	1
224001B	M	TO BKLN FRM FDR	FRANKFRT & CITY			OE	31	S	3/12/2004	4.148	F	51400	\$74,016,000.00	1
224001C	M	PEARL ST TO BKLN	LAND ADJ TO BRDG			OE	9	S	4/7/2005	3.814	F	6489	\$9,344,160.00	3
224001D	M	TO FDR DR N.B.	PEARL STREET			OE	30	S	5/16/2005	5.208	G	49600	\$71,424,000.00	1
224001E	M	TO PEARL ST	LAND ADJ TO BRDG			OE	3	S	5/2/2005	5.225	G	5300	\$7,632,000.00	6
224001F	M	PEARL ST TO FDR DR	LAND ADJ TO BRDG			OE	3	S	4/11/2005	5.254	G	5200	\$7,488,000.00	1
224001G	M	TO PARK ROW	ROSE ST			OE	11	S	5/3/2005	4.681	F	16551	\$23,833,440.00	1
2240027	K M	MANHATTAN BRIDGE(LL)	EAST RIVER	T		WEO	23	S	10/15/2004	4.000	F	616390	\$887,601,600.00	3
2240028	K M	MANHATTAN BRIDGE(UL)	NYCTA TRACKS-BMT	T		WEO	43	S	10/10/2004	4.300	F	587424	\$845,890,560.00	3
2240039	K M	WILLIAMSBURG BRIDGE	EAST RIVER	T		WEO	53	S	10/28/2004	4.556	F	824000	\$1,186,560,000.00	3
2240047	M Q	QUEENSBORO BRIDGE(LL)	EAST RIVER	L		WEO	53	S	11/23/2004	4.543	F	626900	\$902,736,000.00	6
2240048	M Q	QUEENSBORO BRIDGE(UL)	EAST RIVER-LL			WEO	37	S	12/5/2004	4.623	F	322300	\$464,112,000.00	6
224004A	M	TO QNS FRM E 59TH ST	FIRST AVE			OE	13	S	7/22/2004	5.732	G	14800	\$21,312,000.00	6
224004B	M	TO E 60TH ST FROM QNS	FIRST AVE			OE	13	S	7/23/2004	5.764	G	14800	\$21,312,000.00	6
224004C	M	TO E 62ND ST FROM QNS	E 60TH ST			OE	10	S	7/29/2004	4.985	F	16720	\$24,076,800.00	6
224004D	M	TO QNS FROM E 58TH ST	E 59TH ST			OE	12	S	8/25/2004	4.660	F	11781	\$16,964,640.00	6
224004E	Q	TO NY FR THOMSON AVE	JACKSON AVE			OE	94	S	10/29/2004	4.906	F	104600	\$150,624,000.00	2
224004F	Q	TO NY FROM 21ST ST	21ST ST (QUEENS)			OE	63	S	12/9/2004	4.652	F	63310	\$91,166,400.00	2

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224004G	Q	TO NY FROM 11TH ST	TERRAIN (CHAMBER)			OE	36	S	10/5/2004	4.634	F	8360	\$12,038,400.00	1
224004H	Q	TO 21ST ST FROM NY	22ND ST			OE	43	S	12/10/2004	4.310	F	48100	\$69,264,000.00	2
224004I	Q	TO THOMSON AVE FROM NY	JACKSON AVE			OE	39	S	11/23/2004	5.016	G	59100	\$85,104,000.00	2
224004J	M	25X	NYC GARAGE			OE	14	S	7/30/2004	4.537	F	22058	\$31,763,520.00	6
2240059	B M	WILLIS AVENUE	HARLEM RIVER			WMO	26	S	9/30/2005	3.222	F	94700	\$136,368,000.00	11
224005A	M	FROM FDR DRIVE	HARLEM RIVER DR			OR	19	S	8/18/2004	4.119	F	29900	\$43,056,000.00	11
224005B	B	TO BRUCKNER BLVD	RELIEF			OR	5	S	8/3/2005	3.833	F	12100	\$17,424,000.00	1
2240069	B M	THIRD AVE BRIDGE	HARLEM RIVER			WMO	32	S	9/7/2004	7.000	V	79950	\$115,128,000.00	11
224006A	B	TO BRUCKNER BLVD	RELIEF			OR	11	S	12/8/2005	6.732	V	11100	\$15,984,000.00	1
2240079	B M	MADISON AVE BRIDGE	HARLEM RIVER			WMO	21	S	9/1/2004	5.139	G	80000	\$115,200,000.00	11
224007A	M	TO MADISON AVENUE	RELIEF			OR	7	S	4/30/2004	5.592	G	19880	\$28,627,200.00	11
2240089	B M	145TH ST BRIDGE	HARLEM RIVER			WMO	8	S	10/21/2005	3.097	F	56700	\$81,648,000.00	10
2240120	B M	W 207TH/W FORDHAM RD	HARLEM RIVER			WMO	5	S	6/30/2004	5.667	G	31784	\$45,768,960.00	12
2240137	B M	BROADWAY BRIDGE	HARLEM RIVER	T		WMO	3	S	10/13/2003	3.986	F	46848	\$67,461,120.00	12
2240138	B M	NYCTA IRT	HARLEM RVR/BROADWAY	T		WMO	3	S	10/27/2005	4.882	F	19520	\$28,108,800.00	12
2240180	B	WESTCHESTER AVE	BRONX RIVER			WO	1	S	7/1/2005	4.932	F	5476	\$7,885,440.00	2
2240200	B	SHORE ROAD	HUTCHINSON RIVER			WMO	7	S	9/3/2004	4.597	F	4800	\$6,912,000.00	28
2240210	B	CITY ISLAND ROAD	EASTCHESTER BAY			WO	7	S	12/6/2005	3.500	F	28900	\$41,616,000.00	28
2240231	K	HAMILTON AVE BRIDGE	GOWANUS CANAL			WMO	3	S	8/31/2005	4.028	F	7300	\$10,512,000.00	7
2240232	K	HAMILTON AVE BRIDGE	GOWANUS CANAL			WMO	3	S	8/31/2005	4.125	F	7300	\$10,512,000.00	6
2240240	K	NINTH ST BRIDGE	GOWANUS CANAL			WMO	3	S	6/14/2005	6.613	V	5772	\$8,311,680.00	6
2240250	K	THIRD ST	GOWANUS CANAL			WMO	5	S	6/17/2005	4.931	F	4900	\$7,056,000.00	6
2240260	K	CARROLL ST	GOWANUS CANAL			WMO	2	S	8/8/2005	4.690	F	3000	\$4,320,000.00	6
2240270	K	UNION ST	GOWANUS CANAL			WMO	5	S	8/23/2004	4.153	F	4900	\$7,056,000.00	6
2240290	K	METROPOLITAN AVE	ENGLISH KILLS			WMO	5	S	8/31/2004	4.186	F	15245	\$21,952,800.00	1
2240301	K	CROPSEY AVE	CONEY ISLAND CREEK			WO	3	S	8/2/2005	5.225	G	9400	\$13,536,000.00	13
2240302	K	CROPSEY AVE	CONEY ISLAND CREEK			WO	3	S	8/19/2005	5.028	G	9400	\$13,536,000.00	13
2240310	K	THIRD AVE	GOWANUS CANAL			WO	1	S	6/13/2005	4.055	F	3200	\$4,608,000.00	6
2240320	K	OCEAN AVE PED BRDG	SHEEPSHEAD BAY			WO-PED	30	C	5/2/2003	4.070	F	4000	\$5,760,000.00	15
2240350	R	RICHMOND AVE	RICHMOND CREEK			WO	3	S	6/16/2005	5.819	G	32589	\$46,928,160.00	2
2240370	K Q	GREENPOINT AVE BRIDGE	NEWTOWN CREEK	L		WMO	12	S	10/21/2005	5.250	G	76106	\$109,592,640.00	2
2240390	K Q	GRAND ST BRIDGE	NEWTOWN CREEK			WMO	2	S	9/3/2004	4.486	F	5100	\$7,344,000.00	5
2240410	Q	BORDEN AVE	DUTCH KILLS			WMO	2	S	6/8/2005	3.833	F	8400	\$12,096,000.00	2
2240440	Q	NORTHERN BLVD	ALLEY CREEK			WO	2	S	6/2/2004	4.750	F	8300	\$11,952,000.00	11
2240450	Q	HUNTERS PT AVE BRIDGE	DUTCH KILLS			WMO	4	S	5/26/2004	5.167	G	12168	\$17,521,920.00	2
2240507	Q	ROOSEVELT AVE	6781 - VAN WYCK EXPWY			WA	27	S	12/8/2004	3.254	F	84424	\$121,570,560.00	81
2240540	K	STILLWELL AVE	CONEY ISLAND CRK			WO	2	S	6/7/2005	6.292	V	17000	\$24,480,000.00	13
2240620	M	WARDS ISLAND PED BRDG	HARLEM RIVER			WMO-PED	10	C	7/29/2003	4.049	F	12600	\$18,144,000.00	11
2240639	K Q	PULASKI BRIDGE	NEWTOWN CREEK			WMO	44	S	7/7/2004	4.817	F	205770	\$296,308,800.00	2
2240640	M Q	ROOSEVELT ISLAND	E. RIVER E. CHANNEL			WMO	8	S	6/15/2004	4.222	F	36500	\$52,560,000.00	8
2240650	Q	163RD ST PED BRDG	HAWTREE BASIN			WO-PED	13	C	4/21/2004	4.333	F	5000	\$7,200,000.00	10
2240660	Q	RIKERS ISLAND BRIDGE	RIKERS ISL CHANNEL			WO	56	S	7/5/2005	4.282	F	183100	\$263,664,000.00	1
2241000	B	WESTCHESTER AVE	CONRAIL PT MORRIS	C		O	1	S	9/2/2004	5.085	G	1740	\$2,505,600.00	1
2241010	B	E 156TH STREET	CONRAIL PT MORRIS	C		O	1	S	9/3/2004	4.556	F	2400	\$3,456,000.00	1
2241020	B	E 161ST STREET	CONRAIL PT MORRIS	C		O	1	S	8/31/2004	6.783	V	12800	\$18,432,000.00	1
2241030	B	E 163RD STREET	CONRAIL PT MORRIS	C		O	1	S	5/25/2004	4.778	F	3200	\$4,608,000.00	3
2241040	B	THIRD AVE	CONRAIL PT MORRIS	C		O	1	S	11/3/2004	4.563	F	2700	\$3,888,000.00	1
2241050	B	E 149TH ST/JACKSON AVE	CONRAIL PT MORRIS	C		O	1	S	9/3/2004	4.850	F	65000	\$93,600,000.00	1
2241060	B	ST. MARYS & CONCORD	CONRAIL PT MORRIS	C		O	1	S	9/3/2004	5.333	G	4500	\$6,480,000.00	1
2241070	B	WALES AVE	CONRAIL PT MORRIS	C		O	1	S	11/5/2004	6.567	V	2535	\$3,650,400.00	1
2241080	B	SOUTHERN BLVD	CONRAIL PT MORRIS	C		O	1	S	11/5/2004	4.185	F	3900	\$5,616,000.00	1
2241099	B	BRUCKNER BLVD	CONRAIL PT MORRIS	C		O	1	S	11/5/2004	6.734	V	6700	\$9,648,000.00	1
2241110	B	MELROSE AVE	CONRAIL PT MORRIS	C		O	8	S	5/23/2005	5.889	G	37854	\$54,509,760.00	3
2241129	B	E 149TH ST	AMTRAK	A		O	2	S	8/3/2004	4.620	F	12575	\$18,108,000.00	1
2241139	B	LEGGETT AVE	AMTRAK	A		O	3	S	8/6/2004	4.690	F	28300	\$40,752,000.00	2
2241159	B	LONGWOOD AVE	AMTRAK	A		O	2	S	8/2/2004	6.042	V	10625	\$15,300,000.00	2
2241169	B	LAFAYETTE AVE	AMTRAK	A		O	1	S	8/5/2004	5.794	G	12000	\$17,280,000.00	2
2241170	B	TIFFANY ST	AMTRAK	A		O	1	S	7/6/2005	5.627	G	7267	\$10,464,480.00	2
2241180	B	BARRETTO ST	AMTRAK	A		O	1	S	7/26/2004	6.219	V	5313	\$7,650,720.00	2
2241190	B	HUNTS POINT AVE	AMTRAK	A		O	1	S	7/27/2004	4.984	F	13700	\$19,728,000.00	2
2241200	B	FAILE ST	AMTRAK	A		O	1	S	7/28/2004	5.797	G	6208	\$8,939,520.00	2

INVENTORY SORTED BY B.I.N.														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD

2241210	B	BRYANT AVE	AMTRAK	A		O	1	S	7/5/2005	3.085	F	5300	\$7,632,000.00	2
2241230	B	WESTCHESTER AVE	AMTRAK	A		O	3	S	8/11/2004	6.250	V	15600	\$22,464,000.00	2
2241259	B	204TH ST PED BRDG	METRO NORTH RR HAR	M	P	O-PED	1	C	7/26/2004	4.121	F	4700	\$6,768,000.00	27
2241269	B	E 177TH ST	AMTRAK	A		O	3	S	8/12/2004	5.514	G	16606	\$23,912,640.00	9
2241270	B	EAST TREMONT AVE	AMTRAK	A		O	2	S	8/2/2004	5.556	G	22300	\$32,112,000.00	9
2241329	B	WHITE PLAINS ROAD	AMTRAK	A		O	1	S	8/13/2004	4.891	F	6900	\$9,936,000.00	9
2241330	B	UNIONPORT ROAD	AMTRAK	A		O	1	S	8/13/2004	4.875	F	4400	\$6,336,000.00	9
2241369	B	WILLIAMSBRIDGE RD	AMTRAK	A		O	2	S	8/5/2004	4.836	F	10400	\$14,976,000.00	11
2241380	B	PELHAM BAY PK PED	AMTRAK	A	P	O-PED	1	C	11/13/1978	5.109	G	4223	\$6,081,120.00	28
2241390	B	SHORE RD CIRCLE	AMTRAK	A		O	2	S	6/13/2005	3.254	F	4800	\$6,912,000.00	10
2241409	B	GRAND CONCOURSE	METRO NORTH RR HUD	TCM		O	1	S	4/7/2004	3.844	F	16100	\$23,184,000.00	4
2241410	B	WALTON AVE	METRO NORTH RR HUD	M		O	1	S	4/6/2004	5.328	G	3600	\$5,184,000.00	4
2241420	B	GERARD AVE	METRO NORTH RR HUD	M		O	1	S	4/30/2004	6.766	V	5063	\$7,290,720.00	4
2241430	B	RIVER AVE	METRO NORTH RR HUD	M		O	1	S	6/22/2005	6.281	V	5040	\$7,257,600.00	4
2241460	B	W TREMONT AVE	METRO NORTH RR HUD	M		O	8	S	1/20/2005	4.328	F	12900	\$18,576,000.00	5
2241470	B	W FORDHAM RD	METRO NORTH RR HUD	M		O	4	S	6/27/2005	5.806	G	16052	\$23,114,880.00	7
2241489	B	W 225TH ST	CONRAIL PUTNAM	C		O	2	S	5/26/2004	5.313	G	10900	\$15,696,000.00	7
2241490	B	W 230TH ST	CONRAIL PUTNAM	C		O	1	S	3/31/2005	5.844	G	5600	\$8,064,000.00	8
2241509	B	W 231ST ST	CONRAIL PUTNAM	C		O	1	S	11/18/2004	5.765	G	4723	\$6,801,120.00	8
2241510	B	W 233RD ST	CONRAIL PUTNAM	C		O	1	S	4/1/2005	5.275	G	3760	\$5,414,400.00	8
2241520	B	W 234TH ST	CONRAIL PUTNAM	C		O	1	S	4/4/2005	5.412	G	3770	\$5,428,800.00	8
2241550	B	E 144TH ST	METRO NORTH RR HAR	M		O	2	S	6/20/2005	6.528	V	8290	\$11,937,600.00	1
2241560	B	E 149TH ST	METRO NORTH RR HAR	M		O	8	S	4/9/2004	4.625	F	27900	\$40,176,000.00	1
2241590	B	CONCOURSE VILL AVE	METRO NORTH RR HAR	M		O	1	S	4/8/2004	4.188	F	17800	\$25,632,000.00	1
2241600	B	E 158TH ST	METRO NORTH RR HAR	M		O	1	S	6/14/2005	5.167	G	3400	\$4,896,000.00	1
2241610	B	E 161ST ST	METRO NORTH RR HAR	M		O	1	S	6/15/2005	5.283	G	6600	\$9,504,000.00	1
2241620	B	E 162ND ST	METRO NORTH RR HAR	M		O	1	S	4/14/2004	4.984	F	4700	\$6,768,000.00	3
2241630	B	E 165TH ST	METRO NORTH RR HAR	M		O	1	S	4/15/2004	4.350	F	16400	\$23,616,000.00	3
2241650	B	E 167TH ST	METRO NORTH RR HAR	M		O	1	S	3/15/2004	5.863	G	3363	\$4,842,720.00	3
2241660	B	E 168TH ST	METRO NORTH RR HAR	M		O	1	S	3/15/2004	4.922	F	7700	\$11,088,000.00	3
2241670	B	E 169TH ST	METRO NORTH RR HAR	M		O	1	S	3/15/2004	4.500	F	3300	\$4,752,000.00	3
2241680	B	E 170TH ST	METRO NORTH RR HAR	M		O	1	S	3/22/2004	6.451	V	3150	\$4,536,000.00	3
2241700	B	ST PAULS PL PED BRDG	METRO NORTH RR HAR	M		O-PED	2	C	7/30/2004	5.423	G	600	\$864,000.00	3
2241710	B	CLAREMONT PKWY	METRO NORTH RR HAR	M		O	1	S	3/22/2004	4.422	F	6300	\$9,072,000.00	3
2241720	B	E 173RD ST	METRO NORTH RR HAR	M		O	1	S	4/19/2004	4.391	F	3000	\$4,320,000.00	3
2241740	B	E 175TH ST	METRO NORTH RR HAR	M		O	1	S	3/22/2004	4.031	F	3600	\$5,184,000.00	3
2241760	B	E TREMONT AVE	METRO NORTH RR HAR	M		O	1	S	6/16/2005	6.517	V	7300	\$10,512,000.00	6
2241770	B	E 178TH ST PED BRDG	METRO NORTH RR HAR	M		O-PED	1	C	7/28/2004	5.921	G	700	\$1,008,000.00	6
2241780	B	E 179TH ST PED BRDG	METRO NORTH RR HAR	M		O-PED	6	C	7/27/2004	6.000	G	700	\$1,008,000.00	6
2241790	B	E 180TH ST	METRO NORTH RR HAR	M		O	1	S	4/15/2004	4.078	F	5000	\$7,200,000.00	6
2241800	B	E 183TH ST	METRO NORTH RR HAR	M		O	1	S	4/16/2004	4.234	F	3600	\$5,184,000.00	6
2241810	B	E 188TH ST	METRO NORTH RR HAR	M		O	1	S	4/19/2004	4.188	F	5300	\$7,632,000.00	6
2241820	B	E 187TH ST	METRO NORTH RR HAR	M		O	1	S	4/16/2004	4.750	F	3800	\$5,472,000.00	6
2241839	B	E 189TH ST	METRO NORTH RR HAR	M		O	1	S	6/13/2005	6.533	V	43157	\$62,146,080.00	6
2241840	B	BEDFORD PARK BLVD	METRO NORTH RR HAR	M		O	1	S	4/16/2004	4.578	F	6400	\$9,216,000.00	27
2241860	B	GUN HILL RD	METRO NORTH RR HAR	M		O	2	S	4/20/2004	4.103	F	9000	\$12,960,000.00	12
2241870	B	E 233RD ST	METRO NORTH RR HAR	M		O	1	S	4/20/2004	5.157	G	7664	\$11,036,160.00	12
2241890	B	E 241ST ST	BRP, METRO NORTH HAR	M		O	28	S	7/22/2005	4.444	F	49500	\$71,280,000.00	12
2241900	B	EASTCHESTER ROAD	NYCTA-DYRE AVE LN	T		O	3	S	9/14/2004	4.917	F	13500	\$19,440,000.00	12
2241910	B	GUN HILL ROAD	NYCTA-DYRE AVE LN	T		O	1	S	9/14/2004	6.906	V	75000	\$108,000,000.00	11
2241930	B	BEDFORD PARK BLVD	NYCTA IND YARDS	T		O	4	S	9/13/2004	6.500	V	46300	\$66,672,000.00	7
2241940	B	W 205TH ST	NYCTA IND YARDS	T		O	4	S	9/13/2004	6.778	V	32508	\$46,811,520.00	7
2241959	B	HUTCHINSON RVR PKWY	AMTRAK	A		O	1	S	8/6/2004	5.746	G	15444	\$22,239,360.00	10
2242010	B	BRONX PELHAM PKWY	BRONX RIVER			WA	1	S	5/18/2004	4.931	F	9200	\$13,248,000.00	27
2242029	B	SOUTHERN BLVD	BRONX PELHAM PKWY			O	2	S	4/13/2004	4.684	F	12900	\$18,576,000.00	27
2242030	B	CROTONA AVE	BRONX PELHAM PKWY			O	2	S	4/13/2004	5.447	G	7600	\$10,944,000.00	6
2242071	B	BRONX BLVD S.B.	BRONX RIVER			WO	1	S	5/5/2004	4.700	F	1800	\$2,592,000.00	12
2242072	B	BRONX BLVD N.B.	BRONX RIVER			WO	1	S	5/5/2004	5.033	G	1800	\$2,592,000.00	12
2242081	B	BRONX BLVD S.B.	BRONX RIVER			WO	1	S	5/6/2004	4.467	F	2800	\$4,032,000.00	12
2242082	B	BRONX BLVD N.B.	BRONX RIVER			WO	1	S	5/6/2004	4.467	F	2800	\$4,032,000.00	12
2242099	B	PARK ROAD (204TH ST)	BRONX RIVER			WO	1	S	8/31/2004	4.172	F	4700	\$6,768,000.00	27
2242100	B	BOTANICAL GARDEN ROAD	TWIN LAKES		P	WO-PED	1	S	5/19/2004	4.967	F	2200	\$3,168,000.00	27
2242110	B	BOSTON ROAD	BRONX RIVER			WO	1	S	5/17/2004	4.273	F	6200	\$8,928,000.00	27

INVENTORY SORTED BY B.I.N.														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD

2242120	B	FTBG N OF RTE 1	BRONX RIVER		P	WO- PED	1	C	6/15/2002	4.029	F	1904	\$2,741,760.00	9
2242149	B	E TREMONT AVE	BRONX RIVER			WO	2	S	5/20/2004	4.722	F	12900	\$18,576,000.00	6
2242200	B	YANKEE STDM PED BRDG	E 153 ST, METRO NORTH	M	P	O- PED	5	C	7/29/2004	4.556	F	4200	\$6,048,000.00	4
2242210	B	S OF ALLERTON AVE	BRONX RIVER			WO	3	S	7/17/2004	4.763	F	6200	\$8,928,000.00	27
2242220	B	SOUTHERN BLVD	BRONX RIVER			WO	2	S	3/2/2004	4.105	F	4800	\$6,912,000.00	27
2242259	B	GRAND CONCOURSE	E 161ST ST			O	1	S	10/18/2004	3.583	F	24100	\$34,704,000.00	4
2242260	B	EAGLE AVE	E 161ST ST			O	1	S	4/8/2004	5.234	G	2800	\$4,032,000.00	1
2242280	B	GRAND CONCOURSE	E 167TH ST			O	2	S	9/22/2004	4.544	F	42900	\$61,776,000.00	4
2242299	B	GRAND CONCOURSE	E 138TH ST			O	1	S	5/9/2005	4.933	F	9500	\$13,680,000.00	1
2242300	B	GRAND CONCOURSE	E 170TH ST			O	2	S	6/24/2004	4.789	F	39300	\$56,592,000.00	4
2242319	B	GRAND CONCOURSE	E 174TH ST	T		O	1	S	4/9/2004	4.067	F	14900	\$21,456,000.00	4
2242329	B	GRAND CONCOURSE	E 175TH ST	T		O	1	S	10/5/2004	4.800	F	11900	\$17,136,000.00	4
2242330	B	GRAND CONCOURSE	E TREMONT AVE			O	1	S	10/20/2005	5.983	G	11700	\$16,848,000.00	5
2242340	B	GRAND CONCOURSE	EAST KINGSBRIDGE			O	2	S	10/20/2004	4.714	F	16500	\$23,760,000.00	7
2242350	B	EAST FORDHAM RD	GRAND CONCOURSE			O	1	S	4/21/2004	4.567	F	10300	\$14,832,000.00	5
2242360	B	GRAND CONCOURSE	BURNSIDE AVE			O	2	S	10/21/2004	4.441	F	8400	\$12,096,000.00	5
2242370	B	GRAND CONCOURSE	BEDFORD PARK BLVD			O	1	S	4/22/2004	4.765	F	8418	\$12,121,920.00	7
2242380	B	GRAND CONCOURSE	E 204TH ST			O	1	S	5/5/2005	5.391	G	9272	\$13,351,680.00	7
2242400	B	E 180TH ST	BRONX RIVER			WO	1	S	11/23/2004	4.810	F	4500	\$6,480,000.00	6
2242430	B	GUN HILL ROAD	BRONX BLVD			O	4	S	6/25/2004	4.982	F	9400	\$13,536,000.00	12
2242440	B	GUN HILL ROAD	BRONX RIVER			WO	1	S	3/1/2004	5.167	G	8700	\$12,528,000.00	12
2242459	B	E 233RD ST	BRONX RIVER			WO	1	S	5/27/2004	4.367	F	7000	\$10,080,000.00	12
2242460	B	E 233RD ST	ENTR RD BNX RVR PKWY			O	1	S	2/13/2004	5.467	G	5300	\$7,632,000.00	12
2243010	K	LINCOLN ROAD	BMT SUBWAY, BRIGHTON	T		O	4	S	7/11/2005	4.103	F	6100	\$8,784,000.00	55
2243020	K	PARKSIDE AVE	BMT SUBWAY, BRIGHTON	T		O	6	S	9/28/2004	4.000	F	48700	\$70,128,000.00	14
2243040	K	CROOKE AVE	BMT SUBWAY, BRIGHTON	T		O	4	S	7/15/2005	4.158	F	6000	\$8,640,000.00	14
2243050	K	CATON AVE	BMT SUBWAY, BRIGHTON	T		O	4	S	7/19/2005	4.500	F	20800	\$29,952,000.00	14
2243080	K	CHURCH AVE	BMT SUBWAY, BRIGHTON	T		O	4	S	7/22/2005	4.545	F	18200	\$26,208,000.00	14
2243100	K	BEVERLY ROAD	BMT SUBWAY, BRIGHTON	T		O	3	S	7/29/2005	3.877	F	2700	\$3,888,000.00	14
2243110	K	CORTEYOU ROAD	BMT SUBWAY, BRIGHTON	T		O	3	S	8/3/2005	6.306	V	2900	\$4,176,000.00	14
2243120	K	DORCHESTER ROAD	BMT SUBWAY, BRIGHTON	T		O	1	S	10/28/2004	5.490	G	4825	\$6,948,000.00	14
2243130	K	DITMAS AVE	BMT SUBWAY, BRIGHTON	T		O	1	S	8/4/2005	5.766	G	4875	\$7,020,000.00	14
2243140	K	NEWKIRK AVE	BMT SUBWAY, BRIGHTON	T		O	3	S	8/26/2005	4.250	F	4100	\$5,904,000.00	14
2243150	K	FOSTER AVE	BMT SUBWAY, BRIGHTON	T		O	1	S	10/14/2004	4.550	F	3000	\$4,320,000.00	14
2243170	K	STERLING PLACE	FRANKLIN SHUTTLE	T		O	1	S	8/5/2005	6.500	V	2300	\$3,312,000.00	8
2243180	K	ST JOHNS PLACE	FRANKLIN SHUTTLE	T		O	1	S	9/28/2005	6.781	V	2200	\$3,168,000.00	9
2243190	K	LINCOLN PLACE	FRANKLIN SHUTTLE	T		O	1	S	9/21/2004	6.922	V	2460	\$3,542,400.00	9
2243200	K	UNION ST	FRANKLIN SHUTTLE	T		O	2	S	9/20/2004	5.065	G	4100	\$5,904,000.00	9
2243210	K	PRESIDENT ST	FRANKLIN SHUTTLE	T		O	2	S	9/17/2004	5.314	G	2500	\$3,600,000.00	9
2243220	K	CARROLL ST PED BRDG	FRANKLIN SHUTTLE	T		O- PED	3	C	9/26/2002	5.484	G	600	\$864,000.00	9
2243230	K	CROWN ST	FRANKLIN SHUTTLE	T		O	3	S	9/30/2005	5.264	G	4800	\$6,912,000.00	9
2243240	K	MONTGOMERY ST	FRANKLIN SHUTTLE	T		O	1	S	9/26/2005	6.275	V	2030	\$2,923,200.00	9
2243250	K	WASHINGTON AVE	FRANKLIN SHUTTLE	T		O	1	S	9/16/2004	6.391	V	3657	\$5,266,080.00	9
2243260	K	FLATBUSH AVE	FRANKLIN SHUTTLE	T		O	2	S	9/15/2004	5.196	G	11300	\$16,272,000.00	9
2243279	K	EASTERN PKWY	FRANKLIN SHUTTLE	T		O	1	S	9/22/2004	4.861	F	7700	\$11,088,000.00	9
2243280	K	6TH AVE	LIRR ATLANTIC AVE	L		O	9	S	11/21/2004	5.528	G	12276	\$17,677,440.00	8
2243290	K	CARLTON AVE	LIRR ATLANTIC AVE	L		O	7	S	11/20/2004	4.931	F	10823	\$15,585,120.00	8
2243310	K	2ND AVE	LIRR BAY RIDGE	N		O	2	S	11/14/2003	3.925	F	17751	\$25,561,440.00	10
2243320	K	3RD AVE	LIRR BAY RIDGE	N		O	4	S	6/22/2005	5.542	G	17230	\$24,811,200.00	10
2243330	K	4TH AVE	LIRR BAY RIDGE	NT		O	4	S	8/12/2005	5.819	G	13668	\$19,681,920.00	10
2243340	K	15TH AVE	LIRR BAY RIDGE	N		O	1	S	10/14/2004	4.872	F	3614	\$5,204,160.00	11
2243350	K	60TH ST	LIRR BAY RIDGE	N		O	1	S	6/20/2005	6.383	V	3900	\$5,616,000.00	11
2243360	K	16TH AVE	LIRR BAY RIDGE	N		O	1	S	12/8/2004	5.733	G	4345	\$6,256,800.00	11
2243370	K	17TH AVE	LIRR BAY RIDGE	N		O	1	S	12/1/2004	4.784	F	3406	\$4,904,640.00	12
2243380	K	18TH AVE	LIRR BAY RIDGE	N		O	1	S	12/2/2004	5.016	G	6006	\$8,648,640.00	12
2243390	K	52ND ST	LIRR BAY RIDGE	N		O	1	S	12/6/2004	6.467	V	3293	\$4,741,920.00	12
2243400	K	50TH ST	LIRR BAY RIDGE	N		O	2	S	6/17/2005	4.701	F	7100	\$10,224,000.00	12
2243410	K	MCDONALD AVE	LIRR BAY RIDGE	N		O	1	S	11/30/2004	5.422	G	2760	\$3,974,400.00	12
2243420	K	E 3RD ST	LIRR BAY RIDGE	N		O	1	S	6/15/2005	6.783	V	1500	\$2,160,000.00	12
2243439	K	OCEAN PKWY	LIRR BAY RIDGE	N		O	1	S	11/18/2004	5.218	G	7000	\$10,080,000.00	12
2243440	K	CONY ISLAND AVE	LIRR BAY RIDGE	N		O	1	S	11/17/2004	5.234	G	3231	\$4,652,640.00	12
2243450	K	E 14TH ST	LIRR BAY RIDGE	N		O	1	S	11/15/2004	5.383	G	1775	\$2,556,000.00	14
2243460	K	E 15TH ST - PED	LIRR BAY RIDGE	N		O- PED	3	C	4/17/2002	3.650	F	900	\$1,296,000.00	14

INVENTORY SORTED BY B.I.N.														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD

2243480	K	OCEAN AVE	LIRR BAY RIDGE	N		O	2	S	11/12/2004	5.000	G	5000	\$7,200,000.00	14
2243490	K	BEDFORD AVE	LIRR BAY RIDGE	N		O	6	S	11/11/2004	4.639	F	12000	\$17,280,000.00	14
2243500	K	NOSTRAND AVE	LIRR BAY RIDGE	N		O	2	S	11/16/2004	5.186	G	4320	\$6,220,800.00	14
2243510	K	FLATBUSH AVE	LIRR BAY RIDGE	N		O	2	S	6/8/2005	4.667	F	5700	\$8,208,000.00	18
2243520	K	BROOKLYN AVE	LIRR BAY RIDGE	N		O	3	S	6/10/2005	6.236	V	4500	\$6,480,000.00	18
2243530	K	AVENUE H	LIRR BAY RIDGE	N		O	2	S	6/14/2005	6.279	V	35100	\$50,544,000.00	18
2243569	K	ATLANTIC AVE	LIRR ATLANTIC AVE	L		O	75	S	7/14/2004	3.845	F	135100	\$194,544,000.00	16
2243570	K	86TH ST	LIRR & SEA BEACH	LT		O	1	S	8/9/2004	6.172	V	3840	\$5,529,600.00	13
2243580	K	5TH AVE	LIRR & SEA BEACH	LT		O	4	S	10/29/2004	4.353	F	12500	\$18,000,000.00	10
2243590	K	6TH AVE	LIRR & SEA BEACH	LT		O	2	S	8/12/2005	6.528	V	14200	\$20,448,000.00	10
2243600	K	7TH AVE	LIRR & SEA BEACH	LT		O	7	S	10/29/2004	5.556	G	18913	\$27,234,720.00	10
2243610	K	8TH AVE	LIRR & SEA BEACH	LT		O	2	S	8/12/2005	6.319	V	10834	\$15,600,960.00	10
2243620	K	FORT HAMILTON PKWY	LIRR & SEA BEACH	LT		O	3	S	10/20/2004	5.492	G	14800	\$21,312,000.00	10
2243630	K	11TH AVE	LIRR & SEA BEACH	LT		O	5	S	10/26/2004	6.603	V	9700	\$13,968,000.00	10
2243640	K	13TH AVE	LIRR & SEA BEACH	LT		O	5	S	8/29/2005	4.694	F	16000	\$23,040,000.00	10
2243650	K	14TH AVE	LIRR BAY RIDGE	N		O	1	S	10/12/2004	6.967	V	4720	\$6,796,800.00	11
2243660	K	NEW UTRECHT AVE	LIRR BAY RIDGE	N		O	1	S	10/13/2004	6.900	V	2350	\$3,384,000.00	11
2243670	K	15TH AVE	BMT SEA BEACH	T		O	6	S	9/29/2005	6.568	V	17300	\$24,912,000.00	11
2243680	K	16TH AVE	BMT SEA BEACH	T		O	3	S	9/9/2004	5.444	G	6816	\$9,815,040.00	11
2243690	K	17TH AVE	BMT SEA BEACH	T		O	4	S	9/13/2004	3.711	F	8500	\$12,240,000.00	11
2243700	K	18TH AVE	BMT SEA BEACH	T		O	4	S	8/31/2005	6.842	V	8700	\$12,528,000.00	11
2243710	K	19TH AVE	BMT SEA BEACH	T		O	4	S	9/1/2004	4.395	F	4800	\$6,912,000.00	11
2243720	K	20TH AVE	BMT SEA BEACH	T		O	6	S	8/19/2004	4.744	F	12500	\$18,000,000.00	11
2243730	K	65TH ST	BMT SEA BEACH	T		O	4	S	8/13/2004	5.947	G	12000	\$17,280,000.00	11
2243740	K	BAY PKWY	BMT SEA BEACH	T		O	4	S	8/11/2004	4.974	F	16800	\$24,192,000.00	11
2243750	K	AVENUE O	BMT SEA BEACH	T		O	1	S	9/2/2005	5.863	G	4658	\$6,707,520.00	11
2243760	K	AVENUE P	BMT SEA BEACH	T		O	1	S	9/16/2005	6.605	V	5544	\$7,983,360.00	11
2243770	K	KINGS HIGHWAY	BMT SEA BEACH	T		O	1	S	8/24/2005	6.767	V	5032	\$7,246,080.00	11
2243780	K	HIGHLAWN AVE	BMT SEA BEACH	T		O	1	S	9/9/2005	6.440	V	6960	\$10,022,400.00	11
2243790	K	AVENUE S	BMT SEA BEACH	T		O	1	S	9/19/2005	6.133	V	5360	\$7,718,400.00	15
2243800	K	AVENUE T	BMT SEA BEACH	T		O	1	S	9/20/2005	6.033	V	5360	\$7,718,400.00	11
2243810	K	AVENUE U	BMT SEA BEACH	T		O	1	S	8/27/2004	6.137	V	5880	\$8,467,200.00	15
2243820	K	21ST AVE	BMT SEA BEACH	T		O	4	S	8/26/2004	4.184	F	21400	\$30,816,000.00	11
2243839	K	4TH AVE	NYCTA BMT TRACKS	T		O	1	S	9/21/2005	6.600	V	5160	\$7,430,400.00	7
2243840	K	9TH AVE	NYCTA BMT YARD	T		O	5	S	9/15/2005	6.458	V	12440	\$17,913,600.00	12
2243850	K	LIBERTY AVE	LIRR BAY RIDGE	N		O	4	S	6/23/2005	4.294	F	6400	\$9,216,000.00	16
2243860	K	GLENMORE AVE	LIRR BAY RIDGE	N		O	2	S	11/8/2004	6.559	V	5616	\$8,087,040.00	16
2243870	K	PITKIN AVE	LIRR BAY RIDGE	N		O	3	S	11/3/2004	4.471	F	5600	\$8,064,000.00	16
2243890	K	SUTTER AVE	LIRR BAY RIDGE	N		O	3	S	11/4/2004	6.681	V	5497	\$7,915,680.00	16
2243900	K	BLAKE AVE	LIRR BAY RIDGE LINE	N		O	3	S	11/5/2004	5.309	G	5020	\$7,228,800.00	16
2243910	K	LIVONIA AVE PED BRDG	LIRR BAY RIDGE LINE	N		O-PED	3	C	7/2/2004	5.125	G	2500	\$3,600,000.00	16
2243920	K	7TH AVE	NYCTA BMT YARD	T		O	2	S	10/21/2004	6.507	V	4700	\$6,768,000.00	7
2243940	K	9TH AVE	NYCTA IND SBWY	T		O	5	S	9/15/2005	4.737	F	11900	\$17,136,000.00	12
2244010	K	PROSPECT PK E DRIVE	ENDALE ARCH E DRIVE		P	O	1	C	5/7/2002	4.367	F	900	\$1,296,000.00	55
2244020	K	W DR OV WK-MA.ENT	MEADOWPORT ARCH		P	O	1	S	4/5/2005	5.964	G	2500	\$3,600,000.00	55
2244030	K	EAST DRIVE	BRIDLE PATH		P	O	1	S	4/11/2005	5.041	G	2000	\$2,880,000.00	55
2244040	K	EAST DRIVE	EAST WOOD ARCH		P	O	1	C	6/30/2003	4.200	F	900	\$1,296,000.00	55
2244050	K	CENTRAL DRIVE	PED PATH & STREAM		P	WO	3	S	4/15/2005	5.316	G	7400	\$10,656,000.00	55
2244060	K	CLEFT RIDGE SPAN	PROSPECT PARK		P	O	1	C	6/10/2003	4.500	F	900	\$1,296,000.00	55
2244100	K	WEST FOOTBRIDGE	PROSPECT PK STREAM		P	WO-PED	1	C	9/9/2003	4.577	F	308	\$443,520.00	55
2244120	K	HILL DRIVE	PROSPECT PK LAKE		P	WO	3	S	4/20/2005	3.873	F	7800	\$11,232,000.00	55
2244130	K	FTBRG NR BOATHSE	PROSPECT PK LAKE		P	WO-PED	1	C	11/28/2005	5.000	G	1260	\$1,814,400.00	55
2244150	K	RIDGE BLVD	SHORE RD DRIVE			O	1	S	5/5/2005	6.800	V	4350	\$6,264,000.00	10
2244160	K	3RD AVE	SHORE RD DRIVE			O	1	S	5/5/2005	6.727	V	4360	\$6,278,400.00	10
2244170	K	ATLNTC AV SVC RD E.B.	EAST NEW YORK AVE			O	2	S	6/30/2005	5.632	G	5520	\$7,948,800.00	5
2244180	K	ATLNTC AV SVC RD W.B.	EAST NEW YORK AVE			O	2	S	6/29/2005	5.456	G	5600	\$8,064,000.00	16
2244440	K	SOUTH OF TILLARY ST	NAVY ST			O-PED	1	C	5/4/2004	4.480	F	6200	\$8,928,000.00	2
2244460	K	CONDUIT BLVD NB	ATLANTIC AVE EB			O	1	S	10/25/2004	4.833	F	3800	\$5,472,000.00	5
2244470	K	SEELEY ST	PROSPECT AVE			O	1	S	6/3/2005	4.100	F	7700	\$11,088,000.00	7
2244480	K	5TH AVE	GREENWOOD CEMETERY			O	1	S	7/29/2005	5.000	G	3600	\$5,184,000.00	7
2245010	M	11TH AVE VIADUCT	LIRR WEST SIDE YARD	AL		O	39	S	11/22/2004	3.861	F	157500	\$226,800,000.00	4
224501B	M	W 33RD ST	AMTRAK 30 ST BRANCH	A		O	8	S	4/5/2004	4.639	F	16500	\$23,760,000.00	4
224501C	M	W 33RD ST	LAND ADJ TO AMTRAK	A		O	2	S	7/8/2005	4.750	F	4620	\$6,652,800.00	4

INVENTORY SORTED BY B.I.N.														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD

224501D	M	W 34TH ST	AMTRAK 30 ST BRANCH	A		O	4	S	7/8/2005	4.653	F	11800	\$16,992,000.00	4
224501E	M	W 35TH ST	AMTRAK 30 ST BRANCH	A		O	3	S	9/20/2004	4.208	F	6500	\$9,360,000.00	4
224501F	M	W 36TH ST	AMTRAK 30 ST BRANCH	A		O	7	S	9/15/2004	3.940	F	16400	\$23,616,000.00	4
2245040	M	FORT TRYON PARK	SOUTH OF CLOISTERS		P	O	1	C	7/30/2004	5.133	G	750	\$1,080,000.00	12
2245050	M	FORT TRYON PARK	UNDERPASS		P	O	1	C	7/30/2004	4.867	F	750	\$1,080,000.00	12
2245060	M	W 37TH ST	AMTRAK 30 ST BRANCH	A		O	3	S	11/7/2005	6.270	V	7600	\$10,944,000.00	4
2245070	M	W 38TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	9/16/2004	4.077	F	6200	\$8,928,000.00	4
2245080	M	W 39TH ST	AMTRAK 30 ST BRANCH	A		O	3	S	9/16/2004	4.196	F	6300	\$9,072,000.00	4
2245090	M	W 43RD ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/8/2004	4.485	F	4100	\$5,904,000.00	4
2245100	M	W 44TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/8/2004	4.662	F	4300	\$6,192,000.00	4
2245110	M	W 45TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/9/2004	5.662	G	4100	\$5,904,000.00	4
2245120	M	W 46TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/21/2004	4.441	F	4100	\$5,904,000.00	4
2245130	M	W 47TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/21/2004	4.721	F	4100	\$5,904,000.00	4
2245140	M	W 48TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/21/2004	4.618	F	4100	\$5,904,000.00	4
2245150	M	W 49TH ST	AMTRAK 30 ST BRANCH	A		O	3	S	11/2/2004	4.500	F	4100	\$5,904,000.00	4
2245160	M	W 51ST ST	AMTRAK 30 ST BRANCH	A		O	2	S	11/2/2004	4.882	F	4300	\$6,192,000.00	4
2245170	M	W 52ND ST	AMTRAK 30 ST BRANCH	A		O	2	S	11/2/2004	5.088	G	4300	\$6,192,000.00	4
2245180	M	W 53RD ST	AMTRAK 30 ST BRANCH	A		O	2	S	11/10/2004	5.162	G	5100	\$7,344,000.00	4
2245190	M	W 58TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	12/6/2004	4.588	F	4100	\$5,904,000.00	4
2245209	M	11TH AVE	AMTRAK 30 ST BRANCH	A		O	2	S	12/2/2004	4.647	F	15400	\$22,176,000.00	4
2245210	M	W 42ND ST	AMTRAK 30 ST BRANCH	A		O	4	S	10/4/2004	4.841	F	9155	\$13,183,200.00	4
2245220	M	W 57TH ST	AMTRAK 30 ST BRANCH	A		O	3	S	12/6/2004	4.838	F	9100	\$13,104,000.00	4
2245230	M	W 148TH ST PED BRDG	AMTRAK 30 ST BRANCH	A	P	O-PED	3	C	4/20/2004	3.509	F	1100	\$1,584,000.00	9
2245240	M	W 151ST ST FOOTBR	CONRAIL 30 ST BR	A	P	O-PED	2	C	6/8/2002	3.462	F	1020	\$1,468,800.00	9
2245250	M	W 158TH ST	AMTRAK 30 ST BRANCH	A		O	7	S	9/29/2005	6.431	V	29170	\$42,004,800.00	12
2245260	M	W 173RD ST PED BRDG	AMTRAK 30 ST BRANCH	A	P	O-PED	2	C	4/22/2004	4.611	F	1500	\$2,160,000.00	12
2245290	M	W 155TH ST PED BRDG	AMTRAK 30 ST BRANCH	A		O-PED	3	C	4/21/2004	4.262	F	800	\$1,152,000.00	9
2245300	M	INWOOD HILL PK FTBR	AMTRAK 30 ST BRANCH	A	P	O-PED	6	C	4/26/2004	4.174	F	700	\$1,008,000.00	12
2245319	M	E 97TH ST	METRO NORTH MAIN LN	M		O	1	S	9/1/2004	4.725	F	3200	\$4,608,000.00	8
2245330	M	W 41ST ST	AMTRAK 30 ST BRANCH	A		O	3	S	9/24/2004	4.164	F	6200	\$8,928,000.00	4
2245340	M	W 50TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	11/10/2004	4.647	F	4100	\$5,904,000.00	4
2245350	M	W 54TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	11/10/2004	5.540	G	4700	\$6,768,000.00	4
2245360	M	W 55TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	12/6/2004	5.485	G	4300	\$6,192,000.00	4
2245370	M	W 56TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	12/6/2004	5.368	G	4400	\$6,336,000.00	4
2245380	M	E 66TH ST	PED WALK N. OF ZOO		P	O	1	S	6/2/2004	5.267	G	1500	\$2,160,000.00	8
2245420	M	W 65TH ST E.B.	BRIDLE PATH W END			O	1	S	6/2/2004	4.900	F	1600	\$2,304,000.00	64
2245440	M	W 40TH ST	AMTRAK 30 ST BRANCH	A		O	4	S	12/5/2005	4.042	F	9400	\$13,536,000.00	4
2245460	M	PARK AVE S.B.	E 45TH ST			O	1	S	7/8/2005	4.730	F	2400	\$3,456,000.00	5
2245470	M	PARK AVE N.B.	E 45TH ST			O	1	S	7/25/2005	4.865	F	2400	\$3,456,000.00	5
2245480	M	TO GWB OPP W 171ST ST	RIVERSIDE DRIVE			O	1	S	6/29/2004	5.333	G	10800	\$15,552,000.00	12
2246000	M	WEST DRIVE	PED BET 61ST & 62ST		P	O	1	S	6/2/2004	5.267	G	2500	\$3,600,000.00	64
2246010	M	FTBRG OPP 62ND ST	BRIDLE PATH		P	O-PED	1	C	12/22/2004	5.000	G	1026	\$1,477,440.00	64
2246030	M	PEDESTRIAN BRIDGE	POND		P	O-PED	1	C	7/29/2004	4.310	F	1400	\$2,016,000.00	64
2246040	M	EAST DR AT CNTRL PARK	PEDESTRIAN WALK		P	O	1	C	7/12/2004	4.533	F	1200	\$1,728,000.00	5
2246050	M	CENTRAL DRIVE	PED OPP 63RD ST		P	O	1	S	6/2/2004	5.267	G	2000	\$2,880,000.00	64
2246069	M	EAST DRIVE	PEDESTRIAN WALK		P	O	1	S	6/2/2004	4.500	F	2700	\$3,888,000.00	64
2246070	M	CPK UNDER CENTR DR	OPP 65TH ST-IN E&W		P	O	1	C	7/14/2004	6.000	G	1200	\$1,728,000.00	64
2246080	M	WEST DRIVE	BRIDLE PATH @ 64TH ST		P	O	1	S	6/2/2004	4.667	F	2000	\$2,880,000.00	64
2246090	M	PED BRDG OPP 65 ST	TRANSVERSE RD #1		P	O-PED	1	C	2/14/2004	4.655	F	2300	\$3,312,000.00	64
2246100	M	CENTRAL DRIVE	TRANSVERSE RD #1		P	O	1	S	3/31/2004	4.200	F	6000	\$8,640,000.00	64
2246110	M	EAST DRIVE	TRANSVERSE RD #1		P	O	1	S	3/31/2004	4.567	F	6000	\$8,640,000.00	64
2246120	M	WEST DRIVE	TRANSVERSE RD #1		P	O	1	S	3/31/2004	4.833	F	7900	\$11,376,000.00	64
2246130	M	CENTRAL PARK	UNDER EAST DRIVE		P	O	1	C	7/15/2004	4.233	F	1200	\$1,728,000.00	64
2246140	M	72ND ST ENT TO W DR	BRIDLE PATH		P	O	1	S	2/11/2004	4.867	F	3600	\$5,184,000.00	64
2246150	M	72ND ST CROSS DR	NEAR CONCERT GRNDS		P	O	3	S	6/2/2004	4.941	F	7300	\$10,512,000.00	64
2246160	M	PED BET 73ST&74ST	THE LAKE		P	WO-PED	1	C	6/1/2002	5.000	G	1655	\$2,383,200.00	64
2246170	M	EAST DRIVE	PED WALK @ 73RD ST		P	O	1	S	2/24/2004	5.056	G	1900	\$2,736,000.00	64
2246230	M	EAST DRIVE	TRANSVERSE RD #2		P	O	1	S	4/5/2004	4.533	F	6500	\$9,360,000.00	64
2246240	M	WEST DRIVE	TRANSVERSE RD #2		P	O	1	S	4/5/2004	4.167	F	7200	\$10,368,000.00	64
2246250	M	EAST DRIVE	TRANSVERSE RD #3		P	O	1	S	3/1/2004	4.433	F	5100	\$7,344,000.00	64
2246260	M	WEST DRIVE	TRANSVERSE RD #3		P	O	1	S	3/3/2004	4.800	F	5100	\$7,344,000.00	64
2246270	M	EAST DRIVE	TRANSVERSE RD #4		P	O	1	S	4/1/2004	3.967	F	7000	\$10,080,000.00	64

INVENTORY SORTED BY B.I.N.														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD

2246280	M	WEST DRIVE	TRANSVERSE RD #4		P	O	1	S	4/1/2004	4.033	F	4700	\$6,768,000.00	64
2246320	M	FTBRG OPP 77TH ST	THE LAKE		P	WO- PED	3	C	12/29/2004	4.862	F	1125	\$1,620,000.00	64
2246330	M	WEST DRIVE	FEEDER TO LAKE		P	WO	1	S	2/23/2004	5.000	G	6700	\$9,648,000.00	64
2246340	M	PED WALK OPP 77ST	STREAM TO LAKE		P	WO- PED	4	C	12/29/2004	4.871	F	455	\$655,200.00	64
2246350	M	CNTRL PK OVER E DRIVE	S OF CLEOPATRAS NDL		P	O	1	C	7/15/2004	4.500	F	750	\$1,080,000.00	64
2246360	M	WEST DRIVE	PED WALK OPP 82 ST		P	O	1	S	2/25/2004	5.682	G	3100	\$4,464,000.00	64
2246380	M	PED WALK OPP 86ST	BRIDLE PATH		P	O- PED	1	C	12/3/2004	5.190	G	714	\$1,028,160.00	64
2246390	M	PED WALK OPP 86ST	BRIDLE PATH		P	O- PED	1	C	12/3/2004	4.627	F	1095	\$1,576,800.00	64
2246400	M	E FOOTBRIDGE	TRANSVERSE RD #2		P	O- PED	1	C	10/23/2004	4.500	F	3700	\$5,328,000.00	64
2246410	M	TRANSVERSE RD. #1	PED WALK NEAR 5 AV		P	O	1	S	2/27/2004	4.364	F	1739	\$2,504,160.00	8
2246430	M	WEST DRIVE	PED OPP 109TH ST		P	O	1	S	2/26/2004	4.317	F	1200	\$1,728,000.00	64
2246440	M	PED IN CTR OF PK	TRANSVERSE RD NO.2		P	O- PED	1	C	10/23/2004	4.259	F	5900	\$8,496,000.00	64
2246450	M	79 ST ENTR TO E DR	PED PATH OPP 77TH ST		P	O- PED	1	C	2/27/2002	5.190	G	5000	\$7,200,000.00	64
2246460	M	77 ST ENTR TO W DR	PED PATH OPP 77TH ST		P	O	2	S	2/13/2004	4.789	F	5800	\$8,352,000.00	64
2246470	M	EAST DRIVE	THE LOCH		P	WO	1	S	3/2/2004	4.700	F	1100	\$1,584,000.00	64
2246489	M	W 181 ST	RAMP TO WASH BR			O	1	S	2/10/2004	4.633	F	8200	\$11,808,000.00	12
2246490	M	A.C. POWELL BLVD N.B.	A.C. POWELL BLVD			O	1	S	2/24/2004	4.061	F	5600	\$8,064,000.00	10
2246500	M	FORT TRYON PLACE	ENTR FROM RIVERSIDE DR		P	O	1	S	3/8/2004	4.267	F	6600	\$9,504,000.00	12
2246510	M	CORBIN PL OVERPASS	CORBIN PLACE		P	O	1	S	2/9/2004	5.133	G	2200	\$3,168,000.00	12
2246540	M	E 34TH ST	PARK AVE TUNNEL			OT	1	S	8/27/2004	4.033	F	36200	\$52,128,000.00	5
2246550	M	PARK AVE VIADUCT	E 42ND ST			O	10	S	11/1/2005	4.597	F	22150	\$31,896,000.00	6
2246560	M	TUDOR CITY PLACE	E 42ND ST			O	1	S	3/17/2004	5.133	G	6600	\$9,504,000.00	6
2246570	M	UNITED NATIONS PL	FIRST AVE TUNNEL			OT	2	S	7/21/2004	4.843	F	95000	\$136,800,000.00	6
2246580	M	HIGH BRIDGE PDOVP	87I - HARLEM RIVER		P	WA- PED	11	P	10/1/85	5.651	G	34115	\$49,125,600	12
2246600	M	W 176TH ST PED BRDG	APPROACH TO G.W.B.			O- PED	1	C	3/3/2004	4.600	F	1200	\$1,728,000.00	12
2246620	M	PEDESTRIAN BRIDGE	E 128TH ST			O- PED	18	C	10/1/2004	4.720	F	2300	\$3,312,000.00	11
2246660	M	RIVERSIDE DRIVE	W 125TH ST & OTHERS			O	27	S	7/18/2005	4.389	F	148300	\$213,552,000.00	9
2246670	M	W 134 ST VIADUCT	RIVERSIDE DRIVE			O	4	S	10/14/2005	4.944	F	7500	\$10,800,000.00	9
2246690	M	ISHAM PK VEHICULR	HARLEM RIVER INLET		P	O	1	S	6/30/2004	6.826	V	911	\$1,311,840.00	12
2246700	M	ISHM PK PEDESTRN	HARLEM RV INLET		P	WO- PED	1	C	12/29/2004	4.931	F	285	\$410,400.00	12
2246710	M	W 153 ST	A.C. POWELL BLVD			O	1	S	2/25/2004	4.389	F	3082	\$4,438,080.00	10
2246720	M	RIVERSIDE DRIVE	W 158TH ST			O	77	S	11/18/2005	3.639	F	181400	\$261,216,000.00	9
2246970	M	RIVERSIDE DRIVE	W 96TH ST			O	3	S	6/21/2005	5.500	G	10600	\$15,264,000.00	7
2246980	M	RIVERSIDE DRIVE	W 138TH ST			O	1	S	3/5/2004	4.900	F	6700	\$9,648,000.00	9
2246990	M	129 - 130 ST PED BRDG	RAMP OFF 3RD AVE			O- PED	5	C	7/19/2004	4.238	F	500	\$720,000.00	11
2247020	Q	94TH ST PED BRDG	LIRR N SIDE DIV	L		O- PED	5	C	8/9/2004	4.333	F	500	\$720,000.00	4
2247040	Q	UNION ST	LIRR N SIDE DIV	L		O	1	S	6/20/2005	6.391	V	3313	\$4,770,720.00	7
2247050	Q	BOWNE AVE	LIRR N SIDE DIV	L		O	1	S	5/5/2004	5.863	G	4974	\$7,162,560.00	7
2247060	Q	PARSONS BLVD	LIRR N SIDE DIV	L		O	1	S	5/6/2004	5.176	G	4200	\$6,048,000.00	7
2247070	Q	147TH ST	LIRR N SIDE DIV	L		O	1	S	6/21/2005	5.627	G	2800	\$4,032,000.00	7
2247080	Q	149TH ST	LIRR N SIDE DIV	L		O	1	S	6/21/2005	4.776	F	4100	\$5,904,000.00	7
2247090	Q	149TH PLACE	LIRR N SIDE DIV	L		O	2	S	6/22/2005	5.316	G	4300	\$6,192,000.00	7
2247100	Q	150TH ST	LIRR N SIDE DIV	L		O	2	S	6/23/2005	6.588	V	7830	\$11,275,200.00	7
2247110	Q	MURRAY ST	LIRR N SIDE DIV	L		O	1	S	6/23/2005	5.556	G	4000	\$5,760,000.00	7
2247120	Q	WOODSIDE AVE	LIRR MAIN LINE	L		O	3	S	7/27/2005	4.444	F	14900	\$21,456,000.00	2
2247130	Q	CORPORAL KENNEDY ST	LIRR N SIDE DIV	L		O	1	S	7/29/2005	6.235	V	3379	\$4,865,760.00	11
2247140	Q	BELL BLVD	LIRR N SIDE DIV	L		O	1	S	6/24/2005	5.814	G	4320	\$6,220,800.00	11
2247150	Q	65TH ST	LIRR N SIDE DIV	L		O	3	S	7/27/2005	6.375	V	6344	\$9,135,360.00	2
2247160	Q	65TH PLACE	LIRR N SHR DIV	L		O	3	S	7/26/2005	6.471	V	8381	\$12,068,640.00	2
2247170	Q	DOUGLASTON PKWY	LIRR N SIDE DIV	L		O	3	S	5/7/2004	5.288	G	6300	\$9,072,000.00	11
2247180	Q	GRAND AVE	LIRR MAIN LINE	L		O	3	S	5/25/2004	4.849	F	7415	\$10,677,600.00	4
2247190	Q	55TH AVE PED BRDG	LIRR MAIN LINE	L		O- PED	3	C	8/3/2004	4.491	F	13000	\$18,720,000.00	4
2247220	Q	80TH ROAD	LIRR MAIN LINE	L		O	3	S	7/28/2005	4.857	F	4100	\$5,904,000.00	9
2247230	Q	82ND AVE	LIRR MAIN LINE	L		O	3	S	7/29/2005	5.377	G	4100	\$5,904,000.00	9
2247240	Q	LEFFERTS BLVD	LIRR MAIN LINE	L		O	3	S	7/29/2005	5.917	G	5460	\$7,862,400.00	9
2247260	Q	JACKSON AVE	LIRR,AMT,CON NE	L		O	1	S	11/24/2004	6.183	V	4517	\$6,504,480.00	2
2247270	Q	21ST STREET	CONRAIL	C		O	6	S	8/10/2005	5.528	G	17590	\$25,329,600.00	2
2247290	Q	49TH AVE	LIRR,AMT,CON NE	L		O	5	S	9/1/2004	4.292	F	20400	\$29,376,000.00	2
2247300	Q	THOMPSON AVE	AMTRAK YARD	L		O	14	S	9/8/2004	5.264	G	61280	\$88,243,200.00	2
2247310	Q	QUEENS BLVD	AMTRAK & LIRR YARD	L		O	19	S	9/10/2004	6.577	V	92400	\$133,056,000.00	2
2247320	Q	HONEYWELL ST	AMTRAK & LIRR YARD	AL		O	22	S	12/16/2005	6.236	V	99036	\$142,611,840.00	2

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2247330	Q	39TH ST (NORTH)	SUNNYSIDE YARDS	AL		O	14	S	12/12/2005	6.556	V	48200	\$69,408,000.00	2
2247370	Q	37TH AVE	CONRAIL HELLGATE	C		O	1	S	8/4/2005	4.818	F	5300	\$7,632,000.00	2
2247380	Q	ROOSEVELT AVE	CONRAIL HELLGATE	C		O	2	S	6/28/2004	4.958	F	5200	\$7,488,000.00	2
2247390	Q	41ST AVE	CONRAIL HELLGATE	C		O	2	S	8/8/2005	4.942	F	4400	\$6,336,000.00	2
2247400	Q	WOODSIDE AVE	CONRAIL	C		O	1	S	8/12/2005	5.067	G	8200	\$11,808,000.00	2
2247410	Q	43RD AVE	CONRAIL	C		O	1	S	8/22/2005	5.033	G	4800	\$6,912,000.00	2
2247420	Q	44TH AVE	CONRAIL	C		O	1	S	8/22/2005	5.033	G	5100	\$7,344,000.00	2
2247430	Q	45TH AVE	CONRAIL	C		O	1	S	8/23/2005	5.510	G	2400	\$3,456,000.00	2
2247440	Q	GRAND AVE	CONRAIL	C		O	1	S	8/23/2005	6.483	V	3280	\$4,723,200.00	5
2247450	Q	57TH AVE	CONRAIL	C		O	1	S	8/24/2005	6.195	V	2248	\$3,237,120.00	5
2247460	Q	CALDWELL AVE	CONRAIL	C		O	1	S	6/29/2004	6.639	V	2243	\$3,229,920.00	5
2247470	Q	ELIOT AVE	CONRAIL	C		O	1	S	8/24/2005	5.250	G	3600	\$5,184,000.00	5
2247480	Q	JUNIPER BLVD SO	CONRAIL	C		O	1	S	8/30/2005	5.417	G	9000	\$12,960,000.00	5
2247490	Q	69TH ST JUNPR BLVD	CONRAIL	C		O	1	S	6/30/2004	5.455	G	6175	\$8,892,000.00	5
2247500	Q	METROPOLITAN AVE	CONRAIL	C		O	1	S	8/30/2005	4.167	F	18650	\$26,856,000.00	5
2247530	Q	ANDREWS AVE	LIRR MONTAUK DIV	L		O	4	S	6/20/2005	7.000	V	3200	\$4,608,000.00	5
2247540	Q	60TH ST	LIRR MONTAUK DIV	L		O	2	S	7/18/2005	5.264	G	5340	\$7,689,600.00	5
2247550	Q	ELIOT AVE	LIRR MONTAUK DIV	L		O	2	S	6/21/2005	5.894	G	9550	\$13,752,000.00	5
2247570	Q	80TH ST	71ST TO 77TH AVE	L		O	5	S	5/3/2004	5.102	G	11725	\$16,884,000.00	5
2247590	Q	FOREST PARK DRIVE	LIRR MONTAUK DIV	L	P	O	5	S	8/19/2005	5.509	G	6000	\$8,640,000.00	9
2247600	Q	PARK LANE SOUTH	LIRR MONTAUK DIV	AL		O	1	S	5/4/2004	6.983	V	3024	\$4,354,560.00	9
2247620	Q	MYRTLE AVE	ABANDONED LIRR	L		O	3	S	2/11/2004	5.278	G	6725	\$9,684,000.00	4
2247630	Q	PED BRG NEAR UNION TPK	ABANDONED LIRR			O- PED	8	C	7/8/2004	5.318	G	900	\$1,296,000.00	5
2247640	Q	39 ST (SOUTH)	AMTRAK & LIRR YARD	AL		O	9	S	12/15/2005	6.125	V	34100	\$49,104,000.00	2
2247650	Q	60TH RD PED BRDG	LIRR MAIN LINE	L		O- PED	3	C	8/2/2004	4.934	F	2293	\$3,301,920.00	5
2247660	Q	FOREST PARK DRIVE	ABANDONED LIRR	L	P	O	6	S	3/31/2005	5.381	G	10000	\$14,400,000.00	9
2247680	Q	221ST ST	LIRR N SIDE DIV	L		O	3	S	6/24/2005	6.000	G	6050	\$8,712,000.00	11
2248019	Q	WOODHAVEN BLVD	ATLANTIC AVE			O	3	S	6/10/2004	4.472	F	19400	\$27,936,000.00	9
2248020	Q	WHITELAW PED BRDG	CONDUIT AVE			O- PED	7	C	3/15/2004	4.718	F	5500	\$7,920,000.00	10
2248039	Q	CROSS BAY BLVD	CONDUIT BLVD			O	2	S	6/1/2005	6.444	V	16544	\$23,823,360.00	10
2248040	Q	LINDEN BLVD	CONDUIT AVE			O	1	S	4/15/2004	5.233	G	3352	\$4,826,880.00	10
2248059	Q	MOTOR PKWY (PED)	FRANCIS LEWIS BLD		P	O- PED	2	C	10/28/2004	4.556	F	2756	\$3,968,640.00	8
2248060	Q	MOTOR PKWY (PED)	BELL BLVD		P	O- PED	2	C	10/29/2004	4.778	F	2648	\$3,813,120.00	11
2248070	Q	MOTOR PKWY (PED)	SPRINGFIELD BLVD		P	O- PED	3	C	12/8/2004	4.293	F	2940	\$4,233,600.00	11
2248080	Q	MOTOR PKWY (PED)	HOLLIS COURT BLVD		P	O- PED	3	C	11/18/2005	4.841	F	2670	\$3,844,800.00	8
2248090	Q	FLSHG MDW PK PED.	LAWRENCE STREET		P	O- PED	3	C	5/11/2002	4.722	F	8418	\$12,121,920.00	7
2248100	Q	MOTOR PKWY (PED)	73RD AVE		P	O- PED	3	C	3/10/2005	4.750	F	2640	\$3,801,600.00	8
2248110	Q	MOTOR PKWY (PED)	ALLEY PK PED WALK		P	O- PED	1	C	12/8/2004	4.582	F	963	\$1,386,720.00	13
2248129	Q	UNION TPKE	CREEDMOORE HOSP RD			O	1	S	6/3/2005	4.867	F	3500	\$5,040,000.00	13
2248130	Q	FLUSHING MEADW PK	WILLOW LK&76TH RD		P	WO- PED	4	C	4/20/2002	1.000	P	1891	\$2,723,040.00	81
2248140	Q	FLUSHING MEADW PK	STREAM N OF LIE		P	WO- PED	5	C	12/14/2004	4.741	F	4102	\$5,906,880.00	81
2248159	Q	WOODHAVEN BLVD	QUEENS BLVD			O	2	S	7/7/2004	4.288	F	11500	\$16,560,000.00	6
2248160	Q	ELLIOT AVE	QUEENS BLVD			O	2	S	7/7/2004	4.922	F	13785	\$19,850,400.00	12
2248200	Q	RUST ST	FLUSHING AVE			O	1	S	7/11/2005	5.078	G	2940	\$4,233,600.00	5
2248220	Q	FLUSHING AV SERVICE	FLUSHING AVE			O	1	S	7/11/2005	5.125	G	2940	\$4,233,600.00	5
2248230	Q	BEACH CHANNEL DR WB	BEACH CHANNEL DR EB			O	1	S	7/7/2005	4.400	F	3600	\$5,184,000.00	84
2248240	Q	SERVICE RD TURNAROUND	OVER FLUSHING AVE			O	1	S	7/11/2005	5.250	G	2940	\$4,233,600.00	5
2248250	Q	102ND ST	HAWTREE BASIN			WO	3	S	7/21/2005	6.456	V	4900	\$7,056,000.00	10
2248260	Q	FLUSHING MEADW PARK	MEADOW LAKE & 69TH RD		P	WO	5	S	4/28/2004	4.891	F	4200	\$6,048,000.00	81
2248280	Q	HIGHLAND PK PED.	PEDESTRIAN PATH		P	O- PED	1	C	12/22/2004	3.667	F	1856	\$2,672,640.00	5
2248299	Q	INTER PKWY-UNION TPK	AUSTIN ST			O	1	S	2/11/2004	4.750	F	5900	\$8,496,000.00	9
2248300	Q	71ST AVE	COOPER AVE			O	1	S	6/8/2005	4.458	F	2800	\$4,032,000.00	5
2248340	Q	FOREST PARK DR	MYRTLE AVE		P	O	3	S	6/7/2005	4.984	F	5100	\$7,344,000.00	9
2248369	Q	ROCKAWAY BLVD	THURSTON BASIN			WO	2	S	7/19/2005	5.158	G	6000	\$8,640,000.00	83
2248379	Q	FLUSHING MW PK RD	AQUACADE LAKE		P	WO- PED	5	C	4/5/2005	4.702	F	6321	\$9,102,240.00	81
2249040	R	TOMPKINS AVE	B&O RR (ABANDONED)			O	1	S	3/25/2004	6.250	V	5096	\$7,338,240.00	1
2249070	R	JOHN ST	B&O RAILROAD	O		O- PED	3	C	2/23/2004	6.806	V	5800	\$8,352,000.00	1
2249090	R	MORNINGSTAR ROAD	B&O RAILROAD	O		O	4	S	4/20/2005	5.169	G	7900	\$11,376,000.00	1
2249100	R	GRANITE AVE	B&O RAILROAD	O		O	4	S	4/23/2004	6.034	V	7300	\$10,512,000.00	1
2249110	R	LAKE AVE	B&O RAILROAD	O		O	3	S	4/12/2005	5.370	G	5900	\$8,496,000.00	1
2249120	R	SIMONSON AVE	B&O RAILROAD	O		O	3	S	4/22/2005	6.093	V	5819	\$8,379,360.00	1
2249130	R	VAN NAME AVE	B&O RAILROAD	O		O	3	S	4/13/2005	5.492	G	5474	\$7,882,560.00	1
2249140	R	VAN PELT AVE	B&O RAILROAD	O		O	3	S	4/15/2005	5.780	G	5000	\$7,200,000.00	1
2249160	R	DE HART AVE	B&O RAILROAD	O		O	4	S	4/19/2005	6.500	V	6700	\$9,648,000.00	1

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2249170	R	UNION AVE	B&O RAILROAD	O	O	4	S		4/26/2005	5.426	G	6500	\$9,360,000.00	1
2249180	R	HARBOR ROAD	B&O RAILROAD	O	O	4	S		5/9/2005	6.356	V	6615	\$9,525,600.00	1
2249200	R	SOUTH AVE	B&O RAILROAD	O	O	3	S		10/3/2005	6.927	V	8322	\$11,983,680.00	1
2249210	R	MAIN ST PED BRDG	SIRT SOUTH SHORE	S	O-PED	9	C		4/8/2004	4.710	F	400	\$576,000.00	3
2249230	R	TRACY AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED	9	C		4/2/2004	2.744	P	200	\$288,000.00	3
2249240	R	ARTHUR KILL ROAD	SIRT SOUTH SHORE	S	O	1	S		12/2/2004	4.833	F	3700	\$5,328,000.00	3
2249250	R	BETHEL AV PED BRDG	SIRT SOUTH SHORE	S	O-PED	12	C		6/11/2003	3.980	F	500	\$720,000.00	3
2249269	R	PAGE AVE	SIRT SOUTH SHORE	S	O	4	S		10/7/2005	6.306	V	30420	\$43,804,800.00	3
2249270	R	RICHMMD VALLY ROAD	SIRT SOUTH SHORE	S	O	4	S		10/5/2005	5.284	G	9300	\$13,392,000.00	3
2249280	R	COZZINS BLVD PED BRDG	SIRT SOUTH SHORE	S	O-PED	7	C		4/11/2005	4.564	F	200	\$288,000.00	3
2249290	R	SEGUINE AVE	SIRT SOUTH SHORE	S	O	1	S		10/10/2005	6.016	V	2200	\$3,168,000.00	3
2249300	R	HUGUENOT AVE	SIRT SOUTH SHORE	S	O	2	S		10/4/2005	4.924	F	4900	\$7,056,000.00	3
2249320	R	ALBEE AVE	SIRT SOUTH SHORE	S	O	3	S		10/11/2005	4.623	F	6500	\$9,360,000.00	3
2249330	R	ANNADALE ROAD	SIRT SOUTH SHORE	S	O	2	S		10/14/2005	4.455	F	4500	\$6,480,000.00	3
2249350	R	NELSON AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED	1	C		7/8/2004	4.725	F	300	\$432,000.00	3
2249360	R	GIFFORDS LANE	SIRT SOUTH SHORE	S	O	1	S		12/3/2004	5.844	G	3042	\$4,380,480.00	3
2249370	R	GREAVES AVE	SIRT SOUTH SHORE	S	O	1	S		10/17/2005	6.750	V	3950	\$5,688,000.00	3
2249380	R	GUYON AVE	SIRT SOUTH SHORE	S	O	3	S		10/18/2005	4.869	F	6900	\$9,936,000.00	3
2249390	R	CEDARVIEW AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED	5	C		4/12/2005	4.474	F	600	\$864,000.00	3
2249400	R	BEACH AVE	SIRT SOUTH SHORE	S	O	2	S		10/24/2005	5.697	G	3700	\$5,328,000.00	2
2249410	R	ROSS AVE	SIRT SOUTH SHORE	S	O	2	S		10/26/2005	5.500	G	3800	\$5,472,000.00	2
2249420	R	ROSE AVE	SIRT SOUTH SHORE	S	O	2	S		11/4/2005	5.712	G	3800	\$5,472,000.00	2
2249430	R	NEW DORP LANE	SIRT SOUTH SHORE	S	O	2	S		10/21/2005	4.972	F	7600	\$10,944,000.00	2
2249440	R	BANCROFT AVE	SIRT SOUTH SHORE	S	O	3	S		10/21/2005	5.492	G	5900	\$8,496,000.00	2
2249450	R	FREMONT AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED	3	C		6/12/2003	4.459	F	800	\$1,152,000.00	2
2249460	R	LINCOLN AVE	SIRT SOUTH SHORE	S	O	1	S		10/27/2005	5.483	G	4500	\$6,480,000.00	2
2249470	R	MIDLAND AVE	SIRT SOUTH SHORE	S	O	1	S		10/28/2005	5.603	G	3000	\$4,320,000.00	2
2249480	R	FINGERBOARD ROAD	SIRT SOUTH SHORE	S	O	2	S		10/31/2005	6.708	V	5100	\$7,344,000.00	2
2249490	R	CLOVE ROAD	SIRT SOUTH SHORE	S	O	3	S		12/7/2004	6.264	V	5270	\$7,588,800.00	2
2249510	R	TOMPKINS AVE	WILLOW AVE, SIRT	S	O	2	S		12/6/2004	5.475	G	5378	\$7,744,320.00	1
2249520	R	HANNAH ST	SIRT SOUTH SHORE	S	O	10	S		12/7/2005	4.893	F	10020	\$14,428,800.00	1
2249530	R	MINTHORNE ST PED BRDG	SIRT SOUTH SHORE	S	O-PED	23	C		9/9/2004	5.686	G	1600	\$2,304,000.00	1
2249580	R	BELFIELD AVE PED BRDG	SIRT SOUTH SHORE	S	O-PED	5	C		4/5/2005	4.490	F	400	\$576,000.00	3
2249710	R	WEST FOOTBRIDGE	CLOVE LAKE		P WO-PED	2	C		12/2/2004	4.862	F	899	\$1,294,560.00	1
2249720	R	EAST FOOTBRIDGE	CLOVE LAKE		P WO-PED	2	C		12/2/2004	4.621	F	899	\$1,294,560.00	1
2249730	R	BRIDGE OVER DAM	N.END CLOVE LAKE		P WO-PED	1	C		11/17/2004	4.586	F	972	\$1,399,680.00	1
2249760	R	MARTLINGS AVE	RICHMOND LAKE DAM		P WO	2	S		5/12/2005	4.867	F	7000	\$10,080,000.00	1
2249770	R	S OF BROOKS LAKE	STREAM IN PARK		P WO-PED	3	C		11/23/2004	5.129	G	696	\$1,002,240.00	1
2249780	R	FOOTBRIDGE	BROOKS LAKE DAM		P WO-PED	1	C		11/30/2004	4.947	F	800	\$1,152,000.00	1
2249790	R	FB S OF FOREST AV	STREAM IN PARK		P WO-PED	3	C		11/30/2004	5.000	G	658	\$947,520.00	1
2249800	R	FOREST AVE	CLOVE LAKES PK STREAM		P WO	1	S		9/2/2005	4.633	F	1600	\$2,304,000.00	1
2249810	R	HYLAN BLVD	LEMON CREEK		WO	1	S		3/17/2004	6.422	V	11400	\$16,416,000.00	3
2249820	R	ARTHUR KILL ROAD	ARTHUR KILL STREAM		WO	1	S		4/22/2005	4.122	F	2000	\$2,880,000.00	3
2249840	R	TOMPKINS AVE	GREENFIELD AVE		O	1	S		3/18/2004	5.106	G	2562	\$3,689,280.00	1
2249860	R	SLATER BLVD	NEW CREEK		WO	1	S		4/14/2005	5.673	G	2037	\$2,933,280.00	2
2249870	R	TRAVIS AVE	MAIN CREEK		WO	1	S		8/3/2005	6.100	V	1537	\$2,213,280.00	2
2249880	R	CHELSEA ROAD	SAWMILL CREEK		WO	1	S		4/20/2005	6.833	V	2205	\$3,175,200.00	2
2257569	M	MILLER HIGHWAY	TERRAIN		A	64	S		8/20/2005	4.915	F	264190	\$380,433,600.00	7
2266129	Q	WINCHESTER BLVD S.B.	BCIP		A	1	S		4/6/2004	4.592	F	4400	\$6,336,000.00	11
2266139	Q	WINCHESTER BLVD N.B.	BCIP		A	1	S		4/16/2004	4.633	F	6400	\$9,216,000.00	11
2266149	Q	HEMPSTEAD AVE	CROSS ISLAND PKWY		A	2	S		5/5/2004	4.172	F	9500	\$13,680,000.00	13
2266160	Q	678I SB TO BCIP EB	ACCESS RD FROM 678I		A	1	S		4/28/2004	4.438	F	2300	\$3,312,000.00	7
2266229	M	HHP	PED UNDERPASS @ 148 ST		A	1	S		3/5/2004	5.476	G	1800	\$2,592,000.00	9
2266230	M	HHP	PED UNDERPASS INWD PK		A	1	S		2/2/2004	6.211	V	800	\$1,152,000.00	12
2266240	M	HHP	PED UNDERPASS INWD PK		A	1	S		2/3/2004	5.762	G	1100	\$1,584,000.00	12
2266540	B	BRUCKNER BLVD OVRPAS	133RD - 135TH ST		A	2	S		5/10/2005	4.565	F	32900	\$47,376,000.00	1
226672A	M	W 31ST ST	AMTRAK LAYUP TRACKS	A	O	9	S		12/10/2004	3.683	F	8800	\$12,672,000.00	4
2266770	Q	CROSS ISLAND PKWY	LAURELTON PKWY		A	1	S		5/12/2004	5.250	G	9508	\$13,691,520.00	13
2267130	M	RIVERSIDE DRIVE	W 145TH ST		O	1	S		6/20/2005	5.000	G	5800	\$8,352,000.00	9
2267160	Q	ROOSEVELT AVE	FLUSHING MDW PK ROAD		O	4	S		9/13/2005	4.683	F	7280	\$10,483,200.00	84
2267199	Q	FRANCIS LEWIS BLVD	PARK ROAD		O	1	S		4/11/2005	5.033	G	7085	\$10,202,400.00	8
2267240	M	HRD NB RAMP	HARLEM RIVER DR		A	55	S		10/20/2005	3.083	F	122900	\$176,976,000.00	12
2267250	M	HHP	AMTRAK 30TH ST LINE	A	A	55	S		10/29/2004	3.710	F	40000	\$57,600,000.00	7

INVENTORY SORTED BY B.I.N.														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD

2267380	M	WEST STREET	RECTOR ST			AT	1	S	11/4/2005	5.033	G	25760	\$37,094,400.00	1
2267717	M	79 ST PED PLAZA	79 ST BT BASIN GAR		P	A	10	S	4/18/2005	4.593	F	27400	\$39,456,000.00	7
2267718	M	79 ST TRAFFIC CIRC	79 ST PED PLAZA		P	A	34	S	6/17/2005	3.934	F	24130	\$34,747,200.00	7
226771A	M	79 ST RAMP TO HHP	79 ST BT BASIN GAR		P	AR	4	S	5/16/2005	4.242	F	3131	\$4,508,640.00	7
226771B	M	79 ST RAMP TO GAR	79 ST BT BASIN GAR		P	AR	21	S	5/24/2005	4.452	F	7114	\$10,244,160.00	7
226771C	M	GAR RAMP TO 79 ST	79 ST BT BASIN GAR		P	AR	21	S	6/16/2005	4.726	F	9095	\$13,096,800.00	7
226771D	M	SB HHP RAMP TO 79 ST	79 ST BT BASIN GAR		P	AR	4	S	5/27/2005	4.645	F	2601	\$3,745,440.00	7
2267860	K	BROOKLYN BR APPROACH	SANDS STREET			O	1	S	6/17/2004	4.732	F	6490	\$9,345,600.00	2
2268350	K	BROOKLYN PROMENADE	278I N.B. (B.Q.E.)		P	A- PED	35	C	4/17/2003	4.500	F	46184	\$66,504,960.00	6
2268480	M	CHAMBERS ST PED BRDG	WEST SIDE HWY			O- PED	8	C	9/20/2004	5.925	G	3344	\$4,815,360.00	1
2268497	K	278I W.B. (B.Q.E.)	FURMAN ST			A	45	S	6/15/2005	4.214	F	78022	\$112,351,680.00	2
2268498	K	278I E.B. (B.Q.E.)	278I W.B. (B.Q.E.)			A	69	S	8/29/2005	4.035	F	120734	\$173,856,960.00	2
2268507	K	278I W.B. (B.Q.E.)	YORK ST			A	6	S	5/12/2005	4.167	F	9380	\$13,507,200.00	2
2268508	K	278I E.B. (B.Q.E.)	278I W.B. (B.Q.E.)			A	11	S	5/4/2005	4.034	F	17956	\$25,856,640.00	2
2268517	K	278I W.B. (B.Q.E.)	FURMAN ST			A	7	S	6/28/2005	4.059	F	10988	\$15,822,720.00	2
2268518	K	278I E.B. (B.Q.E.)	278I W.B. (B.Q.E.)			A	5	S	10/25/2005	4.500	F	8375	\$12,060,000.00	2
2268650	M	FDR NB 42ND TO 49ST	EAST RIVER			A	119	S	8/28/2003	4.415	F	30767	\$44,304,480.00	6
2268760	M	PS-5 PEDESTRIAN BR.	TENTH AVENUE			O- PED	5	C	6/3/2003	5.837	G	1500	\$2,160,000.00	12
2268770	Q	SPRINGFIELD BLVD	EQUES. PATH (ABAND.)			O	1	S	4/27/2005	4.667	F	1470	\$2,116,800.00	13
2268920	R	AMBOY ROAD	LEMON CREEK			WO	1	S	3/17/2004	6.667	V	1310	\$1,886,400.00	3
2268930	M	MORRIS ST PED BRDG	BKLN-BATTERY TUNN PLZ			A- PED	3	C	10/13/2004	4.451	F	1200	\$1,728,000.00	1
2269030	B	MATTHEWSON ROAD	MAC CRACKEN AVE			O	15	S	12/7/2004	4.754	F	14880	\$21,427,200.00	7
2269190	M	W.70TH STREET	AMTRAK	A		O	3	S	10/14/2005	6.417	V	17258	\$24,851,520.00	7
2269210	M	W.68TH STREET	AMTRAK	A		O	3	S	9/28/2005	6.780	V	5382	\$7,750,080.00	7
2269240	M	RIVERSIDE DRIVE	W. 155TH ST			O	1	S	6/20/2005	4.640	F	4397	\$6,331,680.00	9
2269260	K	W. 8TH STREET	SURF AVE.		P	O- PED	55	C	6/10/2004	3.846	F	14742	\$21,228,480.00	13
2269600	K	ERSKINE STREET	BSHP			A	1	S	10/29/2004	6.141	V	8258	\$11,891,520.00	5
2269730	R	PARKING EXIT RAMP	SIRT		F	O	10	S	11/30/2004	4.194	F	20727	\$29,846,880.00	1
2269740	R	BUS STATION NORTH	SIRT		F	O	12	S	11/16/2004	4.820	F	64605	\$93,031,200.00	1
2269750	R	BUS STATION SOUTH	SIRT		F	O	12	S	11/15/2004	4.520	F	154688	\$222,750,720.00	1
2269760	R	NORTH RAMP	SIRT		F	O	9	S	11/22/2005	4.347	F	17589	\$25,328,160.00	1
2269770	R	BUS STA ENTR RAMP	SIRT		F	O	19	S	12/1/2004	4.431	F	39333	\$56,639,520.00	1
2269780	R	PARKING ENTR RAMP	SIRT		F	O	3	S	11/1/2004	5.125	G	8589	\$12,368,160.00	1
2269790	R	BUS STATION EXIT RAMP	SIRT		F	O	7	S	11/20/2004	4.722	F	28721	\$41,358,240.00	1
2269820	M	E 81 ST PED BRIDGE	FDR DRIVE N.B.		P	A- PED	3	C	10/11/2004	3.213	F	900	\$1,296,000.00	8
2270030	B	E 156TH ST	ACCESS TO HOUSING		E D	O	16	S	12/17/2004	3.537	F	49696	\$71,562,240.00	1
2300130	Q	HOOK CREEK	HOOK CREEK BRIDGE			WO	3	S	7/21/2005	6.339	V	18302	\$26,354,880.00	13
7703720	Q	216TH ST PED BRDG	LIRR PORT WASH BRANCH	L		O- PED	5	C	8/11/2004	4.105	F	400	\$576,000.00	11
7705510	Q	167TH ST PED BRDG	LIRR PORT WASH BRANCH	L		O- PED	3	C	8/10/2004	4.164	F	600	\$864,000.00	7
M00001	M	PEDESTRIAN TUNNEL	BROADWAY TO			O- PED	1	C	3/9/2004	5.000	G	2000	\$2,880,000.00	12
M00003	M	HHP ON/OFF RMP-79 WB	PEDESTRIAN PATH			A	1	C	7/1/2004	4.833	F	900	\$1,296,000.00	7
M00004	M	HHP ON/OFF RMP-79 EB	PEDESTRIAN PATH			A	1	C	7/12/2004	4.900	F	900	\$1,296,000.00	7
Q00002	Q	BCIP	PATH OPPOSITE 88TH RD			A	1	C	7/7/2004	4.467	F	1200	\$1,728,000.00	13
790		BRIDGES				4531			SPANS			14535728	\$20,931,448,320.00	

INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2241000	B	WESTCHESTER AVE	CONRAIL PT MORRIS	C		O	1 S		9/2/2004	5.085	G	1740	\$2,505,600.00	1
2241010	B	E 156TH STREET	CONRAIL PT MORRIS	C		O	1 S		9/3/2004	4.556	F	2400	\$3,456,000.00	1
2241020	B	E 161ST STREET	CONRAIL PT MORRIS	C		O	1 S		8/31/2004	6.783	V	12800	\$18,432,000.00	1
2241040	B	THIRD AVE	CONRAIL PT MORRIS	C		O	1 S		11/3/2004	4.563	F	2700	\$3,888,000.00	1
2241050	B	E 149TH ST/JACKSON AVE	CONRAIL PT MORRIS	C		O	1 S		9/3/2004	4.850	F	65000	\$93,600,000.00	1
2241060	B	ST. MARYS & CONCORD	CONRAIL PT MORRIS	C		O	1 S		9/3/2004	5.333	G	4500	\$6,480,000.00	1
2241070	B	WALES AVE	CONRAIL PT MORRIS	C		O	1 S		11/5/2004	6.567	V	2535	\$3,650,400.00	1
2241080	B	SOUTHERN BLVD	CONRAIL PT MORRIS	C		O	1 S		11/5/2004	4.185	F	3900	\$5,616,000.00	1
2241099	B	BRUCKNER BLVD	CONRAIL PT MORRIS	C		O	1 S		11/5/2004	6.734	V	6700	\$9,648,000.00	1
2241129	B	E 149TH ST	AMTRAK	A		O	2 S		8/3/2004	4.620	F	12575	\$18,108,000.00	1
2241550	B	E 144TH ST	METRO NORTH RR HAR	M		O	2 S		6/20/2005	6.528	V	8290	\$11,937,600.00	1
2241560	B	E 149TH ST	METRO NORTH RR HAR	M		O	8 S		4/9/2004	4.625	F	27900	\$40,176,000.00	1
2241590	B	CONCOURSE VILL AVE	METRO NORTH RR HAR	M		O	1 S		4/8/2004	4.188	F	17800	\$25,632,000.00	1
2241600	B	E 158TH ST	METRO NORTH RR HAR	M		O	1 S		6/14/2005	5.167	G	3400	\$4,896,000.00	1
2241610	B	E 161ST ST	METRO NORTH RR HAR	M		O	1 S		6/15/2005	5.283	G	6600	\$9,504,000.00	1
2242260	B	EAGLE AVE	E 161ST ST			O	1 S		4/8/2004	5.234	G	2800	\$4,032,000.00	1
2242299	B	GRAND CONCOURSE	E 138TH ST			O	1 S		5/9/2005	4.933	F	9500	\$13,680,000.00	1
2266540	B	BRUCKNER BLVD OVRPAS	133RD - 135TH ST			A	2 S		5/10/2005	4.565	F	32900	\$47,376,000.00	1
2270030	B	E 156TH ST	ACCESS TO HOUSING		E D	O	16 S		12/17/2004	3.537	F	49696	\$71,562,240.00	1
224005B	B	TO BRUCKNER BLVD	RELIEF			OR	5 S		8/3/2005	3.833	F	12100	\$17,424,000.00	1
224006A	B	TO BRUCKNER BLVD	RELIEF			OR	11 S		12/8/2005	6.732	V	11100	\$15,984,000.00	1
2066671	B	BRUCKNER EXPWY SB	BRONX RIVER			WMA	3 S		7/7/2005	5.222	G	12400	\$17,856,000.00	2
2066672	B	BRUCKNER EXPWY NB	BRONX RIVER			WMA	8 S		7/13/2005	4.716	F	22300	\$32,112,000.00	2
2075351	B	BRUCKNER EXPWY SB	AMTRAK	A		A	1 S		8/9/2004	3.625	F	11600	\$16,704,000.00	2
2075352	B	BRUCKNER EXPWY NB	AMTRAK	A		A	1 S		8/9/2004	3.547	F	10900	\$15,696,000.00	2
2076929	B	BRUCKNER EXPWY	AMTRAK	A		A	1 S		6/6/2005	4.833	F	3800	\$5,472,000.00	2
2240180	B	WESTCHESTER AVE	BRONX RIVER			WO	1 S		7/1/2005	4.932	F	5476	\$7,885,440.00	2
2241139	B	LEGGETT AVE	AMTRAK	A		O	3 S		8/6/2004	4.690	F	28300	\$40,752,000.00	2
2241159	B	LONGWOOD AVE	AMTRAK	A		O	2 S		8/2/2004	6.042	V	10625	\$15,300,000.00	2
2241169	B	LAFAYETTE AVE	AMTRAK	A		O	1 S		8/5/2004	5.794	G	12000	\$17,280,000.00	2
2241170	B	TIFFANY ST	AMTRAK	A		O	1 S		7/6/2005	5.627	G	7267	\$10,464,480.00	2
2241180	B	BARRETTO ST	AMTRAK	A		O	1 S		7/26/2004	6.219	V	5313	\$7,650,720.00	2
2241190	B	HUNTS POINT AVE	AMTRAK	A		O	1 S		7/27/2004	4.984	F	13700	\$19,728,000.00	2
2241200	B	FAILE ST	AMTRAK	A		O	1 S		7/28/2004	5.797	G	6208	\$8,939,520.00	2
2241210	B	BRYANT AVE	AMTRAK	A		O	1 S		7/5/2005	3.085	F	5300	\$7,632,000.00	2
2241230	B	WESTCHESTER AVE	AMTRAK	A		O	3 S		8/11/2004	6.250	V	15600	\$22,464,000.00	2
2241030	B	E 163RD STREET	CONRAIL PT MORRIS	C		O	1 S		5/25/2004	4.778	F	3200	\$4,608,000.00	3
2241110	B	MELROSE AVE	CONRAIL PT MORRIS	C		O	8 S		5/23/2005	5.889	G	37854	\$54,509,760.00	3
2241620	B	E 162ND ST	METRO NORTH RR HAR	M		O	1 S		4/14/2004	4.984	F	4700	\$6,768,000.00	3
2241630	B	E 165TH ST	METRO NORTH RR HAR	M		O	1 S		4/15/2004	4.350	F	16400	\$23,616,000.00	3
2241650	B	E 167TH ST	METRO NORTH RR HAR	M		O	1 S		3/15/2004	5.863	G	3363	\$4,842,720.00	3
2241660	B	E 168TH ST	METRO NORTH RR HAR	M		O	1 S		3/15/2004	4.922	F	7700	\$11,088,000.00	3
2241670	B	E 169TH ST	METRO NORTH RR HAR	M		O	1 S		3/15/2004	4.500	F	3300	\$4,752,000.00	3
2241680	B	E 170TH ST	METRO NORTH RR HAR	M		O	1 S		3/22/2004	6.451	V	3150	\$4,536,000.00	3
2241700	B	ST PAULS PL PED BRDG	METRO NORTH RR HAR	M		O- PED	2 C		7/30/2004	5.423	G	600	\$864,000.00	3
2241710	B	CLAREMONT PKWY	METRO NORTH RR HAR	M		O	1 S		3/22/2004	4.422	F	6300	\$9,072,000.00	3
2241740	B	E 175TH ST	METRO NORTH RR HAR	M		O	1 S		3/22/2004	4.031	F	3600	\$5,184,000.00	3
2076640	B	DEPOT PLACE	CONRAIL HUDSON DIV	C		O	11 S		6/3/2005	5.139	G	30192	\$43,476,480.00	4
2241409	B	GRAND CONCOURSE	METRO NORTH RR HUD	TCM		O	1 S		4/7/2004	3.844	F	16100	\$23,184,000.00	4
2241410	B	WALTON AVE	METRO NORTH RR HUD	M		O	1 S		4/6/2004	5.328	G	3600	\$5,184,000.00	4
2241420	B	GERARD AVE	METRO NORTH RR HUD	M		O	1 S		4/30/2004	6.766	V	5063	\$7,290,720.00	4
2241430	B	RIVER AVE	METRO NORTH RR HUD	M		O	1 S		6/22/2005	6.281	V	5040	\$7,257,600.00	4
2242200	B	YANKEE STDM PED BRDG	E 153 ST, METRO NORTH	M	P	O- PED	5 C		7/29/2004	4.556	F	4200	\$6,048,000.00	4
2242259	B	GRAND CONCOURSE	E 161ST ST			O	1 S		10/18/2004	3.583	F	24100	\$34,704,000.00	4
2242280	B	GRAND CONCOURSE	E 167TH ST			O	2 S		9/22/2004	4.544	F	42900	\$61,776,000.00	4
2242300	B	GRAND CONCOURSE	E 170TH ST			O	2 S		6/24/2004	4.789	F	39300	\$56,592,000.00	4
2242319	B	GRAND CONCOURSE	E 174TH ST	T		O	1 S		4/9/2004	4.067	F	14900	\$21,456,000.00	4
2242329	B	GRAND CONCOURSE	E 175TH ST	T		O	1 S		10/5/2004	4.800	F	11900	\$17,136,000.00	4
2241460	B	W TREMONT AVE	METRO NORTH RR HUD	M		O	8 S		1/20/2005	4.328	F	12900	\$18,576,000.00	5
2242330	B	GRAND CONCOURSE	E TREMONT AVE			O	1 S		10/20/2005	5.983	G	11700	\$16,848,000.00	5
2242350	B	EAST FORDHAM RD	GRAND CONCOURSE			O	1 S		4/21/2004	4.567	F	10300	\$14,832,000.00	5
2242360	B	GRAND CONCOURSE	BURNSIDE AVE			O	2 S		10/21/2004	4.441	F	8400	\$12,096,000.00	5
2241760	B	E TREMONT AVE	METRO NORTH RR HAR	M		O	1 S		6/16/2005	6.517	V	7300	\$10,512,000.00	6
2241770	B	E 178TH ST PED BRDG	METRO NORTH RR HAR	M		O- PED	1 C		7/28/2004	5.921	G	700	\$1,008,000.00	6
2241780	B	E 179TH ST PED BRDG	METRO NORTH RR HAR	M		O- PED	6 C		7/27/2004	6.000	G	700	\$1,008,000.00	6

INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2241790	B	E 180TH ST	METRO NORTH RR HAR	M		O	1	S	4/15/2004	4.078	F	5000	\$7,200,000.00	6
2241800	B	E 183TH ST	METRO NORTH RR HAR	M		O	1	S	4/16/2004	4.234	F	3600	\$5,184,000.00	6
2241810	B	E 188TH ST	METRO NORTH RR HAR	M		O	1	S	4/19/2004	4.188	F	5300	\$7,632,000.00	6
2241820	B	E 187TH ST	METRO NORTH RR HAR	M		O	1	S	4/16/2004	4.750	F	3800	\$5,472,000.00	6
2241839	B	E 189TH ST	METRO NORTH RR HAR	M		O	1	S	6/13/2005	6.533	V	43157	\$62,146,080.00	6
2242030	B	CROTONA AVE	BRONX PELHAM PKWY			O	2	S	4/13/2004	5.447	G	7600	\$10,944,000.00	6
2242149	B	E TREMONT AVE	BRONX RIVER			WO	2	S	5/20/2004	4.722	F	12900	\$18,576,000.00	6
2242400	B	E 180TH ST	BRONX RIVER			WO	1	S	11/23/2004	4.810	F	4500	\$6,480,000.00	6
2230287	B	JEROME AVE	MOSHOLU PARKWAY	T		A	3	S	4/28/2005	4.921	F	11800	\$16,992,000.00	7
2241470	B	W FORDHAM RD	METRO NORTH RR HUD	M		O	4	S	6/27/2005	5.806	G	16052	\$23,114,880.00	7
2241489	B	W 225TH ST	CONRAIL PUTNAM	C		O	2	S	5/26/2004	5.313	G	10900	\$15,696,000.00	7
2241930	B	BEDFORD PARK BLVD	NYCTA IND YARDS	T		O	4	S	9/13/2004	6.500	V	46300	\$66,672,000.00	7
2241940	B	W 205TH ST	NYCTA IND YARDS	T		O	4	S	9/13/2004	6.778	V	32508	\$46,811,520.00	7
2242340	B	GRAND CONCOURSE	EAST KINGSBRIDGE			O	2	S	10/20/2004	4.714	F	16500	\$23,760,000.00	7
2242370	B	GRAND CONCOURSE	BEDFORD PARK BLVD			O	1	S	4/22/2004	4.765	F	8418	\$12,121,920.00	7
2242380	B	GRAND CONCOURSE	E 204TH ST			O	1	S	5/5/2005	5.391	G	9272	\$13,351,680.00	7
2269030	B	MATTHEWSON ROAD	MAC CRACKEN AVE			O	15	S	12/7/2004	4.754	F	14880	\$21,427,200.00	7
2229440	B	HHP	KAPPOCK ST			A	1	S	9/30/2005	5.069	G	3900	\$5,616,000.00	8
2229450	B	232ND ST	HHP			A	2	S	10/3/2005	4.921	F	4900	\$7,056,000.00	8
2229460	B	236TH ST PED BRDG	HHP			A-PED	3	C	8/24/2004	5.106	G	2500	\$3,600,000.00	8
2229470	B	239TH ST	HHP			A	2	S	5/13/2005	4.263	F	6100	\$8,784,000.00	8
2229480	B	MANHATTAN COLL PKWY	HHP			A	3	S	4/25/2005	5.368	G	6200	\$8,928,000.00	8
2229490	B	246TH ST	HHP			A	2	S	4/21/2005	4.842	F	5600	\$8,064,000.00	8
2229500	B	252ND ST	HHP			A	2	S	2/25/2004	4.184	F	4500	\$6,480,000.00	8
2229510	B	RIVERDALE AVE	HHP			A	2	S	9/14/2005	4.000	F	5200	\$7,488,000.00	8
2229520	B	FIELDSTON ROAD	HHP			A	1	S	9/26/2005	5.500	G	6600	\$9,504,000.00	8
2229530	B	HHP	BROADWAY			A	1	S	9/27/2005	4.574	F	7500	\$10,800,000.00	8
2241490	B	W 230TH ST	CONRAIL PUTNAM	C		O	1	S	3/31/2005	5.844	G	5600	\$8,064,000.00	8
2241509	B	W 231ST ST	CONRAIL PUTNAM	C		O	1	S	11/18/2004	5.765	G	4723	\$6,801,120.00	8
2241510	B	W 233RD ST	CONRAIL PUTNAM	C		O	1	S	4/1/2005	5.275	G	3760	\$5,414,400.00	8
2241520	B	W 234TH ST	CONRAIL PUTNAM	C		O	1	S	4/4/2005	5.412	G	3770	\$5,428,800.00	8
1066510	B	BRUCKNER EXP.(2066510)	WESTCHESTER CREEK			WMA	17	S	10/14/2004	3.821	F	39400	\$56,736,000.00	9
2066720	B	E 174TH ST	SHERIDAN EXPWY/AMTRAK	A		A	13	S	10/28/2004	4.375	F	47430	\$68,299,200.00	9
2241269	B	E 177TH ST	AMTRAK	A		O	3	S	8/12/2004	5.514	G	16606	\$23,912,640.00	9
2241270	B	EAST TREMONT AVE	AMTRAK	A		O	2	S	8/2/2004	5.556	G	22300	\$32,112,000.00	9
2241329	B	WHITE PLAINS ROAD	AMTRAK	A		O	1	S	8/13/2004	4.891	F	6900	\$9,936,000.00	9
2241330	B	UNIONPORT ROAD	AMTRAK	A		O	1	S	8/13/2004	4.875	F	4400	\$6,336,000.00	9
2242120	B	FTBG N OF RTE 1	BRONX RIVER		P	WO-PED	1	C	6/15/2002	4.029	F	1904	\$2,741,760.00	9
206672A	B	174TH ST-NTH PED BRDG	895I - SHERIDAN EXPWY			A-PED	4	C	12/28/2005	4.958	F	1800	\$2,592,000.00	9
206672B	B	174TH ST-STH PED BRDG	895I - SHERIDAN EXPWY			A-PED	4	C	2/9/2004	5.056	G	1900	\$2,736,000.00	9
2075820	B	E TREMONT AVE	HUTCHINSON RVR PKWY			A	2	S	11/18/2005	4.472	F	10200	\$14,688,000.00	10
2075837	B	WESTCHESTER AVE	HUTCHINSON RVR PKWY			A	2	S	4/5/2004	4.389	F	15858	\$22,835,520.00	10
2075849	B	BRONX PELHAM PKWY	HUTCHINSON RVR PKWY			A	2	S	9/20/2004	4.184	F	17600	\$25,344,000.00	10
2075859	B	HUTCHINSON RVR PKWY	HUTCHINSON RIVER			WMA	7	S	11/11/2005	4.922	F	60500	\$87,120,000.00	10
2076109	B	BE NB SERVICE RD	HUTCHINSON RVR PKWY			A	2	S	11/4/2005	4.632	F	7800	\$11,232,000.00	10
2076129	B	BE SB SERVICE RD	HUTCHINSON RVR PKWY			A	2	S	2/19/2004	5.105	G	7100	\$10,224,000.00	10
2241390	B	SHORE RD CIRCLE	AMTRAK	A		O	2	S	6/13/2005	3.254	F	4800	\$6,912,000.00	10
2241959	B	HUTCHINSON RVR PKWY	AMTRAK	A		O	1	S	8/6/2004	5.746	G	15444	\$22,239,360.00	10
2229560	B	BRONX PELHAM PKWY	AMTRAK,METRO NORTH	MA		A	3	S	11/16/2004	4.778	F	24591	\$35,411,040.00	11
2241369	B	WILLIAMSBRIDGE RD	AMTRAK	A		O	2	S	8/5/2004	4.836	F	10400	\$14,976,000.00	11
2241910	B	GUN HILL ROAD	NYCTA-DYRE AVE LN	T		O	1	S	9/14/2004	6.906	V	75000	\$108,000,000.00	11
1067150	B	NEREID AVE (2241880)	BRONX RIVER PKWY	M		O	10	S	7/8/2005	4.211	F	57750	\$83,160,000.00	12
2229579	B	BOSTON POST ROAD	HUTCHINSON RIVER			WO	14	S	6/24/2005	4.583	F	95700	\$137,808,000.00	12
2241860	B	GUN HILL RD	METRO NORTH RR HAR	M		O	2	S	4/20/2004	4.103	F	9000	\$12,960,000.00	12
2241870	B	E 233RD ST	METRO NORTH RR HAR	M		O	1	S	4/20/2004	5.157	G	7664	\$11,036,160.00	12
2241890	B	E 241ST ST	BRP, METRO NORTH HAR	M		O	28	S	7/22/2005	4.444	F	49500	\$71,280,000.00	12
2241900	B	EASTCHESTER ROAD	NYCTA-DYRE AVE LN	T		O	3	S	9/14/2004	4.917	F	13500	\$19,440,000.00	12
2242071	B	BRONX BLVD S.B.	BRONX RIVER			WO	1	S	5/5/2004	4.700	F	1800	\$2,592,000.00	12
2242072	B	BRONX BLVD N.B.	BRONX RIVER			WO	1	S	5/5/2004	5.033	G	1800	\$2,592,000.00	12
2242081	B	BRONX BLVD S.B.	BRONX RIVER			WO	1	S	5/6/2004	4.467	F	2800	\$4,032,000.00	12
2242082	B	BRONX BLVD N.B.	BRONX RIVER			WO	1	S	5/6/2004	4.467	F	2800	\$4,032,000.00	12
2242430	B	GUN HILL ROAD	BRONX BLVD			O	4	S	6/25/2004	4.982	F	9400	\$13,536,000.00	12
2242440	B	GUN HILL ROAD	BRONX RIVER			WO	1	S	3/1/2004	5.167	G	8700	\$12,528,000.00	12
2242459	B	E 233RD ST	BRONX RIVER			WO	1	S	5/27/2004	4.367	F	7000	\$10,080,000.00	12
2242460	B	E 233RD ST	ENTR RD BNX RVR PKWY			O	1	S	2/13/2004	5.467	G	5300	\$7,632,000.00	12

INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT															
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD	
2229540	B	VAN CRTLDT PARK	HHP		P	A- PED	2	C	9/17/2004	4.742	F	3900	\$5,616,000.00	26	
2229550	B	VAN CRTLDT EQUES	HHP		P	A- PED	2	C	9/17/2004	5.178	G	2100	\$3,024,000.00	26	
2230290	B	MOSHOLU PARKWAY	EQUESTRIAN PATH			A	1	S	2/12/2004	4.724	F	4300	\$6,192,000.00	26	
2230300	B	MOSHOLU PARKWAY	CONRAIL (ABANDONED)	C		A	1	S	11/16/2004	4.229	F	5200	\$7,488,000.00	26	
2230310	B	MOSHOLU PARKWAY	SB RAMP TO HHP			A	2	S	12/6/2005	5.135	G	7400	\$10,656,000.00	26	
2065629	B	BRONX RVR PKWY	BOSTON RD BX ZOO			A	1	S	7/29/2005	5.000	G	6300	\$9,072,000.00	27	
2230250	B	MOSHOLU PARKWAY	BRONX RIVER			A	5	S	2/26/2004	4.263	F	16300	\$23,472,000.00	27	
2230260	B	MOSHOLU PARKWAY	METRO NORTH	M		A	1	S	4/20/2004	6.203	V	8880	\$12,787,200.00	27	
2230270	B	MOSHOLU PARKWAY	WEBSTER AVE			A	1	S	4/20/2005	5.703	G	8480	\$12,211,200.00	27	
2241259	B	204TH ST PED BRDG	METRO NORTH RR HAR	M	P	O- PED	1	C	7/26/2004	4.121	F	4700	\$6,768,000.00	27	
2241840	B	BEDFORD PARK BLVD	METRO NORTH RR HAR	M		O	1	S	4/16/2004	4.578	F	6400	\$9,216,000.00	27	
2242010	B	BRONX PELHAM PKWY	BRONX RIVER			WA	1	S	5/18/2004	4.931	F	9200	\$13,248,000.00	27	
2242029	B	SOUTHERN BLVD	BRONX PELHAM PKWY			O	2	S	4/13/2004	4.684	F	12900	\$18,576,000.00	27	
2242099	B	PARK ROAD (204TH ST)	BRONX RIVER			WO	1	S	8/31/2004	4.172	F	4700	\$6,768,000.00	27	
2242100	B	BOTANICAL GARDEN ROAD	TWIN LAKES		P	WO- PED	1	S	5/19/2004	4.967	F	2200	\$3,168,000.00	27	
2242110	B	BOSTON ROAD	BRONX RIVER			WO	1	S	5/17/2004	4.273	F	6200	\$8,928,000.00	27	
2242210	B	S OF ALLERTON AVE	BRONX RIVER			WO	3	S	7/17/2004	4.763	F	6200	\$8,928,000.00	27	
2242220	B	SOUTHERN BLVD	BRONX RIVER			WO	2	S	3/2/2004	4.105	F	4800	\$6,912,000.00	27	
2240200	B	SHORE ROAD	HUTCHINSON RIVER			WMO	7	S	9/3/2004	4.597	F	4800	\$6,912,000.00	28	
2240210	B	CITY ISLAND ROAD	EASTCHESTER BAY			WO	7	S	12/6/2005	3.500	F	28900	\$41,616,000.00	28	
2241380	B	PELHAM BAY PK PED	AMTRAK	A	P	O- PED	1	C	11/13/1978	5.109	G	4223	\$6,081,120.00	28	
1240090	B M	MACOMBS DAM BRIDGE	HARLEM RIVER			WMO	52	S	6/13/2005	4.169	F	211788	\$304,974,720.00	10	
2240089	B M	145TH ST BRIDGE	HARLEM RIVER			WMO	8	S	10/21/2005	3.097	F	56700	\$81,648,000.00	10	
2240059	B M	WILLIS AVENUE	HARLEM RIVER			WMO	26	S	9/30/2005	3.222	F	94700	\$136,368,000.00	11	
2240069	B M	THIRD AVE BRIDGE	HARLEM RIVER			WMO	32	S	9/7/2004	7.000	V	79950	\$115,128,000.00	11	
2240079	B M	MADISON AVE BRIDGE	HARLEM RIVER			WMO	21	S	9/1/2004	5.139	G	80000	\$115,200,000.00	11	
2066919	B M	WASHINGTON BRIDGE	HARLEM RIVER			WO	9	S	11/16/2004	4.821	F	128339	\$184,808,160.00	12	
2240120	B M	W 207TH/W FORDHAM RD	HARLEM RIVER			WMO	5	S	6/30/2004	5.667	G	31784	\$45,768,960.00	12	
2240137	B M	BROADWAY BRIDGE	HARLEM RIVER	T		WMO	3	S	10/13/2003	3.986	F	46848	\$67,461,120.00	12	
2240138	B M	NYCTA IRT	HARLEM RVR/BROADWAY	T		WMO	3	S	10/27/2005	4.882	F	19520	\$28,108,800.00	12	
2240290	K	METROPOLITAN AVE	ENGLISH KILLS			WMO	5	S	8/31/2004	4.186	F	15245	\$21,952,800.00	1	
2230410	K	278I (B.Q.E.)	WASHINGTON ST			A	1	S	4/14/2004	4.563	F	2500	\$3,600,000.00	2	
2230420	K	278I (B.Q.E.)	WASHINGTON ST			A	1	S	4/14/2004	4.781	F	2500	\$3,600,000.00	2	
2230430	K	278I (B.Q.E.)	PROSPECT ST			A	1	S	2/2/2004	5.267	G	1100	\$1,584,000.00	2	
2230440	K	278I (B.Q.E.)	ADAMS ST N.B.			A	1	S	2/5/2004	5.200	G	2700	\$3,888,000.00	2	
2230450	K	278I (B.Q.E.)	ADAMS ST S.B.			A	1	S	2/6/2004	4.933	F	2500	\$3,600,000.00	2	
2230460	K	278I (B.Q.E.)	PEARL ST			A	1	S	2/27/2004	5.333	G	4500	\$6,480,000.00	2	
2230470	K	278I (B.Q.E.)	JAY ST			A	1	S	4/14/2004	4.900	F	5100	\$7,344,000.00	2	
2230480	K	278I (B.Q.E.)	PROSPECT ST			A	1	S	3/11/2004	5.241	G	8400	\$12,096,000.00	2	
2230490	K	278I (B.Q.E.)	SANDS ST			A	1	S	3/15/2004	5.093	G	12600	\$18,144,000.00	2	
2230500	K	278I (B.Q.E.)	RAMP TO BQE EB			A	1	S	3/1/2004	5.567	G	1300	\$1,872,000.00	2	
2230510	K	278I (B.Q.E.)	NASSAU ST			A	6	S	4/7/2004	4.444	F	51200	\$73,728,000.00	2	
2230857	K	278I (B.Q.E.)	JORALEMON ST			A	1	S	5/4/2004	5.030	G	2100	\$3,024,000.00	2	
2230858	K	278I (B.Q.E.)	JORALEMON ST / BQE WB			A	2	S	5/4/2004	4.177	F	5900	\$8,496,000.00	2	
2230870	K	COLUMBIA HEIGHTS	278I (B.Q.E.)			A	1	S	4/26/2004	4.583	F	16500	\$23,760,000.00	2	
2230887	K	278I W.B. (B.Q.E.)	CADMAN PLAZA			A	2	S	5/11/2004	4.309	F	4500	\$6,480,000.00	2	
2230888	K	278I E.B. (B.Q.E.)	CADMAN PLAZA / 278I WB			A	2	S	5/11/2004	5.053	G	4500	\$6,480,000.00	2	
2244440	K	SOUTH OF TILLARY ST	NAVY ST			O- PED	1	C	5/4/2004	4.480	F	6200	\$8,928,000.00	2	
2267860	K	BROOKLYN BR APPROACH	SANDS STREET			O	1	S	6/17/2004	4.732	F	6490	\$9,345,600.00	2	
2268497	K	278I W.B. (B.Q.E.)	FURMAN ST			A	45	S	6/15/2005	4.214	F	78022	\$112,351,680.00	2	
2268498	K	278I E.B. (B.Q.E.)	278I W.B. (B.Q.E.)			A	69	S	8/29/2005	4.035	F	120734	\$173,856,960.00	2	
2268507	K	278I W.B. (B.Q.E.)	YORK ST			A	6	S	5/12/2005	4.167	F	9380	\$13,507,200.00	2	
2268508	K	278I E.B. (B.Q.E.)	278I W.B. (B.Q.E.)			A	11	S	5/4/2005	4.034	F	17956	\$25,856,640.00	2	
2268517	K	278I W.B. (B.Q.E.)	FURMAN ST			A	7	S	6/28/2005	4.059	F	10988	\$15,822,720.00	2	
2268518	K	278I E.B. (B.Q.E.)	278I W.B. (B.Q.E.)			A	5	S	10/25/2005	4.500	F	8375	\$12,060,000.00	2	
2230000	K	HIGHLAND BLVD E.B.	JACKIE ROBINSON PKWY			A	1	S	4/22/2004	4.667	F	4900	\$7,056,000.00	5	
2230010	K	HIGHLAND BLVD W.B.	JACKIE ROBINSON PKWY			A	1	S	4/22/2004	4.933	F	3500	\$5,040,000.00	5	
2230020	K	HIGHLAND BLVD W.B.	JACKIE ROBINSON PKWY			A	2	S	4/22/2004	4.974	F	4700	\$6,768,000.00	5	
2230220	K	HIGHLAND BLVD NB	VERMONT AVE			A	1	S	6/16/2005	6.127	V	3995	\$5,752,800.00	5	
2244170	K	ATLNTC AV SVC RD E.B.	EAST NEW YORK AVE			O	2	S	6/30/2005	5.632	G	5520	\$7,948,800.00	5	
2244460	K	CONDUIT BLVD NB	ATLANTIC AVE EB			O	1	S	10/25/2004	4.833	F	3800	\$5,472,000.00	5	
2269600	K	ERSKINE STREET	BSHP			A	1	S	10/29/2004	6.141	V	8258	\$11,891,520.00	5	

INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2230350	K	SUMMIT ST PED BRDG	278I (B.Q.E.)			A- PED	2	S	3/8/2004	4.671	F	1400	\$2,016,000.00	6
2230360	K	UNION ST	278I (B.Q.E.)			A	2	S	3/9/2004	4.486	F	5000	\$7,200,000.00	6
2230370	K	SACKETT ST	278I (B.Q.E.)			A	2	S	3/23/2004	4.694	F	5000	\$7,200,000.00	6
2230380	K	KANE ST	278I (B.Q.E.)			A	2	S	3/25/2004	4.236	F	5000	\$7,200,000.00	6
2230390	K	CONGRESS ST	278I (B.Q.E.)			A	2	S	4/29/2005	4.456	F	5000	\$7,200,000.00	6
2240232	K	HAMILTON AVE BRIDGE	GOWANUS CANAL			WMO	3	S	8/31/2005	4.125	F	7300	\$10,512,000.00	6
2240240	K	NINTH ST BRIDGE	GOWANUS CANAL			WMO	3	S	6/14/2005	6.613	V	5772	\$8,311,680.00	6
2240250	K	THIRD ST	GOWANUS CANAL			WMO	5	S	6/17/2005	4.931	F	4900	\$7,056,000.00	6
2240260	K	CARROLL ST	GOWANUS CANAL			WMO	2	S	8/8/2005	4.690	F	3000	\$4,320,000.00	6
2240270	K	UNION ST	GOWANUS CANAL			WMO	5	S	8/23/2004	4.153	F	4900	\$7,056,000.00	6
2240310	K	THIRD AVE	GOWANUS CANAL			WO	1	S	6/13/2005	4.055	F	3200	\$4,608,000.00	6
2268350	K	BROOKLYN PROMENADE	278I N.B. (B.Q.E.)		P	A- PED	35	C	4/17/2003	4.500	F	46184	\$66,504,960.00	6
2066100	K	5TH AVE	27 X PROSPECT EXPWY			A	1	S	4/2/2004	5.208	G	8800	\$12,672,000.00	7
2240231	K	HAMILTON AVE BRIDGE	GOWANUS CANAL			WMO	3	S	8/31/2005	4.028	F	7300	\$10,512,000.00	7
2243839	K	4TH AVE	NYCTA BMT TRACKS	T		O	1	S	9/21/2005	6.600	V	5160	\$7,430,400.00	7
2243920	K	7TH AVE	NYCTA BMT YARD	T		O	2	S	10/21/2004	6.507	V	4700	\$6,768,000.00	7
2244470	K	SEELEY ST	PROSPECT AVE			O	1	S	6/3/2005	4.100	F	7700	\$11,088,000.00	7
2244480	K	5TH AVE	GREENWOOD CEMETERY			O	1	S	7/29/2005	5.000	G	3600	\$5,184,000.00	7
2243170	K	STERLING PLACE	FRANKLIN SHUTTLE	T		O	1	S	8/5/2005	6.500	V	2300	\$3,312,000.00	8
2243280	K	6TH AVE	LIRR ATLANTIC AVE	L		O	9	S	11/21/2004	5.528	G	12276	\$17,677,440.00	8
2243290	K	CARLTON AVE	LIRR ATLANTIC AVE	L		O	7	S	11/20/2004	4.931	F	10823	\$15,585,120.00	8
2243180	K	ST JOHNS PLACE	FRANKLIN SHUTTLE	T		O	1	S	9/28/2005	6.781	V	2200	\$3,168,000.00	9
2243190	K	LINCOLN PLACE	FRANKLIN SHUTTLE	T		O	1	S	9/21/2004	6.922	V	2460	\$3,542,400.00	9
2243200	K	UNION ST	FRANKLIN SHUTTLE	T		O	2	S	9/20/2004	5.065	G	4100	\$5,904,000.00	9
2243210	K	PRESIDENT ST	FRANKLIN SHUTTLE	T		O	2	S	9/17/2004	5.314	G	2500	\$3,600,000.00	9
2243220	K	CARROLL ST PED BRDG	FRANKLIN SHUTTLE	T		O- PED	3	C	9/26/2002	5.484	G	600	\$864,000.00	9
2243230	K	CROWN ST	FRANKLIN SHUTTLE	T		O	3	S	9/30/2005	5.264	G	4800	\$6,912,000.00	9
2243240	K	MONTGOMERY ST	FRANKLIN SHUTTLE	T		O	1	S	9/26/2005	6.275	V	2030	\$2,923,200.00	9
2243250	K	WASHINGTON AVE	FRANKLIN SHUTTLE	T		O	1	S	9/16/2004	6.391	V	3657	\$5,266,080.00	9
2243260	K	FLATBUSH AVE	FRANKLIN SHUTTLE	T		O	2	S	9/15/2004	5.196	G	11300	\$16,272,000.00	9
2243279	K	EASTERN PKWY	FRANKLIN SHUTTLE	T		O	1	S	9/22/2004	4.861	F	7700	\$11,088,000.00	9
2231249	K	BSHP	BAY RIDGE AVE			A	1	S	4/9/2004	3.667	F	4900	\$7,056,000.00	10
2231250	K	81ST ST PED BR	BSHP		P	A- PED	5	C	10/1/2004	4.483	F	3100	\$4,464,000.00	10
2231260	K	92ND ST PED BR	BSHP		P	A- PED	6	C	9/7/2004	4.016	F	3000	\$4,320,000.00	10
2231270	K	4TH AVE	BSHP			A	2	S	3/24/2004	4.842	F	6100	\$8,784,000.00	10
2243310	K	2ND AVE	LIRR BAY RIDGE	N		O	2	S	11/14/2003	3.925	F	17751	\$25,561,440.00	10
2243320	K	3RD AVE	LIRR BAY RIDGE	N		O	4	S	6/22/2005	5.542	G	17230	\$24,811,200.00	10
2243330	K	4TH AVE	LIRR BAY RIDGE	NT		O	4	S	8/12/2005	5.819	G	13668	\$19,681,920.00	10
2243580	K	5TH AVE	LIRR & SEA BEACH	LT		O	4	S	10/29/2004	4.353	F	12500	\$18,000,000.00	10
2243590	K	6TH AVE	LIRR & SEA BEACH	LT		O	2	S	8/12/2005	6.528	V	14200	\$20,448,000.00	10
2243600	K	7TH AVE	LIRR & SEA BEACH	LT		O	7	S	10/29/2004	5.556	G	18913	\$27,234,720.00	10
2243610	K	8TH AVE	LIRR & SEA BEACH	LT		O	2	S	8/12/2005	6.319	V	10834	\$15,600,960.00	10
2243620	K	FORT HAMILTON PKWY	LIRR & SEA BEACH	LT		O	3	S	10/20/2004	5.492	G	14800	\$21,312,000.00	10
2243630	K	11TH AVE	LIRR & SEA BEACH	LT		O	5	S	10/26/2004	6.603	V	9700	\$13,968,000.00	10
2243640	K	13TH AVE	LIRR & SEA BEACH	LT		O	5	S	8/29/2005	4.694	F	16000	\$23,040,000.00	10
2244150	K	RIDGE BLVD	SHORE RD DRIVE			O	1	S	5/5/2005	6.800	V	4350	\$6,264,000.00	10
2244160	K	3RD AVE	SHORE RD DRIVE			O	1	S	5/5/2005	6.727	V	4360	\$6,278,400.00	10
2231290	K	BAY 8TH ST	BSHP			A	1	S	5/2/2005	5.984	G	4950	\$7,128,000.00	11
2231300	K	17TH AVE PED BRDG	BSHP		P	A- PED	1	C	2/5/2004	3.846	F	2100	\$3,024,000.00	11
2231319	K	BSHP	BAY PKWY			A	1	S	4/6/2004	4.395	F	7200	\$10,368,000.00	11
2243340	K	15TH AVE	LIRR BAY RIDGE	N		O	1	S	10/14/2004	4.872	F	3614	\$5,204,160.00	11
2243350	K	60TH ST	LIRR BAY RIDGE	N		O	1	S	6/20/2005	6.383	V	3900	\$5,616,000.00	11
2243360	K	16TH AVE	LIRR BAY RIDGE	N		O	1	S	12/8/2004	5.733	G	4345	\$6,256,800.00	11
2243650	K	14TH AVE	LIRR BAY RIDGE	N		O	1	S	10/12/2004	6.967	V	4720	\$6,796,800.00	11
2243660	K	NEW UTRECHT AVE	LIRR BAY RIDGE	N		O	1	S	10/13/2004	6.900	V	2350	\$3,384,000.00	11
2243670	K	15TH AVE	BMT SEA BEACH	T		O	6	S	9/29/2005	6.568	V	17300	\$24,912,000.00	11
2243680	K	16TH AVE	BMT SEA BEACH	T		O	3	S	9/9/2004	5.444	G	6816	\$9,815,040.00	11
2243690	K	17TH AVE	BMT SEA BEACH	T		O	4	S	9/13/2004	3.711	F	8500	\$12,240,000.00	11
2243700	K	18TH AVE	BMT SEA BEACH	T		O	4	S	8/31/2005	6.842	V	8700	\$12,528,000.00	11
2243710	K	19TH AVE	BMT SEA BEACH	T		O	4	S	9/1/2004	4.395	F	4800	\$6,912,000.00	11
2243720	K	20TH AVE	BMT SEA BEACH	T		O	6	S	8/19/2004	4.744	F	12500	\$18,000,000.00	11
2243730	K	65TH ST	BMT SEA BEACH	T		O	4	S	8/13/2004	5.947	G	12000	\$17,280,000.00	11
2243740	K	BAY PKWY	BMT SEA BEACH	T		O	4	S	8/11/2004	4.974	F	16800	\$24,192,000.00	11
2243750	K	AVENUE O	BMT SEA BEACH	T		O	1	S	9/2/2005	5.863	G	4658	\$6,707,520.00	11

INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2243760	K	AVENUE P	BMT SEA BEACH	T		O	1	S	9/16/2005	6.605	V	5544	\$7,983,360.00	11
2243770	K	KINGS HIGHWAY	BMT SEA BEACH	T		O	1	S	8/24/2005	6.767	V	5032	\$7,246,080.00	11
2243780	K	HIGHLAWN AVE	BMT SEA BEACH	T		O	1	S	9/9/2005	6.440	V	6960	\$10,022,400.00	11
2243800	K	AVENUE T	BMT SEA BEACH	T		O	1	S	9/20/2005	6.033	V	5360	\$7,718,400.00	11
2243820	K	21ST AVE	BMT SEA BEACH	T		O	4	S	8/26/2004	4.184	F	21400	\$30,816,000.00	11
2243370	K	17TH AVE	LIRR BAY RIDGE	N		O	1	S	12/1/2004	4.784	F	3406	\$4,904,640.00	12
2243380	K	18TH AVE	LIRR BAY RIDGE	N		O	1	S	12/2/2004	5.016	G	6006	\$8,648,640.00	12
2243390	K	52ND ST	LIRR BAY RIDGE	N		O	1	S	12/6/2004	6.467	V	3293	\$4,741,920.00	12
2243400	K	50TH ST	LIRR BAY RIDGE	N		O	2	S	6/17/2005	4.701	F	7100	\$10,224,000.00	12
2243410	K	MCDONALD AVE	LIRR BAY RIDGE	N		O	1	S	11/30/2004	5.422	G	2760	\$3,974,400.00	12
2243420	K	E 3RD ST	LIRR BAY RIDGE	N		O	1	S	6/15/2005	6.783	V	1500	\$2,160,000.00	12
2243439	K	OCEAN PKWY	LIRR BAY RIDGE	N		O	1	S	11/18/2004	5.218	G	7000	\$10,080,000.00	12
2243440	K	CONY ISLAND AVE	LIRR BAY RIDGE	N		O	1	S	11/17/2004	5.234	G	3231	\$4,652,640.00	12
2243840	K	9TH AVE	NYCTA BMT YARD	T		O	5	S	9/15/2005	6.458	V	12440	\$17,913,600.00	12
2243940	K	9TH AVE	NYCTA IND SBWY	T		O	5	S	9/15/2005	4.737	F	11900	\$17,136,000.00	12
2231329	K	BSHP	26TH AVE			A	1	S	4/8/2004	4.800	F	6700	\$9,648,000.00	13
2231330	K	27TH AVE PED BRDG	BSHP		P	A- PED	1	C	7/1/2003	4.000	F	2100	\$3,024,000.00	13
2231340	K	CROPSEY AVE	BSHP			A	2	S	4/12/2004	5.000	G	13100	\$18,864,000.00	13
2231360	K	BSHP	OCEAN PKWY			A	3	S	12/6/2004	7.000	V	29637	\$42,677,280.00	13
2231370	K	GUIDER AV RAMP TO BSHP	BSHP			A	4	S	5/10/2004	3.903	F	12800	\$18,432,000.00	13
2231380	K	CONY ISLAND AVE	BSHP			A	4	S	9/19/2005	6.292	V	19866	\$28,607,040.00	13
2240301	K	CROPSEY AVE	CONY ISLAND CREEK			WO	3	S	8/2/2005	5.225	G	9400	\$13,536,000.00	13
2240302	K	CROPSEY AVE	CONY ISLAND CREEK			WO	3	S	8/19/2005	5.028	G	9400	\$13,536,000.00	13
2240540	K	STILLWELL AVE	CONY ISLAND CRK			WO	2	S	6/7/2005	6.292	V	17000	\$24,480,000.00	13
2243570	K	86TH ST	LIRR & SEA BEACH	LT		O	1	S	8/9/2004	6.172	V	3840	\$5,529,600.00	13
2269260	K	W. 8TH STREET	SURF AVE.		P	O- PED	55	C	6/10/2004	3.846	F	14742	\$21,228,480.00	13
2243020	K	PARKSIDE AVE	BMT SUBWAY, BRIGHTON	T		O	6	S	9/28/2004	4.000	F	48700	\$70,128,000.00	14
2243040	K	CROOKE AVE	BMT SUBWAY, BRIGHTON	T		O	4	S	7/15/2005	4.158	F	6000	\$8,640,000.00	14
2243050	K	CATON AVE	BMT SUBWAY, BRIGHTON	T		O	4	S	7/19/2005	4.500	F	20800	\$29,952,000.00	14
2243080	K	CHURCH AVE	BMT SUBWAY, BRIGHTON	T		O	4	S	7/22/2005	4.545	F	18200	\$26,208,000.00	14
2243100	K	BEVERLY ROAD	BMT SUBWAY, BRIGHTON	T		O	3	S	7/29/2005	3.877	F	2700	\$3,888,000.00	14
2243110	K	CORTELYOU ROAD	BMT SUBWAY, BRIGHTON	T		O	3	S	8/3/2005	6.306	V	2900	\$4,176,000.00	14
2243120	K	DORCHESTER ROAD	BMT SUBWAY, BRIGHTON	T		O	1	S	10/28/2004	5.490	G	4825	\$6,948,000.00	14
2243130	K	DITMAS AVE	BMT SUBWAY, BRIGHTON	T		O	1	S	8/4/2005	5.766	G	4875	\$7,020,000.00	14
2243140	K	NEWKIRK AVE	BMT SUBWAY, BRIGHTON	T		O	3	S	8/26/2005	4.250	F	4100	\$5,904,000.00	14
2243150	K	FOSTER AVE	BMT SUBWAY, BRIGHTON	T		O	1	S	10/14/2004	4.550	F	3000	\$4,320,000.00	14
2243450	K	E 14TH ST	LIRR BAY RIDGE	N		O	1	S	11/15/2004	5.383	G	1775	\$2,556,000.00	14
2243460	K	E 15TH ST - PED	LIRR BAY RIDGE	N		O- PED	3	C	4/17/2002	3.650	F	900	\$1,296,000.00	14
2243480	K	OCEAN AVE	LIRR BAY RIDGE	N		O	2	S	11/12/2004	5.000	G	5000	\$7,200,000.00	14
2243490	K	BEDFORD AVE	LIRR BAY RIDGE	N		O	6	S	11/11/2004	4.639	F	12000	\$17,280,000.00	14
2243500	K	NOSTRAND AVE	LIRR BAY RIDGE	N		O	2	S	11/16/2004	5.186	G	4320	\$6,220,800.00	14
2231390	K	E 12TH ST	BSHP			A	4	S	4/16/2004	4.764	F	17200	\$24,768,000.00	15
2231409	K	BSHP	SHEEPSHEAD BAY ROAD			A	1	S	4/20/2004	4.807	F	6500	\$9,360,000.00	15
2231419	K	BSHP	OCEAN AVE			A	3	S	4/19/2004	4.486	F	14000	\$20,160,000.00	15
2231429	K	BSHP	BEDFORD AVE			A	3	S	4/21/2004	4.278	F	12000	\$17,280,000.00	15
2231439	K	BSHP	NOSTRAND AVE			A	3	S	5/10/2004	4.097	F	13000	\$18,720,000.00	15
2231449	K	KNAPP ST	BSHP			A	1	S	4/28/2004	4.469	F	9500	\$13,680,000.00	15
2233080	K	E 14 ST PED BR	BSHP			A- PED WO- PED	14	C	7/19/2004	4.588	F	4700	\$6,768,000.00	15
2240320	K	OCEAN AVE PED BRDG	SHEEPSHEAD BAY			O	30	C	5/2/2003	4.070	F	4000	\$5,760,000.00	15
2243790	K	AVENUE S	BMT SEA BEACH	T		O	1	S	9/19/2005	6.133	V	5360	\$7,718,400.00	15
2243810	K	AVENUE U	BMT SEA BEACH	T		O	1	S	8/27/2004	6.137	V	5880	\$8,467,200.00	15
2243569	K	ATLANTIC AVE	LIRR ATLANTIC AVE	L		O	75	S	7/14/2004	3.845	F	135100	\$194,544,000.00	16
2243850	K	LIBERTY AVE	LIRR BAY RIDGE	N		O	4	S	6/23/2005	4.294	F	6400	\$9,216,000.00	16
2243860	K	GLENMORE AVE	LIRR BAY RIDGE	N		O	2	S	11/8/2004	6.559	V	5616	\$8,087,040.00	16
2243870	K	PITKIN AVE	LIRR BAY RIDGE	N		O	3	S	11/3/2004	4.471	F	5600	\$8,064,000.00	16
2243890	K	SUTTER AVE	LIRR BAY RIDGE	N		O	3	S	11/4/2004	6.681	V	5497	\$7,915,680.00	16
2243900	K	BLAKE AVE	LIRR BAY RIDGE LINE	N		O	3	S	11/5/2004	5.309	G	5020	\$7,228,800.00	16
2243910	K	LIVONIA AVE PED BRDG	LIRR BAY RIDGE LINE	N		O- PED	3	C	7/2/2004	5.125	G	2500	\$3,600,000.00	16
2244180	K	ATLNTC AV SVC RD W.B.	EAST NEW YORK AVE			O	2	S	6/29/2005	5.456	G	5600	\$8,064,000.00	16
2231479	K	BSHP	MILL BASIN			WMA	14	S	7/25/2005	3.224	F	73500	\$105,840,000.00	18
2231489	K	BSHP	PAERDEGAT BASIN			WA	15	S	9/14/2005	3.278	F	58300	\$83,952,000.00	18
2243510	K	FLATBUSH AVE	LIRR BAY RIDGE	N		O	2	S	6/8/2005	4.667	F	5700	\$8,208,000.00	18
2243520	K	BROOKLYN AVE	LIRR BAY RIDGE	N		O	3	S	6/10/2005	6.236	V	4500	\$6,480,000.00	18
2243530	K	AVENUE H	LIRR BAY RIDGE	N		O	2	S	6/14/2005	6.279	V	35100	\$50,544,000.00	18

INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT															
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB RTN G	DECK AREA	REPLACEMENT COST	CD	
2243010	K	LINCOLN ROAD	BMT SUBWAY, BRIGHTON	T		O	4	S	7/11/2005	4.103	F	6100	\$8,784,000.00	55	
2244010	K	PROSPECT PK E DRIVE	ENDALE ARCH E DRIVE		P	O	1	C	5/7/2002	4.367	F	900	\$1,296,000.00	55	
2244020	K	W DR OV WK-MA.ENT	MEADOWPORT ARCH		P	O	1	S	4/5/2005	5.964	G	2500	\$3,600,000.00	55	
2244030	K	EAST DRIVE	BRIDLE PATH		P	O	1	S	4/11/2005	5.041	G	2000	\$2,880,000.00	55	
2244040	K	EAST DRIVE	EAST WOOD ARCH		P	O	1	C	6/30/2003	4.200	F	900	\$1,296,000.00	55	
2244050	K	CENTRAL DRIVE	PED PATH & STREAM		P	WO	3	S	4/15/2005	5.316	G	7400	\$10,656,000.00	55	
2244060	K	CLEFT RIDGE SPAN	PROSPECT PARK		P	O	1	C	6/10/2003	4.500	F	900	\$1,296,000.00	55	
2244100	K	WEST FOOTBRIDGE	PROSPCT PK STREAM		P	WO- PED	1	C	9/9/2003	4.577	F	308	\$443,520.00	55	
2244120	K	HILL DRIVE	PROSPECT PK LAKE		P	WO	3	S	4/20/2005	3.873	F	7800	\$11,232,000.00	55	
2244130	K	FTBRG NR BOATHSE	PROSPECT PK LAKE		P	WO- PED	1	C	11/28/2005	5.000	G	1260	\$1,814,400.00	55	
2231450	K	BSHP	GERRITSEN INLET			WA	11	S	7/25/2005	3.597	F	46400	\$66,816,000.00	56	
2231460	K	FLATBUSH AVE	BSHP			A	2	S	9/15/2005	6.441	V	14058	\$20,243,520.00	56	
2231499	K	BSHP	ROCKAWAY PKWY			A	4	S	8/12/2005	4.056	F	11500	\$16,560,000.00	56	
2231509	K	BSHP	FRESH CREEK			WA	5	S	8/8/2005	3.222	F	23000	\$33,120,000.00	56	
2231519	K	PENNSYLVANIA AVE	BSHP			A	2	S	4/28/2005	6.181	V	6640	\$9,561,600.00	56	
2240019	K M	BROOKLYN BRIDGE	278I (B.Q.E.)			WEO	75	S	11/2/2004	3.153	F	503788	\$725,454,720.00	3	
2240027	K M	MANHATTAN BRIDGE(LL)	EAST RIVER	T		WEO	23	S	10/15/2004	4.000	F	616390	\$887,601,600.00	3	
2240028	K M	MANHATTAN BRIDGE(UL)	NYCTA TRACKS-BMT	T		WEO	43	S	10/10/2004	4.300	F	587424	\$845,890,560.00	3	
2240039	K M	WILLIAMSBURG BRIDGE	EAST RIVER	T		WEO	53	S	10/28/2004	4.556	F	824000	\$1,186,560,000.00	3	
2240370	K Q	GREENPOINT AVE BRIDGE	NEWTOWN CREEK	L		WMO	12	S	10/21/2005	5.250	G	76106	\$109,592,640.00	2	
2240639	K Q	PULASKI BRIDGE	NEWTOWN CREEK			WMO	44	S	7/7/2004	4.817	F	205770	\$296,308,800.00	2	
2240390	K Q	GRAND ST BRIDGE	NEWTOWN CREEK			WMO	2	S	9/3/2004	4.486	F	5100	\$7,344,000.00	5	
2232000	M	BATTERY PLACE	FDR DRIVE			AT	2	C	7/19/2004	4.500	F	75000	\$108,000,000.00	1	
2267380	M	WEST STREET	RECTOR ST			AT	1	S	11/4/2005	5.033	G	25760	\$37,094,400.00	1	
2268480	M	CHAMBERS ST PED BRDG	WEST SIDE HWY			O- PED	8	C	9/20/2004	5.925	G	3344	\$4,815,360.00	1	
2268930	M	MORRIS ST PED BRDG	BKLN-BATTERY TUNN PLZ			A- PED	3	C	10/13/2004	4.451	F	1200	\$1,728,000.00	1	
223201A	M	FDR DR N.B. OFF RMP	FDR DR & SOUTH ST			AR	17	S	2/18/2004	3.776	F	102225	\$147,204,000.00	1	
223201B	M	STH ST RMP TO FDR S.B.	SOUTH ST			AR	10	S	2/23/2004	3.821	F	44625	\$64,260,000.00	1	
223201C	M	STH ST RMP TO FDR	SOUTH ST			AR	8	S	2/19/2004	4.701	F	39150	\$56,376,000.00	1	
223201D	M	RAMP TO N.B. FDR DRIVE	FDR & SOUTH ST.			AR	22	S	3/22/2004	5.393	G	15825	\$22,788,000.00	1	
224001A	M	PARK ROW TO BKLN	WILLIAM ST N.B.			OE	4	S	4/6/2005	4.250	F	10167	\$14,640,480.00	1	
224001B	M	TO BKLN FRM FDR	FRANKFRT & CITY			OE	31	S	3/12/2004	4.148	F	51400	\$74,016,000.00	1	
224001D	M	TO FDR DR N.B.	PEARL STREET			OE	30	S	5/16/2005	5.208	G	49600	\$71,424,000.00	1	
224001F	M	PEARL ST TO FDR DR	LAND ADJ TO BRDG			OE	3	S	4/11/2005	5.254	G	5200	\$7,488,000.00	1	
224001G	M	TO PARK ROW	ROSE ST			OE	11	S	5/3/2005	4.681	F	16551	\$23,833,440.00	1	
2232029	M	CORLEARS PARK ROAD	FDR DRIVE		P	A	4	S	2/10/2004	4.156	F	4100	\$5,904,000.00	3	
2232030	M	DELANCEY ST PED BRDG	FDR DRIVE		P	A- PED	9	C	8/15/2004	4.449	F	2900	\$4,176,000.00	3	
2232040	M	HOUSTON ST	FDR DRIVE			A	2	S	4/12/2005	3.318	F	11010	\$15,854,400.00	3	
2232050	M	E 6TH ST PED BRDG	FDR DRIVE		P	A- PED	22	C	3/14/2004	4.431	F	2200	\$3,168,000.00	3	
2233020	M	E 10TH ST PED BRDG	FDR DRIVE		P	A- PED	22	C	12/16/2004	6.326	V	1632	\$2,350,080.00	3	
223204A	M	FDR NB TO HOUSTON ST	RELIEF			AR	4	S	6/15/2004	4.100	F	6150	\$8,856,000.00	3	
223204B	M	HOUSTON ST RAMP TO FDR	RELIEF			AR	4	S	2/5/2004	4.417	F	7642	\$11,004,480.00	3	
224001C	M	PEARL ST TO BKLN	LAND ADJ TO BRDG			OE	9	S	4/7/2005	3.814	F	6489	\$9,344,160.00	3	
2245010	M	11TH AVE VIADUCT	LIRR WEST SIDE YARD	AL		O	39	S	11/22/2004	3.861	F	157500	\$226,800,000.00	4	
2245060	M	W 37TH ST	AMTRAK 30 ST BRANCH	A		O	3	S	11/7/2005	6.270	V	7600	\$10,944,000.00	4	
2245070	M	W 38TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	9/16/2004	4.077	F	6200	\$8,928,000.00	4	
2245080	M	W 39TH ST	AMTRAK 30 ST BRANCH	A		O	3	S	9/16/2004	4.196	F	6300	\$9,072,000.00	4	
2245090	M	W 43RD ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/8/2004	4.485	F	4100	\$5,904,000.00	4	
2245100	M	W 44TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/8/2004	4.662	F	4300	\$6,192,000.00	4	
2245110	M	W 45TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/9/2004	5.662	G	4100	\$5,904,000.00	4	
2245120	M	W 46TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/21/2004	4.441	F	4100	\$5,904,000.00	4	
2245130	M	W 47TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/21/2004	4.721	F	4100	\$5,904,000.00	4	
2245140	M	W 48TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/21/2004	4.618	F	4100	\$5,904,000.00	4	
2245150	M	W 49TH ST	AMTRAK 30 ST BRANCH	A		O	3	S	11/2/2004	4.500	F	4100	\$5,904,000.00	4	
2245160	M	W 51ST ST	AMTRAK 30 ST BRANCH	A		O	2	S	11/2/2004	4.882	F	4300	\$6,192,000.00	4	
2245170	M	W 52ND ST	AMTRAK 30 ST BRANCH	A		O	2	S	11/2/2004	5.088	G	4300	\$6,192,000.00	4	
2245180	M	W 53RD ST	AMTRAK 30 ST BRANCH	A		O	2	S	11/10/2004	5.162	G	5100	\$7,344,000.00	4	
2245190	M	W 58TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	12/6/2004	4.588	F	4100	\$5,904,000.00	4	
2245209	M	11TH AVE	AMTRAK 30 ST BRANCH	A		O	2	S	12/2/2004	4.647	F	15400	\$22,176,000.00	4	
2245210	M	W 42ND ST	AMTRAK 30 ST BRANCH	A		O	4	S	10/4/2004	4.841	F	9155	\$13,183,200.00	4	
2245220	M	W 57TH ST	AMTRAK 30 ST BRANCH	A		O	3	S	12/6/2004	4.838	F	9100	\$13,104,000.00	4	
2245330	M	W 41ST ST	AMTRAK 30 ST BRANCH	A		O	3	S	9/24/2004	4.164	F	6200	\$8,928,000.00	4	
2245340	M	W 50TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	11/10/2004	4.647	F	4100	\$5,904,000.00	4	

INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT															
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB RTN G	DECK AREA	REPLACEMENT COST	CD	
2245350	M	W 54TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	11/10/2004	5.540	G	4700	\$6,768,000.00	4	
2245360	M	W 55TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	12/6/2004	5.485	G	4300	\$6,192,000.00	4	
2245370	M	W 56TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	12/6/2004	5.368	G	4400	\$6,336,000.00	4	
2245440	M	W 40TH ST	AMTRAK 30 ST BRANCH	A		O	4	S	12/5/2005	4.042	F	9400	\$13,536,000.00	4	
224501B	M	W 33RD ST	AMTRAK 30 ST BRANCH	A		O	8	S	4/5/2004	4.639	F	16500	\$23,760,000.00	4	
224501C	M	W 33RD ST	LAND ADJ TO AMTRAK	A		O	2	S	7/8/2005	4.750	F	4620	\$6,652,800.00	4	
224501D	M	W 34TH ST	AMTRAK 30 ST BRANCH	A		O	4	S	7/8/2005	4.653	F	11800	\$16,992,000.00	4	
224501E	M	W 35TH ST	AMTRAK 30 ST BRANCH	A		O	3	S	9/20/2004	4.208	F	6500	\$9,360,000.00	4	
224501F	M	W 36TH ST	AMTRAK 30 ST BRANCH	A		O	7	S	9/15/2004	3.940	F	16400	\$23,616,000.00	4	
226672A	M	W 31ST ST	AMTRAK LAYUP TRACKS	A		O	9	S	12/10/2004	3.683	F	8800	\$12,672,000.00	4	
2245460	M	PARK AVE S.B.	E 45TH ST			O	1	S	7/8/2005	4.730	F	2400	\$3,456,000.00	5	
2245470	M	PARK AVE N.B	E 45TH ST			O	1	S	7/25/2005	4.865	F	2400	\$3,456,000.00	5	
2246040	M	EAST DR AT CNTRL PARK	PEDESTRIAN WALK		P	O	1	C	7/12/2004	4.533	F	1200	\$1,728,000.00	5	
2246540	M	E 34TH ST	PARK AVE TUNNEL			OT	1	S	8/27/2004	4.033	F	36200	\$52,128,000.00	5	
2232070	M	25TH ST PED BRDG	FDR DRIVE			A- PED	4	C	3/14/2004	4.594	F	1700	\$2,448,000.00	6	
2232100	M	E 51ST ST PED BRDG	FDR DRIVE		P	A- PED	10	C	3/7/2004	4.188	F	2800	\$4,032,000.00	6	
2233040	M	E 60TH ST	FDR DRIVE			A	17	S	7/1/2005	4.687	F	24480	\$35,251,200.00	6	
2246550	M	PARK AVE VIADUCT	E 42ND ST			O	10	S	11/1/2005	4.597	F	22150	\$31,896,000.00	6	
2246560	M	TUDOR CITY PLACE	E 42ND ST			O	1	S	3/17/2004	5.133	G	6600	\$9,504,000.00	6	
2246570	M	UNITED NATIONS PL	FIRST AVE TUNNEL			OT	2	S	7/21/2004	4.843	F	95000	\$136,800,000.00	6	
2268650	M	FDR NB 42ND TO 49ST	EAST RIVER			A	11 9	S	8/28/2003	4.415	F	30767	\$44,304,480.00	6	
224001E	M	TO PEARL ST	LAND ADJ TO BRDG			OE	3	S	5/2/2005	5.225	G	5300	\$7,632,000.00	6	
224004A	M	TO QNS FRM E 59TH ST	FIRST AVE			OE	13	S	7/22/2004	5.732	G	14800	\$21,312,000.00	6	
224004B	M	TO E 60TH ST FROM QNS	FIRST AVE			OE	13	S	7/23/2004	5.764	G	14800	\$21,312,000.00	6	
224004C	M	TO E 62ND ST FROM QNS	E 60TH ST			OE	10	S	7/29/2004	4.985	F	16720	\$24,076,800.00	6	
224004D	M	TO QNS FROM E 58TH ST	E 59TH ST			OE	12	S	8/25/2004	4.660	F	11781	\$16,964,640.00	6	
224004J	M	25X	NYC GARAGE			OE	14	S	7/30/2004	4.537	F	22058	\$31,763,520.00	6	
2229289	M	HHP VIADUCT	W 72 ST TO W 79 ST	A		A	14 5	S	12/7/2004	3.478	F	236100	\$339,984,000.00	7	
2229290	M	W 79 ST	AMTRAK	A		A	1	S	10/13/2004	4.559	F	4500	\$6,480,000.00	7	
2229309	M	HHP	RIVERSIDE PARK			A	1	S	2/20/2004	5.267	G	2400	\$3,456,000.00	7	
2229311	M	HHP SB	RAMP TO 96 ST			A	1	S	2/26/2004	4.273	F	2000	\$2,880,000.00	7	
2229312	M	HHP NB	RAMP TO 96 ST			A	1	S	2/27/2004	4.364	F	2000	\$2,880,000.00	7	
2229321	M	HHP SB	RAMP TO 96 ST			A	1	S	3/8/2004	5.200	G	2000	\$2,880,000.00	7	
2229322	M	HHP NB	RAMP TO 96 ST			A	1	S	3/8/2004	5.300	G	2000	\$2,880,000.00	7	
2246970	M	RIVERSIDE DRIVE	W 96TH ST			O	3	S	6/21/2005	5.500	G	10600	\$15,264,000.00	7	
2257569	M	MILLER HIGHWAY	TERRAIN			A	64	S	8/20/2005	4.915	F	264190	\$380,433,600.00	7	
2267250	M	HHP	AMTRAK 30TH ST LINE	A		A	55	S	10/29/2004	3.710	F	40000	\$57,600,000.00	7	
2267717	M	79 ST PED PLAZA	79 ST BT BASIN GAR		P	A	10	S	4/18/2005	4.593	F	27400	\$39,456,000.00	7	
2267718	M	79 ST TRAFFIC CIRC	79 ST PED PLAZA		P	A	34	S	6/17/2005	3.934	F	24130	\$34,747,200.00	7	
2269190	M	W.70TH STREET	AMTRAK	A		O	3	S	10/14/2005	6.417	V	17258	\$24,851,520.00	7	
2269210	M	W.68TH STREET	AMTRAK	A		O	3	S	9/28/2005	6.780	V	5382	\$7,750,080.00	7	
222928C	M	PED BR AT 73RD ST	HHP - AMTRAK		P	A- PED	3	C	6/8/2002	4.000	F	3480	\$5,011,200.00	7	
226771A	M	79 ST RAMP TO HHP	79 ST BT BASIN GAR		P	AR	4	S	5/16/2005	4.242	F	3131	\$4,508,640.00	7	
226771B	M	79 ST RAMP TO GAR	79 ST BT BASIN GAR		P	AR	21	S	5/24/2005	4.452	F	7114	\$10,244,160.00	7	
226771C	M	GAR RAMP TO 79 ST	79 ST BT BASIN GAR		P	AR	21	S	6/16/2005	4.726	F	9095	\$13,096,800.00	7	
226771D	M	SB HHP RAMP TO 79 ST	79 ST BT BASIN GAR		P	AR	4	S	5/27/2005	4.645	F	2601	\$3,745,440.00	7	
M000003	M	HHP ON/OFF RMP-79 WB	PEDESTRIAN PATH			A	1	C	7/1/2004	4.833	F	900	\$1,296,000.00	7	
M000004	M	HHP ON/OFF RMP-79 EB	PEDESTRIAN PATH			A	1	C	7/12/2004	4.900	F	900	\$1,296,000.00	7	
2232110	M	E 64TH ST PED BRDG	FDR DRIVE		P	A- PED	13	C	3/7/2004	5.141	G	2100	\$3,024,000.00	8	
2232120	M	E 71ST ST PED BRDG	FDR DRIVE		P	A- PED	19	C	3/21/2004	6.182	V	1800	\$2,592,000.00	8	
2232140	M	E 78TH ST PED BRDG	FDR DRIVE		P	A- PED	9	C	3/21/2004	3.000	P	1700	\$2,448,000.00	8	
2232158	M	FDR DRIVE S.B.	FDR DRIVE N.B.			AT	32	S	5/26/2005	4.712	F	54302	\$78,194,880.00	8	
2232167	M	PROMENADE OVER FDR	FDR/E79TH ST-E91ST ST		P	A- PED AT	53	S	8/3/2005	3.571	F	93000	\$133,920,000.00	8	
2233038	M	FDR DRIVE SB	FDR NB / E 62ND ST			AT	46	S	9/15/2005	2.415	P	70113	\$100,962,720.00	8	
2245319	M	E 97TH ST	METRO NORTH MAIN LN	M		O	1	S	9/1/2004	4.725	F	3200	\$4,608,000.00	8	
2245380	M	E 66TH ST	PED WALK N. OF ZOO		P	O	1	S	6/2/2004	5.267	G	1500	\$2,160,000.00	8	
2246410	M	TRANSVERSE RD. #1	PED WALK NEAR 5 AV		P	O	1	S	2/27/2004	4.364	F	1739	\$2,504,160.00	8	
2269820	M	E 81 ST PED BRIDGE	FDR DRIVE N.B.		P	A- PED	3	C	10/11/2004	3.213	F	900	\$1,296,000.00	8	
2245230	M	W 148TH ST PED BRDG	AMTRAK 30 ST BRANCH	A	P	O- PED	3	C	4/20/2004	3.509	F	1100	\$1,584,000.00	9	
2245240	M	W 151ST ST FOOTBR	CONRAIL 30 ST BR	A	P	O- PED	2	C	6/8/2002	3.462	F	1020	\$1,468,800.00	9	
2245290	M	W 155TH ST PED BRDG	AMTRAK 30 ST BRANCH	A		O- PED	3	C	4/21/2004	4.262	F	800	\$1,152,000.00	9	
2246660	M	RIVERSIDE DRIVE	W 125TH ST & OTHERS			O	27	S	7/18/2005	4.389	F	148300	\$213,552,000.00	9	
2246670	M	W 134 ST VIADUCT	RIVERSIDE DRIVE			O	4	S	10/14/2005	4.944	F	7500	\$10,800,000.00	9	
2246720	M	RIVERSIDE DRIVE	W 158TH ST			O	77	S	11/18/2005	3.639	F	181400	\$261,216,000.00	9	
2246980	M	RIVERSIDE DRIVE	W 138TH ST			O	1	S	3/5/2004	4.900	F	6700	\$9,648,000.00	9	

INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT														
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2266229	M	HHP	PED UNDERPASS @ 148 ST			A	1	S	3/5/2004	5.476	G	1800	\$2,592,000.00	9
2267130	M	RIVERSIDE DRIVE	W 145TH ST			O	1	S	6/20/2005	5.000	G	5800	\$8,352,000.00	9
2269240	M	RIVERSIDE DRIVE	W. 155TH ST			O	1	S	6/20/2005	4.640	F	4397	\$6,331,680.00	9
2246490	M	A.C. POWELL BLVD N.B.	A.C. POWELL BLVD			O	1	S	2/24/2004	4.061	F	5600	\$8,064,000.00	10
2246710	M	W 153 ST	A.C. POWELL BLVD			O	1	S	2/25/2004	4.389	F	3082	\$4,438,080.00	10
2232180	M	E 103RD ST PED BRDG	FDR DRIVE			A- PED	20	C	7/29/2003	5.000	G	6000	\$8,640,000.00	11
2232190	M	E 111TH ST PED BRDG	FDR DRIVE		P	A- PED	14	C	2/2/2004	3.800	F	2600	\$3,744,000.00	11
2232200	M	E 120TH ST PED BRDG	FDR DRIVE		P	A- PED	23	C	10/24/2004	4.500	F	2500	\$3,600,000.00	11
2233059	M	HARLEM RIVER DRIVE	RAMP TO HRD N.B.			A	11	S	4/13/2005	3.522	F	51000	\$73,440,000.00	11
2240620	M	WARDS ISLAND PED BRDG	HARLEM RIVER			WMO- PED	10	C	7/29/2003	4.049	F	12600	\$18,144,000.00	11
2246620	M	PEDESTRIAN BRIDGE	E 128TH ST			O- PED	18	C	10/1/2004	4.720	F	2300	\$3,312,000.00	11
2246990	M	129 - 130 ST PED BRDG	RAMP OFF 3RD AVE			O- PED	5	C	7/19/2004	4.238	F	500	\$720,000.00	11
224005A	M	FROM FDR DRIVE	HARLEM RIVER DR			OR	19	S	8/18/2004	4.119	F	29900	\$43,056,000.00	11
224007A	M	TO MADISON AVENUE	RELIEF			OR	7	S	4/30/2004	5.592	G	19880	\$28,627,200.00	11
2229349	M	HHP	W 158 ST	A		A	44	S	8/12/2004	4.268	F	140000	\$201,600,000.00	12
2229400	M	W 181ST ST PED BRDG	HHP N.B.		P	A- PED	6	C	2/5/2003	4.652	F	1500	\$2,160,000.00	12
2245040	M	FORT TRYON PARK	SOUTH OF CLOISTERS		P	O	1	C	7/30/2004	5.133	G	750	\$1,080,000.00	12
2245050	M	FORT TRYON PARK	UNDERPASS		P	O	1	C	7/30/2004	4.867	F	750	\$1,080,000.00	12
2245250	M	W 158TH ST	AMTRAK 30 ST BRANCH	A		O	7	S	9/29/2005	6.431	V	29170	\$42,004,800.00	12
2245260	M	W 173RD ST PED BRDG	AMTRAK 30 ST BRANCH	A	P	O- PED	2	C	4/22/2004	4.611	F	1500	\$2,160,000.00	12
2245300	M	INWOOD HILL PK FTBR	AMTRAK 30 ST BRANCH	A	P	O- PED	6	C	4/26/2004	4.174	F	700	\$1,008,000.00	12
2245480	M	TO GWB OPP W 171ST ST	RIVERSIDE DRIVE			O	1	S	6/29/2004	5.333	G	10800	\$15,552,000.00	12
2246489	M	W 181 ST	RAMP TO WASH BR			O	1	S	2/10/2004	4.633	F	8200	\$11,808,000.00	12
2246500	M	FORT TRYON PLACE	ENTR FROM RIVERSIDE DR		P	O	1	S	3/8/2004	4.267	F	6600	\$9,504,000.00	12
2246510	M	CORBIN PL OVERPASS	CORBIN PLACE		P	O	1	S	2/9/2004	5.133	G	2200	\$3,168,000.00	12
2246580	M	HIGH BRIDGE PDOVP	87I - HARLEM RIVER		P	WA- PED	11	P	10/1/85	5.651	G	34115	\$49,125,600	12
2246600	M	W 176TH ST PED BRDG	APPROACH TO G.W.B.			O- PED	1	C	3/3/2004	4.600	F	1200	\$1,728,000.00	12
2246690	M	ISHAM PK VEHICULR	HARLEM RIVER INLET		P	O	1	S	6/30/2004	6.826	V	911	\$1,311,840.00	12
2246700	M	ISHM PK PEDESTRN	HARLEM RV INLET		P	WO- PED	1	C	12/29/2004	4.931	F	285	\$410,400.00	12
2266230	M	HHP	PED UNDERPASS INWD PK			A	1	S	2/2/2004	6.211	V	800	\$1,152,000.00	12
2266240	M	HHP	PED UNDERPASS INWD PK			A	1	S	2/3/2004	5.762	G	1100	\$1,584,000.00	12
2267240	M	HRD NB RAMP	HARLEM RIVER DR			A	55	S	10/20/2005	3.083	F	122900	\$176,976,000.00	12
2268760	M	PS-5 PEDESTRIAN BR.	TENTH AVENUE			O- PED	5	C	6/3/2003	5.837	G	1500	\$2,160,000.00	12
222934A	M	RAMP TO N.B. HHP	AMTRAK WEST SIDE	A		AR	26	S	9/1/2004	3.875	F	10800	\$15,552,000.00	12
M00001	M	PEDESTRIAN TUNNEL	BROADWAY TO			O- PED	1	C	3/9/2004	5.000	G	2000	\$2,880,000.00	12
2245420	M	W 65TH ST E.B.	BRIDLE PATH W END			O	1	S	6/2/2004	4.900	F	1600	\$2,304,000.00	64
2246000	M	WEST DRIVE	PED BET 61ST & 62ST		P	O	1	S	6/2/2004	5.267	G	2500	\$3,600,000.00	64
2246010	M	FTBRG OPP 62ND ST	BRIDLE PATH		P	O- PED	1	C	12/22/2004	5.000	G	1026	\$1,477,440.00	64
2246030	M	PEDESTRIAN BRIDGE	POND		P	O- PED	1	C	7/29/2004	4.310	F	1400	\$2,016,000.00	64
2246050	M	CENTRAL DRIVE	PED OPP 63RD ST		P	O	1	S	6/2/2004	5.267	G	2000	\$2,880,000.00	64
2246069	M	EAST DRIVE	PEDESTRIAN WALK		P	O	1	S	6/2/2004	4.500	F	2700	\$3,888,000.00	64
2246070	M	CPK UNDER CENTR DR	OPP 65TH ST-IN E&W		P	O	1	C	7/14/2004	6.000	G	1200	\$1,728,000.00	64
2246080	M	WEST DRIVE	BRIDLE PATH @ 64TH ST		P	O	1	S	6/2/2004	4.667	F	2000	\$2,880,000.00	64
2246090	M	PED BRDG OPP 65 ST	TRANSVERSE RD #1		P	O- PED	1	C	2/14/2004	4.655	F	2300	\$3,312,000.00	64
2246100	M	CENTRAL DRIVE	TRANSVERSE RD #1		P	O	1	S	3/31/2004	4.200	F	6000	\$8,640,000.00	64
2246110	M	EAST DRIVE	TRANSVERSE RD #1		P	O	1	S	3/31/2004	4.567	F	6000	\$8,640,000.00	64
2246120	M	WEST DRIVE	TRANSVERSE RD #1		P	O	1	S	3/31/2004	4.833	F	7900	\$11,376,000.00	64
2246130	M	CENTRAL PARK	UNDER EAST DRIVE		P	O	1	C	7/15/2004	4.233	F	1200	\$1,728,000.00	64
2246140	M	72ND ST ENT TO W DR	BRIDLE PATH		P	O	1	S	2/11/2004	4.867	F	3600	\$5,184,000.00	64
2246150	M	72ND ST CROSS DR	NEAR CONCERT GRNDS		P	O	3	S	6/2/2004	4.941	F	7300	\$10,512,000.00	64
2246160	M	PED BET 73ST&74ST	THE LAKE		P	WO- PED	1	C	6/1/2002	5.000	G	1655	\$2,383,200.00	64
2246170	M	EAST DRIVE	PED WALK @ 73RD ST		P	O	1	S	2/24/2004	5.056	G	1900	\$2,736,000.00	64
2246230	M	EAST DRIVE	TRANSVERSE RD #2		P	O	1	S	4/5/2004	4.533	F	6500	\$9,360,000.00	64
2246240	M	WEST DRIVE	TRANSVERSE RD #2		P	O	1	S	4/5/2004	4.167	F	7200	\$10,368,000.00	64
2246250	M	EAST DRIVE	TRANSVERSE RD #3		P	O	1	S	3/1/2004	4.433	F	5100	\$7,344,000.00	64
2246260	M	WEST DRIVE	TRANSVERSE RD #3		P	O	1	S	3/3/2004	4.800	F	5100	\$7,344,000.00	64
2246270	M	EAST DRIVE	TRANSVERSE RD #4		P	O	1	S	4/1/2004	3.967	F	7000	\$10,080,000.00	64
2246280	M	WEST DRIVE	TRANSVERSE RD #4		P	O	1	S	4/1/2004	4.033	F	4700	\$6,768,000.00	64
2246320	M	FTBRG OPP 77TH ST	THE LAKE		P	WO- PED	3	C	12/29/2004	4.862	F	1125	\$1,620,000.00	64
2246330	M	WEST DRIVE	FEEDER TO LAKE		P	WO	1	S	2/23/2004	5.000	G	6700	\$9,648,000.00	64
2246340	M	PED WALK OPP 77ST	STREAM TO LAKE		P	WO- PED	4	C	12/29/2004	4.871	F	455	\$655,200.00	64

INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT															
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD	
2246350	M	CNTRL PK OVER E DRIVE	S OF CLEOPATRAS NDL		P	O	1	C	7/15/2004	4.500	F	750	\$1,080,000.00	64	
2246360	M	WEST DRIVE	PED WALK OPP 82 ST		P	O	1	S	2/25/2004	5.682	G	3100	\$4,464,000.00	64	
2246380	M	PED WALK OPP 86ST	BRIDLE PATH		P	O- PED	1	C	12/3/2004	5.190	G	714	\$1,028,160.00	64	
2246390	M	PED WALK OPP 86ST	BRIDLE PATH		P	O- PED	1	C	12/3/2004	4.627	F	1095	\$1,576,800.00	64	
2246400	M	E FOOTBRIDGE	TRANSVERSE RD #2		P	O- PED	1	C	10/23/2004	4.500	F	3700	\$5,328,000.00	64	
2246430	M	WEST DRIVE	PED OPP 109TH ST		P	O	1	S	2/26/2004	4.317	F	1200	\$1,728,000.00	64	
2246440	M	PED IN CTR OF PK	TRANSVERSE RD NO.2		P	O- PED	1	C	10/23/2004	4.259	F	5900	\$8,496,000.00	64	
2246450	M	79 ST ENTR TO E DR	PED PATH OPP 77TH ST		P	O- PED	1	C	2/27/2002	5.190	G	5000	\$7,200,000.00	64	
2246460	M	77 ST ENTR TO W DR	PED PATH OPP 77TH ST		P	O	2	S	2/13/2004	4.789	F	5800	\$8,352,000.00	64	
2246470	M	EAST DRIVE	THE LOCH		P	WO	1	S	3/2/2004	4.700	F	1100	\$1,584,000.00	64	
2240047	M Q	QUEENSBORO BRIDGE(LL)	EAST RIVER	L		WEO	53	S	11/23/2004	4.543	F	626900	\$902,736,000.00	6	
2240048	M Q	QUEENSBORO BRIDGE(UL)	EAST RIVER-LL			WEO	37	S	12/5/2004	4.623	F	322300	\$464,112,000.00	6	
2240640	M Q	ROOSEVELT ISLAND	E. RIVER E. CHANNEL			WMO	8	S	6/15/2004	4.222	F	36500	\$52,560,000.00	8	
2230600	Q	STEINWAY ST	278I W.B. (B.Q.E.)			A	1	S	1/13/2004	4.167	F	4200	\$6,048,000.00	1	
2230610	Q	STEINWAY ST	278I E.B. (B.Q.E.)			A	1	S	1/13/2004	4.028	F	4200	\$6,048,000.00	1	
2230620	Q	37TH ST	278I (B.Q.E.)			A	2	S	4/8/2004	4.667	F	5300	\$7,632,000.00	1	
2230630	Q	35TH ST	278I (B.Q.E.)			A	4	S	7/16/2004	4.819	F	9000	\$12,960,000.00	1	
2230640	Q	32ND ST	278I (B.Q.E.)			A	2	S	5/6/2005	4.986	F	8100	\$11,664,000.00	1	
2230657	Q	31ST ST	278I (B.Q.E.)			A	2	S	7/16/2004	4.917	F	9500	\$13,680,000.00	1	
2230690	Q	BQE EAST LEG NB	32ND AVE			A	1	S	6/3/2004	7.000	V	4080	\$5,875,200.00	1	
2230700	Q	BQE EAST LEG	TO BQE WEST LEG			A	8	S	11/8/2004	6.915	V	31600	\$45,504,000.00	1	
2230710	Q	278I S.B. (B.Q.E.)	32ND AVE			A	1	S	9/6/2005	6.695	V	5240	\$7,545,600.00	1	
2230720	Q	BQE EAST LEG	BQE NB WEST LEG			A	3	S	4/26/2005	6.515	V	20896	\$30,090,240.00	1	
2230730	Q	31ST AVE	278I (B.Q.E.)			A	1	S	8/15/2005	6.517	V	5800	\$8,352,000.00	1	
2230740	Q	BQE WEST LEG SB	31ST AVE			A	1	S	9/9/2005	6.545	V	5246	\$7,554,240.00	1	
2230750	Q	BQE EAST LEG SB	31ST AVE			A	1	S	9/9/2005	6.407	V	2900	\$4,176,000.00	1	
2230760	Q	BQE WEST LEG NB	31ST AVE			A	1	S	10/5/2004	7.000	V	4020	\$5,788,800.00	1	
2230770	Q	BQE WEST LEG	30TH AVE			A	1	S	5/24/2005	7.000	V	6199	\$8,926,560.00	1	
2230790	Q	BULOVA AVE	BQE WEST LEG			A	2	S	3/22/2004	5.667	G	3300	\$4,752,000.00	1	
2230800	Q	49TH ST	BQE WEST LEG			A	2	S	3/22/2004	5.333	G	4900	\$7,056,000.00	1	
2230810	Q	ASTORIA BLVD E.B.	BQE WEST LEG			A	4	S	3/22/2004	4.221	F	8200	\$11,808,000.00	1	
2230820	Q	47TH ST	GCP			A	2	S	4/20/2004	4.944	F	5700	\$8,208,000.00	1	
2230830	Q	BQE WEST LEG	GCP			A	2	S	7/14/2004	4.861	F	7600	\$10,944,000.00	1	
2230840	Q	44TH ST	GCP			A	2	S	4/16/2004	4.847	F	5000	\$7,200,000.00	1	
2230890	Q	49TH ST	GCP			A	2	S	6/11/2004	4.778	F	6350	\$9,144,000.00	1	
2240660	Q	RIKERS ISLAND BRIDGE	RIKERS ISL CHANNEL			WO	56	S	7/5/2005	4.282	F	183100	\$263,664,000.00	1	
224004G	Q	TO NY FROM 11TH ST	TERRAIN (CHAMBER)			OE	36	S	10/5/2004	4.634	F	8360	\$12,038,400.00	1	
1247280	Q	51 AVE PED BR.2247280	LIRR MAIN LINE	L		O- PED	5	C	8/4/2004	3.091	F	700	\$1,008,000.00	2	
2230520	Q	65TH PLACE	278I (B.Q.E.)			A	2	S	2/4/2004	4.338	F	11600	\$16,704,000.00	2	
2230530	Q	QUEENS BLVD	278I (B.Q.E.)			A	2	S	8/25/2004	4.625	F	23500	\$33,840,000.00	2	
2230540	Q	WOODSIDE AVE	278I (B.Q.E.)			A	1	S	1/5/2004	5.266	G	7500	\$10,800,000.00	2	
2230550	Q	69TH ST	278I (B.Q.E.)			A	2	S	3/11/2004	4.842	F	12600	\$18,144,000.00	2	
2230560	Q	70TH ST	278I (B.Q.E.)			A	2	S	3/11/2004	5.125	G	8500	\$12,240,000.00	2	
2230570	Q	41ST AVE	278I (B.Q.E.)			A	3	S	2/13/2004	4.931	F	8800	\$12,672,000.00	2	
2230587	Q	ROOSEVELT AVE	278I (B.Q.E.)			A	2	S	2/13/2004	4.559	F	6600	\$9,504,000.00	2	
2230590	Q	BROADWAY	278I (B.Q.E.)			O	2	S	4/27/2004	3.842	F	16000	\$23,040,000.00	2	
2230669	Q	278I (B.Q.E.)	35TH AVE			A	1	S	9/8/2005	6.831	V	13135	\$18,914,400.00	2	
2230679	Q	278I (B.Q.E.)	34TH AVE			A	1	S	5/20/2005	6.898	V	9500	\$13,680,000.00	2	
2230680	Q	278I (B.Q.E.)	NORTHERN BLVD			A	1	S	3/24/2004	6.683	V	27011	\$38,895,840.00	2	
2230869	Q	QUEENS BLVD	ACCESS RD BQE S.B.			A	1	S	6/18/2004	4.205	F	7900	\$11,376,000.00	2	
2240410	Q	BORDEN AVE	DUTCH KILLS			WMO	2	S	6/8/2005	3.833	F	8400	\$12,096,000.00	2	
2240450	Q	HUNTERS PT AVE BRIDGE	DUTCH KILLS			WMO	4	S	5/26/2004	5.167	G	12168	\$17,521,920.00	2	
2247120	Q	WOODSIDE AVE	LIRR MAIN LINE	L		O	3	S	7/27/2005	4.444	F	14900	\$21,456,000.00	2	
2247150	Q	65TH ST	LIRR N SIDE DIV	L		O	3	S	7/27/2005	6.375	V	6344	\$9,135,360.00	2	
2247160	Q	65TH PLACE	LIRR N SHR DIV	L		O	3	S	7/26/2005	6.471	V	8381	\$12,068,640.00	2	
2247260	Q	JACKSON AVE	LIRR,AMT,CON NE	L		O	1	S	11/24/2004	6.183	V	4517	\$6,504,480.00	2	
2247270	Q	21ST STREET	CONRAIL	C		O	6	S	8/10/2005	5.528	G	17590	\$25,329,600.00	2	
2247290	Q	49TH AVE	LIRR,AMT,CON NE	L		O	5	S	9/1/2004	4.292	F	20400	\$29,376,000.00	2	
2247300	Q	THOMPSON AVE	AMTRAK YARD	L		O	14	S	9/8/2004	5.264	G	61280	\$88,243,200.00	2	
2247310	Q	QUEENS BLVD	AMTRAK & LIRR YARD	L		O	19	S	9/10/2004	6.577	V	92400	\$133,056,000.00	2	
2247320	Q	HONEYWELL ST	AMTRAK & LIRR YARD	AL		O	22	S	12/16/2005	6.236	V	99036	\$142,611,840.00	2	
2247330	Q	39TH ST (NORTH)	SUNNYSIDE YARDS	AL		O	14	S	12/12/2005	6.556	V	48200	\$69,408,000.00	2	
2247370	Q	37TH AVE	CONRAIL HELLGATE	C		O	1	S	8/4/2005	4.818	F	5300	\$7,632,000.00	2	
2247380	Q	ROOSEVELT AVE	CONRAIL HELLGATE	C		O	2	S	6/28/2004	4.958	F	5200	\$7,488,000.00	2	

INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT															
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB RTN G	DECK AREA	REPLACEMENT COST	CD	
2247390	Q	41ST AVE	CONRAIL HELLGATE	C		O	2	S	8/8/2005	4.942	F	4400	\$6,336,000.00	2	
2247400	Q	WOODSIDE AVE	CONRAIL	C		O	1	S	8/12/2005	5.067	G	8200	\$11,808,000.00	2	
2247410	Q	43RD AVE	CONRAIL	C		O	1	S	8/22/2005	5.033	G	4800	\$6,912,000.00	2	
2247420	Q	44TH AVE	CONRAIL	C		O	1	S	8/22/2005	5.033	G	5100	\$7,344,000.00	2	
2247430	Q	45TH AVE	CONRAIL	C		O	1	S	8/23/2005	5.510	G	2400	\$3,456,000.00	2	
2247640	Q	39 ST (SOUTH)	AMTRAK & LIRR YARD	AL		O	9	S	12/15/2005	6.125	V	34100	\$49,104,000.00	2	
224004E	Q	TO NY FR THOMSON AVE	JACKSON AVE			OE	94	S	10/29/2004	4.906	F	104600	\$150,624,000.00	2	
224004F	Q	TO NY FROM 21ST ST	21ST ST (QUEENS)			OE	63	S	12/9/2004	4.652	F	63310	\$91,166,400.00	2	
224004H	Q	TO 21ST ST FROM NY	22ND ST			OE	43	S	12/10/2004	4.310	F	48100	\$69,264,000.00	2	
224004I	Q	TO THOMSON AVE FROM NY	JACKSON AVE			OE	39	S	11/23/2004	5.016	G	59100	\$85,104,000.00	2	
2230780	Q	BQE EAST LEG	30TH AVE			A	1	S	5/25/2005	7.000	V	7071	\$10,182,240.00	3	
1247010	Q	91 PLACE (2247010)	LIRR PT WASH BRANCH	L		O	1	S	9/27/2005	6.833	V	2760	\$3,974,400.00	4	
2247020	Q	94TH ST PED BRDG	LIRR N SIDE DIV	L		O- PED	5	C	8/9/2004	4.333	F	500	\$720,000.00	4	
2247180	Q	GRAND AVE	LIRR MAIN LINE	L		O	3	S	5/25/2004	4.849	F	7415	\$10,677,600.00	4	
2247190	Q	55TH AVE PED BRDG	LIRR MAIN LINE	L		O- PED	3	C	8/3/2004	4.491	F	13000	\$18,720,000.00	4	
2247620	Q	MYRTLE AVE	ABANDONED LIRR	L		O	3	S	2/11/2004	5.278	G	6725	\$9,684,000.00	4	
1247560	Q	METROPOLITAN AVE	LIRR MONTAUK DIV	L		O	2	S	6/23/2005	3.762	F	20900	\$30,096,000.00	5	
2065930	Q	HAMILTON PLACE	495I (L.I.E.)			A	2	S	6/4/2004	6.347	V	11111	\$15,999,840.00	5	
2065940	Q	GRAND AVE	495I (L.I.E.)			A	2	S	9/1/2004	5.264	G	12850	\$18,504,000.00	5	
2065950	Q	69TH STREET	495I (L.I.E.)			A	2	S	5/24/2005	5.417	G	10336	\$14,883,840.00	5	
2230040	Q	CYPRESS HILLS ST	JACKIE ROBINSON PKWY			A	1	S	5/7/2004	5.611	G	5000	\$7,200,000.00	5	
2230050	Q	CYP HILLS CEM WEST	JACKIE ROBINSON PKWY			A	3	S	4/13/2005	3.955	F	4400	\$6,336,000.00	5	
2230070	Q	CYP HILLS CEM EAST	JACKIE ROBINSON PKWY			A	3	S	4/15/2005	4.114	F	4400	\$6,336,000.00	5	
2230099	Q	JACKIE ROBINSON PKWY	CYPRESS HILLS CEMETRY			A	1	S	1/7/2004	5.483	G	4200	\$6,048,000.00	5	
2247440	Q	GRAND AVE	CONRAIL	C		O	1	S	8/23/2005	6.483	V	3280	\$4,723,200.00	5	
2247450	Q	57TH AVE	CONRAIL	C		O	1	S	8/24/2005	6.195	V	2248	\$3,237,120.00	5	
2247460	Q	CALDWELL AVE	CONRAIL	C		O	1	S	6/29/2004	6.639	V	2243	\$3,229,920.00	5	
2247470	Q	ELIOT AVE	CONRAIL	C		O	1	S	8/24/2005	5.250	G	3600	\$5,184,000.00	5	
2247480	Q	JUNIPER BLVD SO	CONRAIL	C		O	1	S	8/30/2005	5.417	G	9000	\$12,960,000.00	5	
2247490	Q	69TH ST JUNPR BLVD	CONRAIL	C		O	1	S	6/30/2004	5.455	G	6175	\$8,892,000.00	5	
2247500	Q	METROPOLITAN AVE	CONRAIL	C		O	1	S	8/30/2005	4.167	F	18650	\$26,856,000.00	5	
2247530	Q	ANDREWS AVE	LIRR MONTAUK DIV	L		O	4	S	6/20/2005	7.000	V	3200	\$4,608,000.00	5	
2247540	Q	60TH ST	LIRR MONTAUK DIV	L		O	2	S	7/18/2005	5.264	G	5340	\$7,689,600.00	5	
2247550	Q	ELIOT AVE	LIRR MONTAUK DIV	L		O	2	S	6/21/2005	5.894	G	9550	\$13,752,000.00	5	
2247570	Q	80TH ST	71ST TO 77TH AVE	L		O	5	S	5/3/2004	5.102	G	11725	\$16,884,000.00	5	
2247630	Q	PED BRG NEAR UNION TPK	ABANDONED LIRR			O- PED	8	C	7/8/2004	5.318	G	900	\$1,296,000.00	5	
2247650	Q	60TH RD PED BRDG	LIRR MAIN LINE	L		O- PED	3	C	8/2/2004	4.934	F	2293	\$3,301,920.00	5	
2248200	Q	RUST ST	FLUSHING AVE			O	1	S	7/11/2005	5.078	G	2940	\$4,233,600.00	5	
2248220	Q	FLUSHING AV SERVICE	FLUSHING AVE			O	1	S	7/11/2005	5.125	G	2940	\$4,233,600.00	5	
2248240	Q	SERVICE RD TURNAROUND	OVER FLUSHING AVE			O	1	S	7/11/2005	5.250	G	2940	\$4,233,600.00	5	
2248280	Q	HIGHLAND PK PED.	PEDESTRIAN PATH		P	O- PED	1	C	12/22/2004	3.667	F	1856	\$2,672,640.00	5	
2248300	Q	71ST AVE	COOPER AVE			O	1	S	6/8/2005	4.458	F	2800	\$4,032,000.00	5	
1247200	Q	67 AVE PED BR 2247200	LIRR MAIN LINE	L		O- PED	3	C	8/5/2004	4.414	F	1300	\$1,872,000.00	6	
2066002	Q	495I (2066000)	WOODHAVEN BLVD			A	2	S	7/14/2005	6.197	V	25200	\$36,288,000.00	6	
2248159	Q	WOODHAVEN BLVD	QUEENS BLVD			O	2	S	7/7/2004	4.288	F	11500	\$16,560,000.00	6	
1065210	Q	WHITESTONE EXP NB	BCIP (2065210)			A	1	S	7/8/2004	4.683	F	2500	\$3,600,000.00	7	
2055801	Q	NORTHERN BLVD W.B.	FLUSHING RIVER			WO	40	S	8/30/2004	4.817	F	71900	\$103,536,000.00	7	
2055802	Q	NORTHERN BLVD E.B.	FLUSHING RIVER			WO	40	S	8/30/2004	4.507	F	78894	\$113,607,360.00	7	
2231900	Q	BCIP	FORT TOTTEN ENTRANCE			A	1	S	6/15/2004	4.672	F	4900	\$7,056,000.00	7	
2231910	Q	UTOPIA PKWY	BCIP			A	2	S	2/5/2004	5.136	G	7200	\$10,368,000.00	7	
2231920	Q	160TH ST	BCIP			A	2	S	4/11/2005	5.861	G	5550	\$7,992,000.00	7	
2231930	Q	FRANCIS LEWIS BLVD	BCIP			A	3	S	1/14/2004	4.773	F	9100	\$13,104,000.00	7	
2231940	Q	CLINTONVILLE ST	BCIP			A	2	S	1/14/2004	4.727	F	7400	\$10,656,000.00	7	
2231950	Q	150TH ST	BCIP			A	2	S	1/14/2004	4.773	F	5900	\$8,496,000.00	7	
2231960	Q	149TH ST	BCIP			A	2	S	1/27/2004	4.977	F	6210	\$8,942,400.00	7	
2231970	Q	14TH AVE	BCIP			A	2	S	1/27/2004	4.750	F	8100	\$11,664,000.00	7	
2231980	Q	147TH ST	BCIP			A	2	S	1/27/2004	4.773	F	6300	\$9,072,000.00	7	
2247040	Q	UNION ST	LIRR N SIDE DIV	L		O	1	S	6/20/2005	6.391	V	3313	\$4,770,720.00	7	
2247050	Q	BOWNE AVE	LIRR N SIDE DIV	L		O	1	S	5/5/2004	5.863	G	4974	\$7,162,560.00	7	
2247060	Q	PARSONS BLVD	LIRR N SIDE DIV	L		O	1	S	5/6/2004	5.176	G	4200	\$6,048,000.00	7	
2247070	Q	147TH ST	LIRR N SIDE DIV	L		O	1	S	6/21/2005	5.627	G	2800	\$4,032,000.00	7	
2247080	Q	149TH ST	LIRR N SIDE DIV	L		O	1	S	6/21/2005	4.776	F	4100	\$5,904,000.00	7	
2247090	Q	149TH PLACE	LIRR N SIDE DIV	L		O	2	S	6/22/2005	5.316	G	4300	\$6,192,000.00	7	
2247100	Q	150TH ST	LIRR N SIDE DIV	L		O	2	S	6/23/2005	6.588	V	7830	\$11,275,200.00	7	
2247110	Q	MURRAY ST	LIRR N SIDE DIV	L		O	1	S	6/23/2005	5.556	G	4000	\$5,760,000.00	7	
2248090	Q	FLSHG MDW PK PED.	LAWRENCE STREET		P	O-	3	C	5/11/2002	4.722	F	8418	\$12,121,920.00	7	

INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2266160	Q	6781 SB TO BCIP EB	ACCESS RD FROM 6781			A	1	S	4/28/2004	4.438	F	2300	\$3,312,000.00	7
7705510	Q	167TH ST PED BRDG	LIRR PORT WASH BRANCH	L		O- PED	3	C	8/10/2004	4.164	F	600	\$864,000.00	7
205580A	Q	N.BLVD WB TO 6781 SB	VACANT LAND			AR	16	S	9/2/2004	5.571	G	8600	\$12,384,000.00	7
2248059	Q	MOTOR PKWY (PED)	FRANCIS LEWIS BLD		P	O- PED	2	C	10/28/2004	4.556	F	2756	\$3,968,640.00	8
2248080	Q	MOTOR PKWY (PED)	HOLLIS COURT BLVD		P	O- PED	3	C	11/18/2005	4.841	F	2670	\$3,844,800.00	8
2248100	Q	MOTOR PKWY (PED)	73RD AVE		P	O- PED	3	C	3/10/2005	4.750	F	2640	\$3,801,600.00	8
2267199	Q	FRANCIS LEWIS BLVD	PARK ROAD			O	1	S	4/11/2005	5.033	G	7085	\$10,202,400.00	8
2230209	Q	QUEENS BLVD	JACKIE ROBINSON PKWY	T		A	5	S	4/23/2004	4.857	F	90000	\$129,600,000.00	9
2247220	Q	80TH ROAD	LIRR MAIN LINE	L		O	3	S	7/28/2005	4.857	F	4100	\$5,904,000.00	9
2247230	Q	82ND AVE	LIRR MAIN LINE	L		O	3	S	7/29/2005	5.377	G	4100	\$5,904,000.00	9
2247240	Q	LEFFERTS BLVD	LIRR MAIN LINE	L		O	3	S	7/29/2005	5.917	G	5460	\$7,862,400.00	9
2247590	Q	FOREST PARK DRIVE	LIRR MONTAUK DIV	L	P	O	5	S	8/19/2005	5.509	G	6000	\$8,640,000.00	9
2247600	Q	PARK LANE SOUTH	LIRR MONTAUK DIV	AL		O	1	S	5/4/2004	6.983	V	3024	\$4,354,560.00	9
2247660	Q	FOREST PARK DRIVE	ABANDONED LIRR	L	P	O	6	S	3/31/2005	5.381	G	10000	\$14,400,000.00	9
2248019	Q	WOODHAVEN BLVD	ATLANTIC AVE			O	3	S	6/10/2004	4.472	F	19400	\$27,936,000.00	9
2248299	Q	INTER PKWY-UNION TPK	AUSTIN ST			O	1	S	2/11/2004	4.750	F	5900	\$8,496,000.00	9
2248340	Q	FOREST PARK DR	MYRTLE AVE		P	O	3	S	6/7/2005	4.984	F	5100	\$7,344,000.00	9
2231559	Q	CROSS BAY BLVD	BSHP			A	4	S	4/6/2004	5.278	G	23205	\$33,415,200.00	10
2231560	Q	S CONDUIT BLVD	BSOP			A	2	S	4/6/2004	5.690	G	15776	\$22,717,440.00	10
2231570	Q	COHANCY ST	BSOP			A	2	S	4/6/2004	4.636	F	6400	\$9,216,000.00	10
2231580	Q	AQUEDUCT RCTK RAMP	BSOP			A	4	S	6/24/2004	4.264	F	14000	\$20,160,000.00	10
2231590	Q	130TH ST	BSOP			A	2	S	2/20/2004	4.750	F	6800	\$9,792,000.00	10
2240650	Q	163RD ST PED BRDG	HAWTREE BASIN			WO- PED	13	C	4/21/2004	4.333	F	5000	\$7,200,000.00	10
2248020	Q	WHITELAW PED BRDG	CONDUIT AVE			O- PED	7	C	3/15/2004	4.718	F	5500	\$7,920,000.00	10
2248039	Q	CROSS BAY BLVD	CONDUIT BLVD			O	2	S	6/1/2005	6.444	V	16544	\$23,823,360.00	10
2248040	Q	LINDEN BLVD	CONDUIT AVE			O	1	S	4/15/2004	5.233	G	3352	\$4,826,880.00	10
2248250	Q	102ND ST	HAWTREE BASIN			WO	3	S	7/21/2005	6.456	V	4900	\$7,056,000.00	10
2231860	Q	W ALLEY ROAD	BCIP			A	2	S	8/18/2005	5.579	G	7200	\$10,368,000.00	11
2231870	Q	NORTHERN BLVD	BCIP			A	2	S	8/17/2004	6.431	V	9400	\$13,536,000.00	11
2231880	Q	CROCHERON PK PED	BCIP		P	A- PED	9	C	10/5/2004	4.750	F	2300	\$3,312,000.00	11
2231890	Q	28TH AVE PED BRDG	BCIP		P	A- PED	24	C	9/21/2004	5.150	G	7600	\$10,944,000.00	11
2240440	Q	NORTHERN BLVD	ALLEY CREEK			WO	2	S	6/2/2004	4.750	F	8300	\$11,952,000.00	11
2247130	Q	CORPORAL KENNEDY ST	LIRR N SIDE DIV	L		O	1	S	7/29/2005	6.235	V	3379	\$4,865,760.00	11
2247140	Q	BELL BLVD	LIRR N SIDE DIV	L		O	1	S	6/24/2005	5.814	G	4320	\$6,220,800.00	11
2247170	Q	DOUGLSTON PKWY	LIRR N SIDE DIV	L		O	3	S	5/7/2004	5.288	G	6300	\$9,072,000.00	11
2247680	Q	221ST ST	LIRR N SIDE DIV	L		O	3	S	6/24/2005	6.000	G	6050	\$8,712,000.00	11
2248060	Q	MOTOR PKWY (PED)	BELL BLVD		P	O- PED	2	C	10/29/2004	4.778	F	2648	\$3,813,120.00	11
2248070	Q	MOTOR PKWY (PED)	SPRINGFIELD BLVD		P	O- PED	3	C	12/8/2004	4.293	F	2940	\$4,233,600.00	11
2266129	Q	WINCHESTER BLVD S.B.	BCIP			A	1	S	4/6/2004	4.592	F	4400	\$6,336,000.00	11
2266130	Q	WINCHESTER BLVD N.B.	BCIP			A	1	S	4/16/2004	4.633	F	6400	\$9,216,000.00	11
7703720	Q	216TH ST PED BRDG	LIRR PORT WASH BRANCH	L		O- PED	5	C	8/11/2004	4.105	F	400	\$576,000.00	11
2248160	Q	ELLIOT AVE	QUEENS BLVD			O	2	S	7/7/2004	4.922	F	13785	\$19,850,400.00	12
2231610	Q	GUY R. BREWER BLVD	BSOP			A	2	S	4/22/2005	6.569	V	12342	\$17,772,480.00	13
2231620	Q	FARMERS BLVD	BSOP			A	2	S	5/10/2005	4.568	F	6400	\$9,216,000.00	13
2231630	Q	SPRINGFIELD BLVD	BSOP			A	2	S	4/15/2004	4.682	F	8500	\$12,240,000.00	13
2231640	Q	225TH ST	BSOP			A	2	S	5/6/2004	4.727	F	7000	\$10,080,000.00	13
2231650	Q	SUNRISE HWY W.B.	BLP E.B.			A	1	S	4/7/2004	4.623	F	4100	\$5,904,000.00	13
2231660	Q	SUNRISE HWY W.B.	BLP W.B.			A	2	S	4/7/2004	4.531	F	5350	\$7,704,000.00	13
2231670	Q	N CONDUIT AVE W.B.	BLP E.B.			A	1	S	1/8/2004	4.917	F	4000	\$5,760,000.00	13
2231680	Q	N CONDUIT AVE WB	BLP W.B.			A	2	S	1/8/2004	4.932	F	6500	\$9,360,000.00	13
2231690	Q	FRANCIS LEWIS BLVD	BLP E.B.			A	1	S	3/26/2004	5.333	G	6000	\$8,640,000.00	13
2231700	Q	FRANCIS LEWIS BLVD	BLP W.B.			A	1	S	3/26/2004	4.867	F	6000	\$8,640,000.00	13
2231710	Q	MERRICK BLVD	BLP N.B.			A	1	S	3/26/2004	4.533	F	6000	\$8,640,000.00	13
2231720	Q	MERRICK BLVD	BLP S.B.			A	1	S	3/26/2004	4.200	F	6000	\$8,640,000.00	13
2231730	Q	130TH AVE	BLP N.B.			A	1	S	1/7/2004	5.267	G	4400	\$6,336,000.00	13
2231740	Q	130TH AVE	BLP S.B.			A	1	S	1/7/2004	4.667	F	4400	\$6,336,000.00	13
2231750	Q	LINDEN BLVD	BCIP			A	2	S	2/10/2004	4.295	F	6700	\$9,648,000.00	13
2231760	Q	BCIP	DUTCH BROADWAY-115 AVE			A	1	S	3/12/2004	4.442	F	7300	\$10,512,000.00	13
2231770	Q	BELMONT PARK RAMP	BCIP		P	A	1	S	3/12/2004	4.781	F	3200	\$4,608,000.00	13
2231780	Q	HEMPSTEAD AVE	BCIP			A	2	S	4/22/2004	4.210	F	14200	\$20,448,000.00	13
2231790	Q	BELMONT PARK RAMP	BCIP		P	A	1	S	1/7/2004	4.656	F	3400	\$4,896,000.00	13
2231800	Q	SUPERIOR ROAD	BCIP			A	2	S	3/22/2004	4.364	F	7000	\$10,080,000.00	13
2231819	Q	JAMAICA AVE	BCIP			A	2	S	2/11/2004	4.773	F	11500	\$16,560,000.00	13
2231829	Q	BRADDOCK AVE	BCIP			A	2	S	2/11/2004	4.909	F	10600	\$15,264,000.00	13
2231840	Q	HILLSIDE AVE	BCIP			A	2	S	4/30/2004	4.079	F	9672	\$13,927,680.00	13
2231850	Q	UNION TPKE	BCIP			A	2	S	5/9/2005	4.318	F	13600	\$19,584,000.00	13
2248110	Q	MOTOR PKWY (PED)	ALLEY PK PED WALK		P	O- PED	1	C	12/8/2004	4.582	F	963	\$1,386,720.00	13
2248129	Q	UNION TPKE	CREEDMOORE HOSP RD			O	1	S	6/3/2005	4.867	F	3500	\$5,040,000.00	13
2266149	Q	HEMPSTEAD AVE	CROSS ISLAND PKWY			A	2	S	5/5/2004	4.172	F	9500	\$13,680,000.00	13

INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2266770	Q	CROSS ISLAND PKWY	LAURELTON PKWY			A	1	S	5/12/2004	5.250	G	9508	\$13,691,520.00	13
2268770	Q	SPRINGFIELD BLVD	EQUES. PATH (ABAND.)			O	1	S	4/27/2005	4.667	F	1470	\$2,116,800.00	13
2300130	Q	HOOK CREEK	HOOK CREEK BRIDGE			WO	3	S	7/21/2005	6.339	V	18302	\$26,354,880.00	13
Q00002	Q	BCIP	PATH OPPOSITE 88TH RD			A	1	C	7/7/2004	4.467	F	1200	\$1,728,000.00	13
2240507	Q	ROOSEVELT AVE	678I - VAN WYCK EXPWY			WA	27	S	12/8/2004	3.254	F	84424	\$121,570,560.00	81
2248130	Q	FLUSHING MEADW PK	WILLOW LK&76TH RD		P	WO- PED	4	C	4/20/2002	1.000	P	1891	\$2,723,040.00	81
2248140	Q	FLUSHING MEADW PK	STREAM N OF LIE		P	WO- PED	5	C	12/14/2004	4.741	F	4102	\$5,906,880.00	81
2248260	Q	FLUSHING MEADW PARK	MEADOW LAKE & 69TH RD		P	WO	5	S	4/28/2004	4.891	F	4200	\$6,048,000.00	81
2248379	Q	FLUSHING MW PK RD	AQUACADE LAKE		P	WO- PED	5	C	4/5/2005	4.702	F	6321	\$9,102,240.00	81
2230120	Q	MYRTLE AVE	JACKIE ROBINSON PKWY			A	1	S	3/5/2004	5.611	G	6400	\$9,216,000.00	82
2230179	Q	JACKIE ROBINSON PKWY	METROPOLITAN AVE			A	2	S	1/29/2004	5.321	G	8673	\$12,489,120.00	82
2230180	Q	UNION TPKE	JACKIE ROBINSON PKWY			A	1	S	2/25/2004	5.984	G	5359	\$7,716,960.00	82
2230190	Q	MARKWOOD ROAD	JACKIE ROBINSON PKWY			A	1	S	3/23/2004	5.389	G	4400	\$6,336,000.00	82
2248369	Q	ROCKAWAY BLVD	THURSTON BASIN			WO	2	S	7/19/2005	5.158	G	6000	\$8,640,000.00	83
2248230	Q	BEACH CHANNEL DR WB	BEACH CHANNEL DR EB			O	1	S	7/7/2005	4.400	F	3600	\$5,184,000.00	84
2267160	Q	ROOSEVELT AVE	FLUSHING MDW PK ROAD			O	4	S	9/13/2005	4.683	F	7280	\$10,483,200.00	84
2249040	R	TOMPKINS AVE	B&O RR (ABANDONED)			O	1	S	3/25/2004	6.250	V	5096	\$7,338,240.00	1
2249070	R	JOHN ST	B&O RAILROAD	O		O- PED	3	C	2/23/2004	6.806	V	5800	\$8,352,000.00	1
2249090	R	MORNINGSTAR ROAD	B&O RAILROAD	O		O	4	S	4/20/2005	5.169	G	7900	\$11,376,000.00	1
2249100	R	GRANITE AVE	B&O RAILROAD	O		O	4	S	4/23/2004	6.034	V	7300	\$10,512,000.00	1
2249110	R	LAKE AVE	B&O RAILROAD	O		O	3	S	4/12/2005	5.370	G	5900	\$8,496,000.00	1
2249120	R	SIMONSON AVE	B&O RAILROAD	O		O	3	S	4/22/2005	6.093	V	5819	\$8,379,360.00	1
2249130	R	VAN NAME AVE	B&O RAILROAD	O		O	3	S	4/13/2005	5.492	G	5474	\$7,882,560.00	1
2249140	R	VAN PELT AVE	B&O RAILROAD	O		O	3	S	4/15/2005	5.780	G	5000	\$7,200,000.00	1
2249160	R	DE HART AVE	B&O RAILROAD	O		O	4	S	4/19/2005	6.500	V	6700	\$9,648,000.00	1
2249170	R	UNION AVE	B&O RAILROAD	O		O	4	S	4/26/2005	5.426	G	6500	\$9,360,000.00	1
2249180	R	HARBOR ROAD	B&O RAILROAD	O		O	4	S	5/9/2005	6.356	V	6615	\$9,525,600.00	1
2249200	R	SOUTH AVE	B&O RAILROAD	O		O	3	S	10/3/2005	6.927	V	8322	\$11,983,680.00	1
2249510	R	TOMPKINS AVE	WILLOW AVE, SIRT	S		O	2	S	12/6/2004	5.475	G	5378	\$7,744,320.00	1
2249520	R	HANNAH ST	SIRT SOUTH SHORE	S		O	10	S	12/7/2005	4.893	F	10020	\$14,428,800.00	1
2249530	R	MINTHORNE ST PED BRDG	SIRT SOUTH SHORE	S		O- PED	23	C	9/9/2004	5.686	G	1600	\$2,304,000.00	1
2249710	R	WEST FOOTBRIDGE	CLOVE LAKE		P	WO- PED	2	C	12/2/2004	4.862	F	899	\$1,294,560.00	1
2249720	R	EAST FOOTBRIDGE	CLOVE LAKE		P	WO- PED	2	C	12/2/2004	4.621	F	899	\$1,294,560.00	1
2249730	R	BRIDGE OVER DAM	N.END CLOVE LAKE		P	WO- PED	1	C	11/17/2004	4.586	F	972	\$1,399,680.00	1
2249760	R	MARTLINGS AVE	RICHMOND LAKE DAM			WO	2	S	5/12/2005	4.867	F	7000	\$10,080,000.00	1
2249770	R	S OF BROOKS LAKE	STREAM IN PARK		P	WO- PED	3	C	11/23/2004	5.129	G	696	\$1,002,240.00	1
2249780	R	FOOTBRIDGE	BROOKS LAKE DAM		P	WO- PED	1	C	11/30/2004	4.947	F	800	\$1,152,000.00	1
2249790	R	FB S OF FOREST AV	STREAM IN PARK		P	WO- PED	3	C	11/30/2004	5.000	G	658	\$947,520.00	1
2249800	R	FOREST AVE	CLOVE LAKES PK STREAM		P	WO	1	S	9/2/2005	4.633	F	1600	\$2,304,000.00	1
2249840	R	TOMPKINS AVE	GREENFIELD AVE			O	1	S	3/18/2004	5.106	G	2562	\$3,689,280.00	1
2269730	R	PARKING EXIT RAMP	SIRT		F	O	10	S	11/30/2004	4.194	F	20727	\$29,846,880.00	1
2269740	R	BUS STATION NORTH	SIRT		F	O	12	S	11/16/2004	4.820	F	64605	\$93,031,200.00	1
2269750	R	BUS STATION SOUTH	SIRT		F	O	12	S	11/15/2004	4.520	F	154688	\$222,750,720.00	1
2269760	R	NORTH RAMP	SIRT		F	O	9	S	11/22/2005	4.347	F	17589	\$25,328,160.00	1
2269770	R	BUS STA ENTR RAMP	SIRT		F	O	19	S	12/1/2004	4.431	F	39333	\$56,639,520.00	1
2269780	R	PARKING ENTR RAMP	SIRT		F	O	3	S	11/1/2004	5.125	G	8589	\$12,368,160.00	1
2269790	R	BUS STATION EXIT RAMP	SIRT		F	O	7	S	11/20/2004	4.722	F	28721	\$41,358,240.00	1
2240350	R	RICHMOND AVE	RICHMOND CREEK			WO	3	S	6/16/2005	5.819	G	32589	\$46,928,160.00	2
2249400	R	BEACH AVE	SIRT SOUTH SHORE	S		O	2	S	10/24/2005	5.697	G	3700	\$5,328,000.00	2
2249410	R	ROSS AVE	SIRT SOUTH SHORE	S		O	2	S	10/26/2005	5.500	G	3800	\$5,472,000.00	2
2249420	R	ROSE AVE	SIRT SOUTH SHORE	S		O	2	S	11/4/2005	5.712	G	3800	\$5,472,000.00	2
2249430	R	NEW DORP LANE	SIRT SOUTH SHORE	S		O	2	S	10/21/2005	4.972	F	7600	\$10,944,000.00	2
2249440	R	BANCROFT AVE	SIRT SOUTH SHORE	S		O	3	S	10/21/2005	5.492	G	5900	\$8,496,000.00	2
2249450	R	FREMONT AVE PED BRDG	SIRT SOUTH SHORE	S		O- PED	3	C	6/12/2003	4.459	F	800	\$1,152,000.00	2
2249460	R	LINCOLN AVE	SIRT SOUTH SHORE	S		O	1	S	10/27/2005	5.483	G	4500	\$6,480,000.00	2
2249470	R	MIDLAND AVE	SIRT SOUTH SHORE	S		O	1	S	10/28/2005	5.603	G	3000	\$4,320,000.00	2
2249480	R	FINGERBOARD ROAD	SIRT SOUTH SHORE	S		O	2	S	10/31/2005	6.708	V	5100	\$7,344,000.00	2
2249490	R	CLOVE ROAD	SIRT SOUTH SHORE	S		O	3	S	12/7/2004	6.264	V	5270	\$7,588,800.00	2
2249860	R	SLATER BLVD	NEW CREEK			WO	1	S	4/14/2005	5.673	G	2037	\$2,933,280.00	2
2249870	R	TRAVIS AVE	MAIN CREEK			WO	1	S	8/3/2005	6.100	V	1537	\$2,213,280.00	2
2249880	R	CHELSEA ROAD	SAWMILL CREEK			WO	1	S	4/20/2005	6.833	V	2205	\$3,175,200.00	2
2249210	R	MAIN ST PED BRDG	SIRT SOUTH SHORE	S		O- PED	9	C	4/8/2004	4.710	F	400	\$576,000.00	3
2249230	R	TRACY AVE PED BRDG	SIRT SOUTH SHORE	S		O- PED	9	C	4/2/2004	2.744	P	200	\$288,000.00	3
2249240	R	ARTHUR KILL ROAD	SIRT SOUTH SHORE	S		O	1	S	12/2/2004	4.833	F	3700	\$5,328,000.00	3
2249250	R	BETHEL AV PED BRDG	SIRT SOUTH SHORE	S		O- PED	12	C	6/11/2003	3.980	F	500	\$720,000.00	3
2249269	R	PAGE AVE	SIRT SOUTH SHORE	S		O	4	S	10/7/2005	6.306	V	30420	\$43,804,800.00	3
2249270	R	RICHMMMD VALLY ROAD	SIRT SOUTH SHORE	S		O	4	S	10/5/2005	5.284	G	9300	\$13,392,000.00	3
2249280	R	COZZINS BLVD PED BRDG	SIRT SOUTH SHORE	S		O- PED	7	C	4/11/2005	4.564	F	200	\$288,000.00	3

INVENTORY SORTED BY BOROUGH AND COMMUNITY BOARD DISTRICT														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2249290	R	SEGUINE AVE	SIRT SOUTH SHORE	S		O	1	S	10/10/2005	6.016	V	2200	\$3,168,000.00	3
2249300	R	HUGUENOT AVE	SIRT SOUTH SHORE	S		O	2	S	10/4/2005	4.924	F	4900	\$7,056,000.00	3
2249320	R	ALBEE AVE	SIRT SOUTH SHORE	S		O	3	S	10/11/2005	4.623	F	6500	\$9,360,000.00	3
2249330	R	ANNADALE ROAD	SIRT SOUTH SHORE	S		O	2	S	10/14/2005	4.455	F	4500	\$6,480,000.00	3
2249350	R	NELSON AVE PED BRDG	SIRT SOUTH SHORE	S		O- PED	1	C	7/8/2004	4.725	F	300	\$432,000.00	3
2249360	R	GIFFORDS LANE	SIRT SOUTH SHORE	S		O	1	S	12/3/2004	5.844	G	3042	\$4,380,480.00	3
2249370	R	GREAVES AVE	SIRT SOUTH SHORE	S		O	1	S	10/17/2005	6.750	V	3950	\$5,688,000.00	3
2249380	R	GUYON AVE	SIRT SOUTH SHORE	S		O	3	S	10/18/2005	4.869	F	6900	\$9,936,000.00	3
2249390	R	CEDARVIEW AVE PED BRDG	SIRT SOUTH SHORE	S		O- PED	5	C	4/12/2005	4.474	F	600	\$864,000.00	3
2249580	R	BELFIELD AVE PED BRDG	SIRT SOUTH SHORE	S		O- PED	5	C	4/5/2005	4.490	F	400	\$576,000.00	3
2249810	R	HYLAN BLVD	LEMON CREEK			WO	1	S	3/17/2004	6.422	V	11400	\$16,416,000.00	3
2249820	R	ARTHUR KILL ROAD	ARTHUR KILL STREAM			WO	1	S	4/22/2005	4.122	F	2000	\$2,880,000.00	3
2268920	R	AMBOY ROAD	LEMON CREEK			WO	1	S	3/17/2004	6.667	V	1310	\$1,886,400.00	3
790		BRIDGES				4531			SPANS			14535728	\$20,931,448,320.00	

INVENTORY SORTED BY FEATURE CARRIED														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2248250	Q	102ND ST	HAWTREE BASIN			WO	3	S	7/21/2005	6.456	V	4900	\$7,056,000.00	10
2245209	M	11TH AVE	AMTRAK 30 ST BRANCH	A		O	2	S	12/2/2004	4.647	F	15400	\$22,176,000.00	4
2243630	K	11TH AVE	LIRR & SEA BEACH	LT		O	5	S	10/26/2004	6.603	V	9700	\$13,968,000.00	10
2245010	M	11TH AVE VIADUCT	LIRR WEST SIDE YARD	AL		O	39	S	11/22/2004	3.861	F	157500	\$226,800,000.00	4
2246990	M	129 - 130 ST PED BRDG	RAMP OFF 3RD AVE			O-PED	5	C	7/19/2004	4.238	F	500	\$720,000.00	11
2231730	Q	130TH AVE	BLP N.B.			A	1	S	1/7/2004	5.267	G	4400	\$6,336,000.00	13
2231740	Q	130TH AVE	BLP S.B.			A	1	S	1/7/2004	4.667	F	4400	\$6,336,000.00	13
2231590	Q	130TH ST	BSOP			A	2	S	2/20/2004	4.750	F	6800	\$9,792,000.00	10
2243640	K	13TH AVE	LIRR & SEA BEACH	LT		O	5	S	8/29/2005	4.694	F	16000	\$23,040,000.00	10
2240089	B M	145TH ST BRIDGE	HARLEM RIVER			WMO	8	S	10/21/2005	3.097	F	56700	\$81,648,000.00	10
2231980	Q	147TH ST	BCIP			A	2	S	1/27/2004	4.773	F	6300	\$9,072,000.00	7
2247070	Q	147TH ST	LIRR N SIDE DIV	L		O	1	S	6/21/2005	5.627	G	2800	\$4,032,000.00	7
2247090	Q	149TH PLACE	LIRR N SIDE DIV	L		O	2	S	6/22/2005	5.316	G	4300	\$6,192,000.00	7
2231960	Q	149TH ST	BCIP			A	2	S	1/27/2004	4.977	F	6210	\$8,942,400.00	7
2247080	Q	149TH ST	LIRR N SIDE DIV	L		O	1	S	6/21/2005	4.776	F	4100	\$5,904,000.00	7
2231970	Q	14TH AVE	BCIP			A	2	S	1/27/2004	4.750	F	8100	\$11,664,000.00	7
2243650	K	14TH AVE	LIRR BAY RIDGE	N		O	1	S	10/12/2004	6.967	V	4720	\$6,796,800.00	11
2231950	Q	150TH ST	BCIP			A	2	S	1/14/2004	4.773	F	5900	\$8,496,000.00	7
2247100	Q	150TH ST	LIRR N SIDE DIV	L		O	2	S	6/23/2005	6.588	V	7830	\$11,275,200.00	7
2243670	K	15TH AVE	BMT SEA BEACH	T		O	6	S	9/29/2005	6.568	V	17300	\$24,912,000.00	11
2243340	K	15TH AVE	LIRR BAY RIDGE	N		O	1	S	10/14/2004	4.872	F	3614	\$5,204,160.00	11
2231920	Q	160TH ST	BCIP			A	2	S	4/11/2005	5.861	G	5550	\$7,992,000.00	7
2240650	Q	163RD ST PED BRDG	HAWTREE BASIN			WO-PED	13	C	4/21/2004	4.333	F	5000	\$7,200,000.00	10
7705510	Q	167TH ST PED BRDG	LIRR PORT WASH BRANCH			O-PED	3	C	8/10/2004	4.164	F	600	\$864,000.00	7
2243680	K	16TH AVE	BMT SEA BEACH	T		O	3	S	9/9/2004	5.444	G	6816	\$9,815,040.00	11
2243360	K	16TH AVE	LIRR BAY RIDGE	N		O	1	S	12/8/2004	5.733	G	4345	\$6,256,800.00	11
206672A	B	174TH ST-NTH PED BRDG	89SI - SHERIDAN EXPWY			A-PED	4	C	12/28/2005	4.958	F	1800	\$2,592,000.00	9
206672B	B	174TH ST-STH PED BRDG	89SI - SHERIDAN EXPWY			A-PED	4	C	2/9/2004	5.056	G	1900	\$2,736,000.00	9
2243690	K	17TH AVE	BMT SEA BEACH	T		O	4	S	9/13/2004	3.711	F	8500	\$12,240,000.00	11
2243370	K	17TH AVE	LIRR BAY RIDGE	N		O	1	S	12/1/2004	4.784	F	3406	\$4,904,640.00	12
2231300	K	17TH AVE PED BRDG	BSHP		P	A-PED	1	C	2/5/2004	3.846	F	2100	\$3,024,000.00	11
2243700	K	18TH AVE	BMT SEA BEACH	T		O	4	S	8/31/2005	6.842	V	8700	\$12,528,000.00	11
2243380	K	18TH AVE	LIRR BAY RIDGE	N		O	1	S	12/2/2004	5.016	G	6006	\$8,648,640.00	12
2243710	K	19TH AVE	BMT SEA BEACH	T		O	4	S	9/1/2004	4.395	F	4800	\$6,912,000.00	11
2241259	B	204TH ST PED BRDG	METRO NORTH RR HAR	M	P	O-PED	1	C	7/26/2004	4.121	F	4700	\$6,768,000.00	27
2243720	K	20TH AVE	BMT SEA BEACH	T		O	6	S	8/19/2004	4.744	F	12500	\$18,000,000.00	11
7703720	Q	216TH ST PED BRDG	LIRR PORT WASH BRANCH			O-PED	5	C	8/11/2004	4.105	F	400	\$576,000.00	11
2243820	K	21ST AVE	BMT SEA BEACH	T		O	4	S	8/26/2004	4.184	F	21400	\$30,816,000.00	11
2247270	Q	21ST STREET	CONRAIL	C		O	6	S	8/10/2005	5.528	G	17590	\$25,329,600.00	2
2247680	Q	221ST ST	LIRR N SIDE DIV	L		O	3	S	6/24/2005	6.000	G	6050	\$8,712,000.00	11
2231640	Q	225TH ST	BSOP			A	2	S	5/6/2004	4.727	F	7000	\$10,080,000.00	13
2229450	B	232ND ST	HHP			A	2	S	10/3/2005	4.921	F	4900	\$7,056,000.00	8
2229460	B	236TH ST PED BRDG	HHP			A-PED	3	C	8/24/2004	5.106	G	2500	\$3,600,000.00	8
2229470	B	239TH ST	HHP			A	2	S	5/13/2005	4.263	F	6100	\$8,784,000.00	8
2229490	B	246TH ST	HHP			A	2	S	4/21/2005	4.842	F	5600	\$8,064,000.00	8
2229500	B	252ND ST	HHP			A	2	S	2/25/2004	4.184	F	4500	\$6,480,000.00	8
2232070	M	25TH ST PED BRDG	FDR DRIVE			A-PED	4	C	3/14/2004	4.594	F	1700	\$2,448,000.00	6
224004J	M	25X	NYC GARAGE			OE	14	S	7/30/2004	4.537	F	22058	\$31,763,520.00	6
2230679	Q	278I (B.Q.E.)	34TH AVE			A	1	S	5/20/2005	6.898	V	9500	\$13,680,000.00	2
2230669	Q	278I (B.Q.E.)	35TH AVE			A	1	S	9/8/2005	6.831	V	13135	\$18,914,400.00	2
2230440	K	278I (B.Q.E.)	ADAMS ST N.B.			A	1	S	2/5/2004	5.200	G	2700	\$3,888,000.00	2
2230450	K	278I (B.Q.E.)	ADAMS ST S.B.			A	1	S	2/6/2004	4.933	F	2500	\$3,600,000.00	2
2230470	K	278I (B.Q.E.)	JAY ST			A	1	S	4/14/2004	4.900	F	5100	\$7,344,000.00	2
2230857	K	278I (B.Q.E.)	JORALEMON ST			A	1	S	5/4/2004	5.030	G	2100	\$3,024,000.00	2
2230858	K	278I (B.Q.E.)	JORALEMON ST / BQE WB			A	2	S	5/4/2004	4.177	F	5900	\$8,496,000.00	2
2230510	K	278I (B.Q.E.)	NASSAU ST			A	6	S	4/7/2004	4.444	F	51200	\$73,728,000.00	2
2230680	Q	278I (B.Q.E.)	NORTHERN BLVD			A	1	S	3/24/2004	6.683	V	27011	\$38,895,840.00	2
2230460	K	278I (B.Q.E.)	PEARL ST			A	1	S	2/27/2004	5.333	G	4500	\$6,480,000.00	2
2230430	K	278I (B.Q.E.)	PROSPECT ST			A	1	S	2/2/2004	5.267	G	1100	\$1,584,000.00	2
2230480	K	278I (B.Q.E.)	PROSPECT ST			A	1	S	3/11/2004	5.241	G	8400	\$12,096,000.00	2
2230500	K	278I (B.Q.E.)	RAMP TO BQE EB			A	1	S	3/1/2004	5.567	G	1300	\$1,872,000.00	2
2230490	K	278I (B.Q.E.)	SANDS ST			A	1	S	3/15/2004	5.093	G	12600	\$18,144,000.00	2
2230410	K	278I (B.Q.E.)	WASHINGTON ST			A	1	S	4/14/2004	4.563	F	2500	\$3,600,000.00	2
2230420	K	278I (B.Q.E.)	WASHINGTON ST			A	1	S	4/14/2004	4.781	F	2500	\$3,600,000.00	2
2268498	K	278I E.B. (B.Q.E.)	278I W.B. (B.Q.E.)			A	69	S	8/29/2005	4.035	F	120734	\$173,856,960.00	2
2268508	K	278I E.B. (B.Q.E.)	278I W.B. (B.Q.E.)			A	11	S	5/4/2005	4.034	F	17956	\$25,856,640.00	2
2268518	K	278I E.B. (B.Q.E.)	278I W.B. (B.Q.E.)			A	5	S	10/25/2005	4.500	F	8375	\$12,060,000.00	2
2230888	K	278I E.B. (B.Q.E.)	CADMAN PLAZA / 278I WB			A	2	S	5/11/2004	5.053	G	4500	\$6,480,000.00	2
2230710	Q	278I S.B. (B.Q.E.)	32ND AVE			A	1	S	9/6/2005	6.695	V	5240	\$7,545,600.00	1

INVENTORY SORTED BY FEATURE CARRIED														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2230887	K	2781 W.B. (B.Q.E.)	CADMAN PLAZA			A	2	S	5/11/2004	4.309	F	4500	\$6,480,000.00	2
2268497	K	2781 W.B. (B.Q.E.)	FURMAN ST			A	45	S	6/15/2005	4.214	F	78022	\$112,351,680.00	2
2268517	K	2781 W.B. (B.Q.E.)	FURMAN ST			A	7	S	6/28/2005	4.059	F	10988	\$15,822,720.00	2
2268507	K	2781 W.B. (B.Q.E.)	YORK ST			A	6	S	5/12/2005	4.167	F	9380	\$13,507,200.00	2
2231330	K	27TH AVE PED BRDG	BSHP		P	A-PED	1	C	7/1/2003	4.000	F	2100	\$3,024,000.00	13
2231890	Q	28TH AVE PED BRDG	BCIP		P	A-PED	24	C	9/21/2004	5.150	G	7600	\$10,944,000.00	11
2243310	K	2ND AVE	LIRR BAY RIDGE	N		O	2	S	11/14/2003	3.925	F	17751	\$25,561,440.00	10
2230730	Q	31ST AVE	2781 (B.Q.E.)			A	1	S	8/15/2005	6.517	V	5800	\$8,352,000.00	1
2230657	Q	31ST ST	2781 (B.Q.E.)			A	2	S	7/16/2004	4.917	F	9500	\$13,680,000.00	1
2230640	Q	32ND ST	2781 (B.Q.E.)			A	2	S	5/6/2005	4.986	F	8100	\$11,664,000.00	1
2230630	Q	35TH ST	2781 (B.Q.E.)			A	4	S	7/16/2004	4.819	F	9000	\$12,960,000.00	1
2247370	Q	37TH AVE	CONRAIL HELLGATE	C		O	1	S	8/4/2005	4.818	F	5300	\$7,632,000.00	2
2230620	Q	37TH ST	2781 (B.Q.E.)			A	2	S	4/8/2004	4.667	F	5300	\$7,632,000.00	1
2247640	Q	39 ST (SOUTH)	AMTRAK & LIRR YARD	AL		O	9	S	12/15/2005	6.125	V	34100	\$49,104,000.00	2
2247330	Q	39TH ST (NORTH)	SUNNYSIDE YARDS	AL		O	14	S	12/12/2005	6.556	V	48200	\$69,408,000.00	2
2243320	K	3RD AVE	LIRR BAY RIDGE	N		O	4	S	6/22/2005	5.542	G	17230	\$24,811,200.00	10
2244160	K	3RD AVE	SHORE RD DRIVE			O	1	S	5/5/2005	6.727	V	4360	\$6,278,400.00	10
2230570	Q	41ST AVE	2781 (B.Q.E.)			A	3	S	2/13/2004	4.931	F	8800	\$12,672,000.00	2
2247390	Q	41ST AVE	CONRAIL HELLGATE	C		O	2	S	8/8/2005	4.942	F	4400	\$6,336,000.00	2
2247410	Q	43RD AVE	CONRAIL	C		O	1	S	8/22/2005	5.033	G	4800	\$6,912,000.00	2
2247420	Q	44TH AVE	CONRAIL	C		O	1	S	8/22/2005	5.033	G	5100	\$7,344,000.00	2
2230840	Q	44TH ST	GCP			A	2	S	4/16/2004	4.847	F	5000	\$7,200,000.00	1
2247430	Q	45TH AVE	CONRAIL	C		O	1	S	8/23/2005	5.510	G	2400	\$3,456,000.00	2
2230820	Q	47TH ST	GCP			A	2	S	4/20/2004	4.944	F	5700	\$8,208,000.00	1
2066002	Q	495I (2066000)	WOODHAVEN BLVD			A	2	S	7/14/2005	6.197	V	25200	\$36,288,000.00	6
2247290	Q	49TH AVE	LIRR,AMT,CON NE	L		O	5	S	9/1/2004	4.292	F	20400	\$29,376,000.00	2
2230800	Q	49TH ST	BQE WEST LEG			A	2	S	3/22/2004	5.333	G	4900	\$7,056,000.00	1
2230890	Q	49TH ST	GCP			A	2	S	6/11/2004	4.778	F	6350	\$9,144,000.00	1
2231270	K	4TH AVE	BSHP			A	2	S	3/24/2004	4.842	F	6100	\$8,784,000.00	10
2243330	K	4TH AVE	LIRR BAY RIDGE	NT		O	4	S	8/12/2005	5.819	G	13668	\$19,681,920.00	10
2243839	K	4TH AVE	NYCTA BMT TRACKS	T		O	1	S	9/21/2005	6.600	V	5160	\$7,430,400.00	7
2243400	K	50TH ST	LIRR BAY RIDGE	N		O	2	S	6/17/2005	4.701	F	7100	\$10,224,000.00	12
1247280	Q	51 AVE PED BR.2247280	LIRR MAIN LINE	L		O-PED	5	C	8/4/2004	3.091	F	700	\$1,008,000.00	2
2243390	K	52ND ST	LIRR BAY RIDGE	N		O	1	S	12/6/2004	6.467	V	3293	\$4,741,920.00	12
2247190	Q	55TH AVE PED BRDG	LIRR MAIN LINE	L		O-PED	3	C	8/3/2004	4.491	F	13000	\$18,720,000.00	4
2247450	Q	57TH AVE	CONRAIL	C		O	1	S	8/24/2005	6.195	V	2248	\$3,237,120.00	5
2066100	K	5TH AVE	27 X PROSPECT EXPWY			A	1	S	4/2/2004	5.208	G	8800	\$12,672,000.00	7
2244480	K	5TH AVE	GREENWOOD CEMETERY			O	1	S	7/29/2005	5.000	G	3600	\$5,184,000.00	7
2243580	K	5TH AVE	LIRR & SEA BEACH	LT		O	4	S	10/29/2004	4.353	F	12500	\$18,000,000.00	10
2247650	Q	60TH RD PED BRDG	LIRR MAIN LINE	L		O-PED	3	C	8/2/2004	4.934	F	2293	\$3,301,920.00	5
2243350	K	60TH ST	LIRR BAY RIDGE	N		O	1	S	6/20/2005	6.383	V	3900	\$5,616,000.00	11
2247540	Q	60TH ST	LIRR MONTAUK DIV	L		O	2	S	7/18/2005	5.264	G	5340	\$7,689,600.00	5
2230520	Q	65TH PLACE	2781 (B.Q.E.)			A	2	S	2/4/2004	4.338	F	11600	\$16,704,000.00	2
2247160	Q	65TH PLACE	LIRR N SHR DIV	L		O	3	S	7/26/2005	6.471	V	8381	\$12,068,640.00	2
2243730	K	65TH ST	BMT SEA BEACH	T		O	4	S	8/13/2004	5.947	G	12000	\$17,280,000.00	11
2247150	Q	65TH ST	LIRR N SIDE DIV	L		O	3	S	7/27/2005	6.375	V	6344	\$9,135,360.00	2
1247200	Q	67 AVE PED BR 2247200	LIRR MAIN LINE	L		O-PED	3	C	8/5/2004	4.414	F	1300	\$1,872,000.00	6
2266160	Q	6781 SB TO BCIP EB	ACCESS RD FROM 6781			A	1	S	4/28/2004	4.438	F	2300	\$3,312,000.00	7
2230550	Q	69TH ST	2781 (B.Q.E.)			A	2	S	3/11/2004	4.842	F	12600	\$18,144,000.00	2
2247490	Q	69TH ST JUNPR BLVD	CONRAIL	C		O	1	S	6/30/2004	5.455	G	6175	\$8,892,000.00	5
2065950	Q	69TH STREET	495I (L.I.E.)			A	2	S	5/24/2005	5.417	G	10336	\$14,883,840.00	5
2243590	K	6TH AVE	LIRR & SEA BEACH	LT		O	2	S	8/12/2005	6.528	V	14200	\$20,448,000.00	10
2243280	K	6TH AVE	LIRR ATLANTIC AVE	L		O	9	S	11/21/2004	5.528	G	12276	\$17,677,440.00	8
2230560	Q	70TH ST	2781 (B.Q.E.)			A	2	S	3/11/2004	5.125	G	8500	\$12,240,000.00	2
2248300	Q	71ST AVE	COOPER AVE			O	1	S	6/8/2005	4.458	F	2800	\$4,032,000.00	5
2246150	M	72ND ST CROSS DR	NEAR CONCERT GRNDS		P	O	3	S	6/2/2004	4.941	F	7300	\$10,512,000.00	64
2246140	M	72ND ST ENT TO W DR	BRIDLE PATH		P	O	1	S	2/11/2004	4.867	F	3600	\$5,184,000.00	64
2246460	M	77 ST ENTR TO W DR	PED PATH OPP 77TH ST		P	O	2	S	2/13/2004	4.789	F	5800	\$8,352,000.00	64
2246450	M	79 ST ENTR TO E DR	PED PATH OPP 77TH ST		P	O-PED	1	C	2/27/2002	5.190	G	5000	\$7,200,000.00	64
2267717	M	79 ST PED PLAZA	79 ST BT BASIN GAR		P	A	10	S	4/18/2005	4.593	F	27400	\$39,456,000.00	7
226771B	M	79 ST RAMP TO GAR	79 ST BT BASIN GAR		P	AR	21	S	5/24/2005	4.452	F	7114	\$10,244,160.00	7
226771A	M	79 ST RAMP TO HHP	79 ST BT BASIN GAR		P	AR	4	S	5/16/2005	4.242	F	3131	\$4,508,640.00	7
2267718	M	79 ST TRAFFIC CIRC	79 ST PED PLAZA		P	A	34	S	6/17/2005	3.934	F	24130	\$34,747,200.00	7
2243600	K	7TH AVE	LIRR & SEA BEACH	LT		O	7	S	10/29/2004	5.556	G	18913	\$27,234,720.00	10
2243920	K	7TH AVE	NYCTA BMT YARD	T		O	2	S	10/21/2004	6.507	V	4700	\$6,768,000.00	7
2247220	Q	80TH ROAD	LIRR MAIN LINE	L		O	3	S	7/28/2005	4.857	F	4100	\$5,904,000.00	9

INVENTORY SORTED BY FEATURE CARRIED														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2247570	Q	80TH ST	71ST TO 77TH AVE	L		O	5	S	5/3/2004	5.102	G	11725	\$16,884,000.00	5
2231250	K	81ST ST PED BR	BSHP		P	A-PED	5	C	10/1/2004	4.483	F	3100	\$4,464,000.00	10
2247230	Q	82ND AVE	LIRR MAIN LINE	L		O	3	S	7/29/2005	5.377	G	4100	\$5,904,000.00	9
2243570	K	86TH ST	LIRR & SEA BEACH	LT		O	1	S	8/9/2004	6.172	V	3840	\$5,529,600.00	13
2243610	K	8TH AVE	LIRR & SEA BEACH	LT		O	2	S	8/12/2005	6.319	V	10834	\$15,600,960.00	10
1247010	Q	91 PLACE (2247010)	LIRR PT WASH BRANCH	L		O	1	S	9/27/2005	6.833	V	2760	\$3,974,400.00	4
2231260	K	92ND ST PED BR	BSHP		P	A-PED	6	C	9/7/2004	4.016	F	3000	\$4,320,000.00	10
2247020	Q	94TH ST PED BRDG	LIRR N SIDE DIV	L		O-PED	5	C	8/9/2004	4.333	F	500	\$720,000.00	4
2243840	K	9TH AVE	NYCTA BMT YARD	T		O	5	S	9/15/2005	6.458	V	12440	\$17,913,600.00	12
2243940	K	9TH AVE	NYCTA IND SBWY	T		O	5	S	9/15/2005	4.737	F	11900	\$17,136,000.00	12
2246490	M	A.C. POWELL BLVD N.B.	A.C. POWELL BLVD			O	1	S	2/24/2004	4.061	F	5600	\$8,064,000.00	10
2249320	R	ALBEE AVE	SIRT SOUTH SHORE	S		O	3	S	10/11/2005	4.623	F	6500	\$9,360,000.00	3
2268920	R	AMBOY ROAD	LEMON CREEK			WO	1	S	3/17/2004	6.667	V	1310	\$1,886,400.00	3
2247530	Q	ANDREWS AVE	LIRR MONTAUK DIV	L		O	4	S	6/20/2005	7.000	V	3200	\$4,608,000.00	5
2249330	R	ANNADALE ROAD	SIRT SOUTH SHORE	S		O	2	S	10/14/2005	4.455	F	4500	\$6,480,000.00	3
2231580	Q	AQUEDUCT RCTK RAMP	BSOP			A	4	S	6/24/2004	4.264	F	14000	\$20,160,000.00	10
2249820	R	ARTHUR KILL ROAD	ARTHUR KILL STREAM			WO	1	S	4/22/2005	4.122	F	2000	\$2,880,000.00	3
2249240	R	ARTHUR KILL ROAD	SIRT SOUTH SHORE	S		O	1	S	12/2/2004	4.833	F	3700	\$5,328,000.00	3
2230810	Q	ASTORIA BLVD E.B.	BQE WEST LEG			A	4	S	3/22/2004	4.221	F	8200	\$11,808,000.00	1
2243569	K	ATLANTIC AVE	LIRR ATLANTIC AVE	L		O	75	S	7/14/2004	3.845	F	135100	\$194,544,000.00	16
2244170	K	ATLNTC AV SVC RD E.B.	EAST NEW YORK AVE			O	2	S	6/30/2005	5.632	G	5520	\$7,948,800.00	5
2244180	K	ATLNTC AV SVC RD W.B.	EAST NEW YORK AVE			O	2	S	6/29/2005	5.456	G	5600	\$8,064,000.00	16
2243530	K	AVENUE H	LIRR BAY RIDGE	N		O	2	S	6/14/2005	6.279	V	35100	\$50,544,000.00	18
2243750	K	AVENUE O	BMT SEA BEACH	T		O	1	S	9/2/2005	5.863	G	4658	\$6,707,520.00	11
2243760	K	AVENUE P	BMT SEA BEACH	T		O	1	S	9/16/2005	6.605	V	5544	\$7,983,360.00	11
2243790	K	AVENUE S	BMT SEA BEACH	T		O	1	S	9/19/2005	6.133	V	5360	\$7,718,400.00	15
2243800	K	AVENUE T	BMT SEA BEACH	T		O	1	S	9/20/2005	6.033	V	5360	\$7,718,400.00	11
2243810	K	AVENUE U	BMT SEA BEACH	T		O	1	S	8/27/2004	6.137	V	5880	\$8,467,200.00	15
2249440	R	BANCROFT AVE	SIRT SOUTH SHORE	S		O	3	S	10/21/2005	5.492	G	5900	\$8,496,000.00	2
2241180	B	BARRETTO ST	AMTRAK	A		O	1	S	7/26/2004	6.219	V	5313	\$7,650,720.00	2
2232000	M	BATTERY PLACE	FDR DRIVE			AT	2	C	7/19/2004	4.500	F	75000	\$108,000,000.00	1
2231290	K	BAY 8TH ST	BSHP			A	1	S	5/2/2005	5.984	G	4950	\$7,128,000.00	11
2243740	K	BAY PKWY	BMT SEA BEACH	T		O	4	S	8/11/2004	4.974	F	16800	\$24,192,000.00	11
2231760	Q	BCIP	DUTCH BROADWAY-115 AVE			A	1	S	3/12/2004	4.442	F	7300	\$10,512,000.00	13
2231900	Q	BCIP	FORT TOTTEN ENTRANCE			A	1	S	6/15/2004	4.672	F	4900	\$7,056,000.00	7
Q00002	Q	BCIP	PATH OPPOSITE 88TH RD			A	1	C	7/7/2004	4.467	F	1200	\$1,728,000.00	13
2076109	B	BE NB SERVICE RD	HUTCHINSON RVR PKWY			A	2	S	11/4/2005	4.632	F	7800	\$11,232,000.00	10
2076129	B	BE SB SERVICE RD	HUTCHINSON RVR PKWY			A	2	S	2/19/2004	5.105	G	7100	\$10,224,000.00	10
2249400	R	BEACH AVE	SIRT SOUTH SHORE	S		O	2	S	10/24/2005	5.697	G	3700	\$5,328,000.00	2
2248230	Q	BEACH CHANNEL DR WB	BEACH CHANNEL DR EB			O	1	S	7/7/2005	4.400	F	3600	\$5,184,000.00	84
2243490	K	BEDFORD AVE	LIRR BAY RIDGE	N		O	6	S	11/11/2004	4.639	F	12000	\$17,280,000.00	14
2241840	B	BEDFORD PARK BLVD	METRO NORTH RR HAR	M		O	1	S	4/16/2004	4.578	F	6400	\$9,216,000.00	27
2241930	B	BEDFORD PARK BLVD	NYCTA IND YARDS	T		O	4	S	9/13/2004	6.500	V	46300	\$66,672,000.00	7
2249580	R	BELFIELD AVE PED BRDG	SIRT SOUTH SHORE	S		O-PED	5	C	4/5/2005	4.490	F	400	\$576,000.00	3
2247140	Q	BELL BLVD	LIRR N SIDE DIV	L		O	1	S	6/24/2005	5.814	G	4320	\$6,220,800.00	11
2231770	Q	BELMONT PARK RAMP	BCIP		P	A	1	S	3/12/2004	4.781	F	3200	\$4,608,000.00	13
2231790	Q	BELMONT PARK RAMP	BCIP		P	A	1	S	1/7/2004	4.656	F	3400	\$4,896,000.00	13
2249250	R	BETHEL AV PED BRDG	SIRT SOUTH SHORE	S		O-PED	12	C	6/11/2003	3.980	F	500	\$720,000.00	3
2243100	K	BEVERLY ROAD	BMT SUBWAY, BRIGHTON	T		O	3	S	7/29/2005	3.877	F	2700	\$3,888,000.00	14
2243900	K	BLAKE AVE	LIRR BAY RIDGE LINE	N		O	3	S	11/5/2004	5.309	G	5020	\$7,228,800.00	16
2240410	Q	BORDEN AVE	DUTCH KILLS			WMO	2	S	6/8/2005	3.833	F	8400	\$12,096,000.00	2
2229579	B	BOSTON POST ROAD	HUTCHINSON RIVER			WO	14	S	6/24/2005	4.583	F	95700	\$137,808,000.00	12
2242110	B	BOSTON ROAD	BRONX RIVER			WO	1	S	5/17/2004	4.273	F	6200	\$8,928,000.00	27
2242100	B	BOTANICAL GARDEN ROAD	TWIN LAKES		P	WO-PED	1	S	5/19/2004	4.967	F	2200	\$3,168,000.00	27
2247050	Q	BOWNE AVE	LIRR N SIDE DIV	L		O	1	S	5/5/2004	5.863	G	4974	\$7,162,560.00	7
2230780	Q	BQE EAST LEG	30TH AVE			A	1	S	5/25/2005	7.000	V	7071	\$10,182,240.00	3
2230720	Q	BQE EAST LEG	BQE NB WEST LEG			A	3	S	4/26/2005	6.515	V	20896	\$30,090,240.00	1
2230700	Q	BQE EAST LEG	TO BQE WEST LEG			A	8	S	11/8/2004	6.915	V	31600	\$45,504,000.00	1
2230690	Q	BQE EAST LEG NB	32ND AVE			A	1	S	6/3/2004	7.000	V	4080	\$5,875,200.00	1
2230750	Q	BQE EAST LEG SB	31ST AVE			A	1	S	9/9/2005	6.407	V	2900	\$4,176,000.00	1
2230770	Q	BQE WEST LEG	30TH AVE			A	1	S	5/24/2005	7.000	V	6199	\$8,926,560.00	1
2230830	Q	BQE WEST LEG	GCP			A	2	S	7/14/2004	4.861	F	7600	\$10,944,000.00	1
2230760	Q	BQE WEST LEG NB	31ST AVE			A	1	S	10/5/2004	7.000	V	4020	\$5,788,800.00	1
2230740	Q	BQE WEST LEG SB	31ST AVE			A	1	S	9/9/2005	6.545	V	5246	\$7,554,240.00	1
2231829	Q	BRADDOCK AVE	BCIP			A	2	S	2/11/2004	4.909	F	10600	\$15,264,000.00	13
2249730	R	BRIDGE OVER DAM	N.END CLOVE LAKE		P	WO-PED	1	C	11/17/2004	4.586	F	972	\$1,399,680.00	1
2230590	Q	BROADWAY	2781 (B.Q.E.)			O	2	S	4/27/2004	3.842	F	16000	\$23,040,000.00	2
2240137	B M	BROADWAY BRIDGE	HARLEM RIVER	T		WO	3	S	10/13/2003	3.986	F	46848	\$67,461,120.00	12
2242072	B	BRONX BLVD N.B.	BRONX RIVER			WO	1	S	5/5/2004	5.033	G	1800	\$2,592,000.00	12
2242082	B	BRONX BLVD N.B.	BRONX RIVER			WO	1	S	5/6/2004	4.467	F	2800	\$4,032,000.00	12

INVENTORY SORTED BY FEATURE CARRIED														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2242071	B	BRONX BLVD S.B.	BRONX RIVER			WO	1	S	5/5/2004	4.700	F	1800	\$2,592,000.00	12
2242081	B	BRONX BLVD S.B.	BRONX RIVER			WO	1	S	5/6/2004	4.467	F	2800	\$4,032,000.00	12
2229560	B	BRONX PELHAM PKWY	AMTRAK,METRO NORTH	MA		A	3	S	11/16/2004	4.778	F	24591	\$35,411,040.00	11
2242010	B	BRONX PELHAM PKWY	BRONX RIVER			WA	1	S	5/18/2004	4.931	F	9200	\$13,248,000.00	27
2075849	B	BRONX PELHAM PKWY	HUTCHINSON RVR PKWY			A	2	S	9/20/2004	4.184	F	17600	\$25,344,000.00	10
2065629	B	BRONX RVR PKWY	BOSTON RD BX ZOO			A	1	S	7/29/2005	5.000	G	6300	\$9,072,000.00	27
2243520	K	BROOKLYN AVE	LIRR BAY RIDGE	N		O	3	S	6/10/2005	6.236	V	4500	\$6,480,000.00	18
2267860	K	BROOKLYN BR APPROACH	SANDS STREET			O	1	S	6/17/2004	4.732	F	6490	\$9,345,600.00	2
2240019	K M	BROOKLYN BRIDGE	278I (B.Q.E.)			WEO	75	S	11/2/2004	3.153	F	503788	\$725,454,720.00	3
2268350	K	BROOKLYN PROMENADE	278I N.B. (B.Q.E.)		P	A-PED	35	C	4/17/2003	4.500	F	46184	\$66,504,960.00	6
2241099	B	BRUCKNER BLVD	CONRAIL PT MORRIS	C		O	1	S	11/5/2004	6.734	V	6700	\$9,648,000.00	1
2266540	B	BRUCKNER BLVD OVRPAS	133RD - 135TH ST			A	2	S	5/10/2005	4.565	F	32900	\$47,376,000.00	1
1066510	B	BRUCKNER EXP.(2066510)	WESTCHESTER CREEK			WMA	17	S	10/14/2004	3.821	F	39400	\$56,736,000.00	9
2076929	B	BRUCKNER EXPWY	AMTRAK	A		A	1	S	6/6/2005	4.833	F	3800	\$5,472,000.00	2
2075352	B	BRUCKNER EXPWY NB	AMTRAK	A		A	1	S	8/9/2004	3.547	F	10900	\$15,696,000.00	2
2066672	B	BRUCKNER EXPWY NB	BRONX RIVER			WMA	8	S	7/13/2005	4.716	F	22300	\$32,112,000.00	2
2075351	B	BRUCKNER EXPWY SB	AMTRAK	A		A	1	S	8/9/2004	3.625	F	11600	\$16,704,000.00	2
2066671	B	BRUCKNER EXPWY SB	BRONX RIVER			WMA	3	S	7/7/2005	5.222	G	12400	\$17,856,000.00	2
2241210	B	BRYANT AVE	AMTRAK	A		O	1	S	7/5/2005	3.085	F	5300	\$7,632,000.00	2
2231329	K	BSHP	26TH AVE			A	1	S	4/8/2004	4.800	F	6700	\$9,648,000.00	13
2231319	K	BSHP	BAY PKWY			A	1	S	4/6/2004	4.395	F	7200	\$10,368,000.00	11
2231249	K	BSHP	BAY RIDGE AVE			A	1	S	4/9/2004	3.667	F	4900	\$7,056,000.00	10
2231429	K	BSHP	BEDFORD AVE			A	3	S	4/21/2004	4.278	F	12000	\$17,280,000.00	15
2231509	K	BSHP	FRESH CREEK			WA	5	S	8/8/2005	3.222	F	23000	\$33,120,000.00	56
2231450	K	BSHP	GERRITSEN INLET			WA	11	S	7/25/2005	3.597	F	46400	\$66,816,000.00	56
2231479	K	BSHP	MILL BASIN			WMA	14	S	7/25/2005	3.224	F	73500	\$105,840,000.00	18
2231439	K	BSHP	NOSTRAND AVE			A	3	S	5/10/2004	4.097	F	13000	\$18,720,000.00	15
2231419	K	BSHP	OCEAN AVE			A	3	S	4/19/2004	4.486	F	14000	\$20,160,000.00	15
2231360	K	BSHP	OCEAN PKWY			A	3	S	12/6/2004	7.000	V	29637	\$42,677,280.00	13
2231489	K	BSHP	PAERDEGAT BASIN			WA	15	S	9/14/2005	3.278	F	58300	\$83,952,000.00	18
2231499	K	BSHP	ROCKAWAY PKWY			A	4	S	8/12/2005	4.056	F	11500	\$16,560,000.00	56
2231409	K	BSHP	SHEEPSHEAD BAY ROAD			A	1	S	4/20/2004	4.807	F	6500	\$9,360,000.00	15
2230790	Q	BULOVA AVE	BQE WEST LEG			A	2	S	3/22/2004	5.667	G	3300	\$4,752,000.00	1
2269770	R	BUS STA ENTR RAMP	SIRT		F	O	19	S	12/1/2004	4.431	F	39333	\$56,639,520.00	1
2269790	R	BUS STATION EXIT RAMP	SIRT		F	O	7	S	11/20/2004	4.722	F	28721	\$41,358,240.00	1
2269740	R	BUS STATION NORTH	SIRT		F	O	12	S	11/16/2004	4.820	F	64605	\$93,031,200.00	1
2269750	R	BUS STATION SOUTH	SIRT		F	O	12	S	11/15/2004	4.520	F	154688	\$222,750,720.00	1
2247460	Q	CALDWELL AVE	CONRAIL	C		O	1	S	6/29/2004	6.639	V	2243	\$3,229,920.00	5
2243290	K	CARLTON AVE	LIRR ATLANTIC AVE	L		O	7	S	11/20/2004	4.931	F	10823	\$15,585,120.00	8
2240260	K	CARROLL ST	GOWANUS CANAL			WMO	2	S	8/8/2005	4.690	F	3000	\$4,320,000.00	6
2243220	K	CARROLL ST PED BRDG	FRANKLIN SHUTTLE	T		O-PED	3	C	9/26/2002	5.484	G	600	\$864,000.00	9
2243050	K	CATON AVE	BMT SUBWAY, BRIGHTON	T		O	4	S	7/19/2005	4.500	F	20800	\$29,952,000.00	14
2249390	R	CEDARVIEW AVE PED BRDG	SIRT SOUTH SHORE	S		O-PED	5	C	4/12/2005	4.474	F	600	\$864,000.00	3
2246050	M	CENTRAL DRIVE	PED OPP 63RD ST		P	O	1	S	6/2/2004	5.267	G	2000	\$2,880,000.00	64
2244050	K	CENTRAL DRIVE	PED PATH & STREAM		P	WO	3	S	4/15/2005	5.316	G	7400	\$10,656,000.00	55
2246100	M	CENTRAL DRIVE	TRANSVERSE RD #1		P	O	1	S	3/31/2004	4.200	F	6000	\$8,640,000.00	64
2246130	M	CENTRAL PARK	UNDER EAST DRIVE		P	O	1	C	7/15/2004	4.233	F	1200	\$1,728,000.00	64
2268480	M	CHAMBERS ST PED BRDG	WEST SIDE HWY			O-PED	8	C	9/20/2004	5.925	G	3344	\$4,815,360.00	1
2249880	R	CHELSEA ROAD	SAWMILL CREEK			WO	1	S	4/20/2005	6.833	V	2205	\$3,175,200.00	2
2243080	K	CHURCH AVE	BMT SUBWAY, BRIGHTON	T		O	4	S	7/22/2005	4.545	F	18200	\$26,208,000.00	14
2240210	B	CITY ISLAND ROAD	EASTCHESTER BAY			WO	7	S	12/6/2005	3.500	F	28900	\$41,616,000.00	28
2241710	B	CLAREMONT PKWY	METRO NORTH RR HAR	M		O	1	S	3/22/2004	4.422	F	6300	\$9,072,000.00	3
2244060	K	CLEFT RIDGE SPAN	PROSPECT PARK		P	O	1	C	6/10/2003	4.500	F	900	\$1,296,000.00	55
2231940	Q	CLINTONVILLE ST	BCIP			A	2	S	1/14/2004	4.727	F	7400	\$10,656,000.00	7
2249490	R	CLOVE ROAD	SIRT SOUTH SHORE	S		O	3	S	12/7/2004	6.264	V	5270	\$7,588,800.00	2
2246350	M	CNTRL PK OVER E DRIVE	S OF CLEOPATRAS NDL		P	O	1	C	7/15/2004	4.500	F	750	\$1,080,000.00	64
2231570	Q	COHANCY ST	BSOP			A	2	S	4/6/2004	4.636	F	6400	\$9,216,000.00	10
2230870	K	COLUMBIA HEIGHTS	278I (B.Q.E.)			A	1	S	4/26/2004	4.583	F	16500	\$23,760,000.00	2
2241590	B	CONCOURSE VILL AVE	METRO NORTH RR HAR	M		O	1	S	4/8/2004	4.188	F	17800	\$25,632,000.00	1
2244460	K	CONDUIT BLVD NB	ATLANTIC AVE EB			O	1	S	10/25/2004	4.833	F	3800	\$5,472,000.00	5
2231380	K	CONEY ISLAND AVE	BSHP			A	4	S	9/19/2005	6.292	V	19866	\$28,607,040.00	13
2243440	K	CONEY ISLAND AVE	LIRR BAY RIDGE	N		O	1	S	11/17/2004	5.234	G	3231	\$4,652,640.00	12
2230390	K	CONGRESS ST	278I (B.Q.E.)			A	2	S	4/29/2005	4.456	F	5000	\$7,200,000.00	6
2246510	M	CORBIN PL OVERPASS	CORBIN PLACE		P	O	1	S	2/9/2004	5.133	G	2200	\$3,168,000.00	12
2232029	M	CORLEARS PARK ROAD	FDR DRIVE		P	A	4	S	2/10/2004	4.156	F	4100	\$5,904,000.00	3
2247130	Q	CORPORAL KENNEDY ST	LIRR N SIDE DIV	L		O	1	S	7/29/2005	6.235	V	3379	\$4,865,760.00	11
2243110	K	CORTEYOU ROAD	BMT SUBWAY, BRIGHTON	T		O	3	S	8/3/2005	6.306	V	2900	\$4,176,000.00	14

INVENTORY SORTED BY FEATURE CARRIED														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2249280	R	COZZINS BLVD PED BRDG	SIRT SOUTH SHORE	S		O-PED	7	C	4/11/2005	4.564	F	200	\$288,000.00	3
2246070	M	CPK UNDER CENTR DR	OPP 65TH ST-IN E&W		P	O	1	C	7/14/2004	6.000	G	1200	\$1,728,000.00	64
2231880	Q	CROCHERON PK PED	BCIP		P	A-PED	9	C	10/5/2004	4.750	F	2300	\$3,312,000.00	11
2243040	K	CROOKE AVE	BMT SUBWAY, BRIGHTON	T		O	4	S	7/15/2005	4.158	F	6000	\$8,640,000.00	14
2231340	K	CROPSEY AVE	BSHP			A	2	S	4/12/2004	5.000	G	13100	\$18,864,000.00	13
2240301	K	CROPSEY AVE	CONEY ISLAND CREEK			WO	3	S	8/2/2005	5.225	G	9400	\$13,536,000.00	13
2240302	K	CROPSEY AVE	CONEY ISLAND CREEK			WO	3	S	8/19/2005	5.028	G	9400	\$13,536,000.00	13
2231559	Q	CROSS BAY BLVD	BSHP			A	4	S	4/6/2004	5.278	G	23205	\$33,415,200.00	10
2248039	Q	CROSS BAY BLVD	CONDUIT BLVD			O	2	S	6/1/2005	6.444	V	16544	\$23,823,360.00	10
2266770	Q	CROSS ISLAND PKWY	LAURELTON PKWY			A	1	S	5/12/2004	5.250	G	9508	\$13,691,520.00	13
2242030	B	CROTONA AVE	BRONX PELHAM PKWY			O	2	S	4/13/2004	5.447	G	7600	\$10,944,000.00	6
2243230	K	CROWN ST	FRANKLIN SHUTTLE	T		O	3	S	9/30/2005	5.264	G	4800	\$6,912,000.00	9
2230070	Q	CYP HILLS CEM EAST	JACKIE ROBINSON PKWY			A	3	S	4/15/2005	4.114	F	4400	\$6,336,000.00	5
2230050	Q	CYP HILLS CEM WEST	JACKIE ROBINSON PKWY			A	3	S	4/13/2005	3.955	F	4400	\$6,336,000.00	5
2230040	Q	CYPRESS HILLS ST	JACKIE ROBINSON PKWY			A	1	S	5/7/2004	5.611	G	5000	\$7,200,000.00	5
2249160	R	DE HART AVE	B&O RAILROAD	O		O	4	S	4/19/2005	6.500	V	6700	\$9,648,000.00	1
2232030	M	DELANCEY ST PED BRDG	FDR DRIVE		P	A-PED	9	C	8/15/2004	4.449	F	2900	\$4,176,000.00	3
2076640	B	DEPOT PLACE	CONRAIL HUDSON DIV	C		O	11	S	6/3/2005	5.139	G	30192	\$43,476,480.00	4
2243130	K	DITMAS AVE	BMT SUBWAY, BRIGHTON	T		O	1	S	8/4/2005	5.766	G	4875	\$7,020,000.00	14
2243120	K	DORCHESTER ROAD	BMT SUBWAY, BRIGHTON	T		O	1	S	10/28/2004	5.490	G	4825	\$6,948,000.00	14
2247170	Q	DOUGLASTON PKWY	LIRR N SIDE DIV	L		O	3	S	5/7/2004	5.288	G	6300	\$9,072,000.00	11
2232180	M	E 103RD ST PED BRDG	FDR DRIVE			A-PED	20	C	7/29/2003	5.000	G	6000	\$8,640,000.00	11
2233020	M	E 10TH ST PED BRDG	FDR DRIVE		P	A-PED	22	C	12/16/2004	6.326	V	1632	\$2,350,080.00	3
2232190	M	E 111TH ST PED BRDG	FDR DRIVE		P	A-PED	14	C	2/2/2004	3.800	F	2600	\$3,744,000.00	11
2232200	M	E 120TH ST PED BRDG	FDR DRIVE		P	A-PED	23	C	10/24/2004	4.500	F	2500	\$3,600,000.00	11
2231390	K	E 12TH ST	BSHP			A	4	S	4/16/2004	4.764	F	17200	\$24,768,000.00	15
2233080	K	E 14 ST PED BR	BSHP			A-PED	14	C	7/19/2004	4.588	F	4700	\$6,768,000.00	15
2241550	B	E 144TH ST	METRO NORTH RR HAR	M		O	2	S	6/20/2005	6.528	V	8290	\$11,937,600.00	1
2241129	B	E 149TH ST	AMTRAK	A		O	2	S	8/3/2004	4.620	F	12575	\$18,108,000.00	1
2241560	B	E 149TH ST	METRO NORTH RR HAR	M		O	8	S	4/9/2004	4.625	F	27900	\$40,176,000.00	1
2241050	B	E 149TH ST/JACKSON AVE	CONRAIL PT MORRIS	C		O	1	S	9/3/2004	4.850	F	65000	\$93,600,000.00	1
2243450	K	E 14TH ST	LIRR BAY RIDGE	N		O	1	S	11/15/2004	5.383	G	1775	\$2,556,000.00	14
2270030	B	E 156TH ST	ACCESS TO HOUSING		ED	O	16	S	12/17/2004	5.337	F	49696	\$71,562,240.00	1
2241010	B	E 156TH STREET	CONRAIL PT MORRIS	C		O	1	S	9/3/2004	4.556	F	2400	\$3,456,000.00	1
2241600	B	E 158TH ST	METRO NORTH RR HAR	M		O	1	S	6/14/2005	5.167	G	3400	\$4,896,000.00	1
2243460	K	E 15TH ST - PED	LIRR BAY RIDGE	N		O-PED	3	C	4/17/2002	3.650	F	900	\$1,296,000.00	14
2241610	B	E 161ST ST	METRO NORTH RR HAR	M		O	1	S	6/15/2005	5.283	G	6600	\$9,504,000.00	1
2241020	B	E 161ST STREET	CONRAIL PT MORRIS	C		O	1	S	8/31/2004	6.783	V	12800	\$18,432,000.00	1
2241620	B	E 162ND ST	METRO NORTH RR HAR	M		O	1	S	4/14/2004	4.984	F	4700	\$6,768,000.00	3
2241030	B	E 163RD STREET	CONRAIL PT MORRIS	C		O	1	S	5/25/2004	4.778	F	3200	\$4,608,000.00	3
2241630	B	E 165TH ST	METRO NORTH RR HAR	M		O	1	S	4/15/2004	4.350	F	16400	\$23,616,000.00	3
2241650	B	E 167TH ST	METRO NORTH RR HAR	M		O	1	S	3/15/2004	5.863	G	3363	\$4,842,720.00	3
2241660	B	E 168TH ST	METRO NORTH RR HAR	M		O	1	S	3/15/2004	4.922	F	7700	\$11,088,000.00	3
2241670	B	E 169TH ST	METRO NORTH RR HAR	M		O	1	S	3/15/2004	4.500	F	3300	\$4,752,000.00	3
2241680	B	E 170TH ST	METRO NORTH RR HAR	M		O	1	S	3/22/2004	6.451	V	3150	\$4,536,000.00	3
2241720	B	E 173RD ST	METRO NORTH RR HAR	M		O	1	S	4/19/2004	4.391	F	3000	\$4,320,000.00	3
2066720	B	E 174TH ST	SHERIDAN EXPWY/AMTRAK	A		A	13	S	10/28/2004	4.375	F	47430	\$68,299,200.00	9
2241740	B	E 175TH ST	METRO NORTH RR HAR	M		O	1	S	3/22/2004	4.031	F	3600	\$5,184,000.00	3
2241269	B	E 177TH ST	AMTRAK	A		O	3	S	8/12/2004	5.514	G	16606	\$23,912,640.00	9
2241770	B	E 178TH ST PED BRDG	METRO NORTH RR HAR	M		O-PED	1	C	7/28/2004	5.921	G	700	\$1,008,000.00	6
2241780	B	E 179TH ST PED BRDG	METRO NORTH RR HAR	M		O-PED	6	C	7/27/2004	6.000	G	700	\$1,008,000.00	6
2242400	B	E 180TH ST	BRONX RIVER			WO	1	S	11/23/2004	4.810	F	4500	\$6,480,000.00	6
2241790	B	E 180TH ST	METRO NORTH RR HAR	M		O	1	S	4/15/2004	4.078	F	5000	\$7,200,000.00	6
2241800	B	E 183TH ST	METRO NORTH RR HAR	M		O	1	S	4/16/2004	4.234	F	3600	\$5,184,000.00	6
2241820	B	E 187TH ST	METRO NORTH RR HAR	M		O	1	S	4/16/2004	4.750	F	3800	\$5,472,000.00	6
2241810	B	E 188TH ST	METRO NORTH RR HAR	M		O	1	S	4/19/2004	4.188	F	5300	\$7,632,000.00	6
2241839	B	E 189TH ST	METRO NORTH RR HAR	M		O	1	S	6/13/2005	6.533	V	43157	\$62,146,080.00	6
2242459	B	E 233RD ST	BRONX RIVER			WO	1	S	5/27/2004	4.367	F	7000	\$10,080,000.00	12
2242460	B	E 233RD ST	ENTR RD BNX RVR PKWY			O	1	S	2/13/2004	5.467	G	5300	\$7,632,000.00	12
2241870	B	E 233RD ST	METRO NORTH RR HAR	M		O	1	S	4/20/2004	5.157	G	7664	\$11,036,160.00	12
2241890	B	E 241ST ST	BRP, METRO NORTH HAR	M		O	28	S	7/22/2005	4.444	F	49500	\$71,280,000.00	12
2246540	M	E 34TH ST	PARK AVE TUNNEL			OT	1	S	8/27/2004	4.033	F	36200	\$52,128,000.00	5
2243420	K	E 3RD ST	LIRR BAY RIDGE	N		O	1	S	6/15/2005	6.783	V	1500	\$2,160,000.00	12
2232100	M	E 51ST ST PED BRDG	FDR DRIVE		P	A-PED	10	C	3/7/2004	4.188	F	2800	\$4,032,000.00	6
2233040	M	E 60TH ST	FDR DRIVE			A	17	S	7/1/2005	4.687	F	24480	\$35,251,200.00	6
2232110	M	E 64TH ST PED BRDG	FDR DRIVE		P	A-PED	13	C	3/7/2004	5.141	G	2100	\$3,024,000.00	8
2245380	M	E 66TH ST	PED WALK N. OF ZOO		P	O	1	S	6/2/2004	5.267	G	1500	\$2,160,000.00	8

INVENTORY SORTED BY FEATURE CARRIED														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2232050	M	E 6TH ST PED BRDG	FDR DRIVE		P	A-PED	22	C	3/14/2004	4.431	F	2200	\$3,168,000.00	3
2232120	M	E 71ST ST PED BRDG	FDR DRIVE		P	A-PED	19	C	3/21/2004	6.182	V	1800	\$2,592,000.00	8
2232140	M	E 78TH ST PED BRDG	FDR DRIVE		P	A-PED	9	C	3/21/2004	3.000	P	1700	\$2,448,000.00	8
2269820	M	E 81 ST PED BRIDGE	FDR DRIVE N.B.		P	A-PED	3	C	10/11/2004	3.213	F	900	\$1,296,000.00	8
2245319	M	E 97TH ST	METRO NORTH MAIN LN	M		O	1	S	9/1/2004	4.725	F	3200	\$4,608,000.00	8
2246400	M	E FOOTBRIDGE	TRANSVERSE RD #2		P	O-PED	1	C	10/23/2004	4.500	F	3700	\$5,328,000.00	64
2242149	B	E TREMONT AVE	BRONX RIVER			WO	2	S	5/20/2004	4.722	F	12900	\$18,576,000.00	6
2075820	B	E TREMONT AVE	HUTCHINSON RVR PKWY			A	2	S	11/18/2005	4.472	F	10200	\$14,688,000.00	10
2241760	B	E TREMONT AVE	METRO NORTH RR HAR	M		O	1	S	6/16/2005	6.517	V	7300	\$10,512,000.00	6
2242260	B	E EAGLE AVE	E 161ST ST			O	1	S	4/8/2004	5.234	G	2800	\$4,032,000.00	1
2246040	M	EAST DR AT CNTRL PARK	PEDESTRIAN WALK		P	O	1	C	7/12/2004	4.533	F	1200	\$1,728,000.00	5
2244030	K	EAST DRIVE	BRIDLE PATH		P	O	1	S	4/11/2005	5.041	G	2000	\$2,880,000.00	55
2244040	K	EAST DRIVE	EAST WOOD ARCH		P	O	1	C	6/30/2003	4.200	F	900	\$1,296,000.00	55
2246170	M	EAST DRIVE	PED WALK @ 73RD ST		P	O	1	S	2/24/2004	5.056	G	1900	\$2,736,000.00	64
2246069	M	EAST DRIVE	PEDESTRIAN WALK		P	O	1	S	6/2/2004	4.500	F	2700	\$3,888,000.00	64
2246470	M	EAST DRIVE	THE LOCH		P	WO	1	S	3/2/2004	4.700	F	1100	\$1,584,000.00	64
2246110	M	EAST DRIVE	TRANSVERSE RD #1		P	O	1	S	3/31/2004	4.567	F	6000	\$8,640,000.00	64
2246230	M	EAST DRIVE	TRANSVERSE RD #2		P	O	1	S	4/5/2004	4.533	F	6500	\$9,360,000.00	64
2246250	M	EAST DRIVE	TRANSVERSE RD #3		P	O	1	S	3/1/2004	4.433	F	5100	\$7,344,000.00	64
2246270	M	EAST DRIVE	TRANSVERSE RD #4		P	O	1	S	4/1/2004	3.967	F	7000	\$10,080,000.00	64
2249720	R	EAST FOOTBRIDGE	CLOVE LAKE		P	WO-PED	2	C	12/2/2004	4.621	F	899	\$1,294,560.00	1
2242350	B	EAST FORDHAM RD	GRAND CONCOURSE			O	1	S	4/21/2004	4.567	F	10300	\$14,832,000.00	5
2241270	B	EAST TREMONT AVE	AMTRAK	A		O	2	S	8/2/2004	5.556	G	22300	\$32,112,000.00	9
2241900	B	EASTCHESTER ROAD	NYCTA-DYRE AVE LN	T		O	3	S	9/14/2004	4.917	F	13500	\$19,440,000.00	12
2243279	K	EASTERN PKWY	FRANKLIN SHUTTLE	T		O	1	S	9/22/2004	4.861	F	7700	\$11,088,000.00	9
2247470	Q	ELIOT AVE	CONRAIL	C		O	1	S	8/24/2005	5.250	G	3600	\$5,184,000.00	5
2247550	Q	ELIOT AVE	LIRR MONTAUK DIV	L		O	2	S	6/21/2005	5.894	G	9550	\$13,752,000.00	5
2248160	Q	ELLIOT AVE	QUEENS BLVD			O	2	S	7/7/2004	4.922	F	13785	\$19,850,400.00	12
2269600	K	ERSKINE STREET	BSHP			A	1	S	10/29/2004	6.141	V	8258	\$11,891,520.00	5
2241200	B	FAILE ST	AMTRAK	A		O	1	S	7/28/2004	5.797	G	6208	\$8,939,520.00	2
2231620	Q	FARMERS BLVD	BSOP			A	2	S	5/10/2005	4.568	F	6400	\$9,216,000.00	13
2249790	R	FB S OF FOREST AV	STREAM IN PARK		P	WO-PED	3	C	11/30/2004	5.000	G	658	\$947,520.00	1
223201A	M	FDR DR N.B. OFF RMP	FDR DR & SOUTH ST			AR	17	S	2/18/2004	3.776	F	102225	\$147,204,000.00	1
2232158	M	FDR DRIVE S.B.	FDR DRIVE N.B.			AT	32	S	5/26/2005	4.712	F	54302	\$78,194,880.00	8
2233038	M	FDR DRIVE SB	FDR NB / E 62ND ST			AT	46	S	9/15/2005	2.415	P	70113	\$100,962,720.00	8
2268650	M	FDR NB 42ND TO 49ST	EAST RIVER			A	119	S	8/28/2003	4.415	F	30767	\$44,304,480.00	6
223204A	M	FDR NB TO HOUSTON ST	RELIEF			AR	4	S	6/15/2004	4.100	F	6150	\$8,856,000.00	3
2229520	B	FIELDSTON ROAD	HHP			A	1	S	9/26/2005	5.500	G	6600	\$9,504,000.00	8
2249480	R	FINGERBOARD ROAD	SIRT SOUTH SHORE	S		O	2	S	10/31/2005	6.708	V	5100	\$7,344,000.00	2
2231460	K	FLATBUSH AVE	BSHP			A	2	S	9/15/2005	6.441	V	14058	\$20,243,520.00	56
2243260	K	FLATBUSH AVE	FRANKLIN SHUTTLE	T		O	2	S	9/15/2004	5.196	G	11300	\$16,272,000.00	9
2243510	K	FLATBUSH AVE	LIRR BAY RIDGE	N		O	2	S	6/8/2005	4.667	F	5700	\$8,208,000.00	18
2248090	Q	FLSHG MDW PK PED.	LAWRENCE STREET		P	O-PED	3	C	5/11/2002	4.722	F	8418	\$12,121,920.00	7
2248220	Q	FLUSHING AV SERVICE	FLUSHING AVE			O	1	S	7/11/2005	5.125	G	2940	\$4,233,600.00	5
2248260	Q	FLUSHING MEADW PARK	MEADOW LAKE & 69TH RD		P	WO	5	S	4/28/2004	4.891	F	4200	\$6,048,000.00	81
2248140	Q	FLUSHING MEADW PK	STREAM N OF LIE		P	WO-PED	5	C	12/14/2004	4.741	F	4102	\$5,906,880.00	81
2248130	Q	FLUSHING MEADW PK	WILLOW LK&76TH RD		P	WO-PED	4	C	4/20/2002	1.000	P	1891	\$2,723,040.00	81
2248379	Q	FLUSHING MW PK RD	AQUACADE LAKE		P	WO-PED	5	C	4/5/2005	4.702	F	6321	\$9,102,240.00	81
2249780	R	FOOTBRIDGE	BROOKS LAKE DAM		P	WO-PED	1	C	11/30/2004	4.947	F	800	\$1,152,000.00	1
2249800	R	FOREST AVE	CLOVE LAKES PK STREAM		P	WO	1	S	9/2/2005	4.633	F	1600	\$2,304,000.00	1
2248340	Q	FOREST PARK DR	MYRTLE AVE		P	O	3	S	6/7/2005	4.984	F	5100	\$7,344,000.00	9
2247660	Q	FOREST PARK DRIVE	ABANDONED LIRR	L	P	O	6	S	3/31/2005	5.381	G	10000	\$14,400,000.00	9
2247590	Q	FOREST PARK DRIVE	LIRR MONTAUK DIV	L	P	O	5	S	8/19/2005	5.509	G	6000	\$8,640,000.00	9
2243620	K	FORT HAMILTON PKWY	LIRR & SEA BEACH	LT		O	3	S	10/20/2004	5.492	G	14800	\$21,312,000.00	10
2245040	M	FORT TRYON PARK	SOUTH OF CLOISTERS		P	O	1	C	7/30/2004	5.133	G	750	\$1,080,000.00	12
2245050	M	FORT TRYON PARK	UNDERPASS		P	O	1	C	7/30/2004	4.867	F	750	\$1,080,000.00	12
2246500	M	FORT TRYON PLACE	ENTR FROM RIVERSIDE DR		P	O	1	S	3/8/2004	4.267	F	6600	\$9,504,000.00	12
2243150	K	FOSTER AVE	BMT SUBWAY, BRIGHTON	T		O	1	S	10/14/2004	4.550	F	3000	\$4,320,000.00	14
2231930	Q	FRANCIS LEWIS BLVD	BCIP			A	3	S	1/14/2004	4.773	F	9100	\$13,104,000.00	7
2231690	Q	FRANCIS LEWIS BLVD	BLP E.B.			A	1	S	3/26/2004	5.333	G	6000	\$8,640,000.00	13
2231700	Q	FRANCIS LEWIS BLVD	BLP W.B.			A	1	S	3/26/2004	4.867	F	6000	\$8,640,000.00	13
2267199	Q	FRANCIS LEWIS BLVD	PARK ROAD			O	1	S	4/11/2005	5.033	G	7085	\$10,202,400.00	8
2249450	R	FREMONT AVE PED BRDG	SIRT SOUTH SHORE	S		O-PED	3	C	6/12/2003	4.459	F	800	\$1,152,000.00	2
224005A	M	FROM FDR DRIVE	HARLEM RIVER DR			OR	19	S	8/18/2004	4.119	F	29900	\$43,056,000.00	11
2242120	B	FTBG N OF RTE 1	BRONX RIVER		P	WO-PED	1	C	6/15/2002	4.029	F	1904	\$2,741,760.00	9
2244130	K	FTBRG NR BOATHSE	PROSPECT PK LAKE		P	WO-PED	1	C	11/28/2005	5.000	G	1260	\$1,814,400.00	55
2246010	M	FTBRG OPP 62ND ST	BRIDLE PATH		P	O-PED	1	C	12/22/2004	5.000	G	1026	\$1,477,440.00	64
2246320	M	FTBRG OPP 77TH ST	THE LAKE		P	WO-PED	3	C	12/29/2004	4.862	F	1125	\$1,620,000.00	64
226771C	M	GAR RAMP TO 79 ST	79 ST BT BASIN GAR		P	AR	21	S	6/16/2005	4.726	F	9095	\$13,096,800.00	7
2241420	B	GERARD AVE	METRO NORTH RR HUD	M		O	1	S	4/30/2004	6.766	V	5063	\$7,290,720.00	4

INVENTORY SORTED BY FEATURE CARRIED														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2249360	R	GIFFORDS LANE	SIRT SOUTH SHORE	S		O	1	S	12/3/2004	5.844	G	3042	\$4,380,480.00	3
2243860	K	GLENMORE AVE	LIRR BAY RIDGE	N		O	2	S	11/8/2004	6.559	V	5616	\$8,087,040.00	16
2065940	Q	GRAND AVE	495I (L.I.E.)			A	2	S	9/1/2004	5.264	G	12850	\$18,504,000.00	5
2247440	Q	GRAND AVE	CONRAIL	C		O	1	S	8/23/2005	6.483	V	3280	\$4,723,200.00	5
2247180	Q	GRAND AVE	LIRR MAIN LINE	L		O	3	S	5/25/2004	4.849	F	7415	\$10,677,600.00	4
2242370	B	GRAND CONCOURSE	BEDFORD PARK BLVD			O	1	S	4/22/2004	4.765	F	8418	\$12,121,920.00	7
2242360	B	GRAND CONCOURSE	BURNSIDE AVE			O	2	S	10/21/2004	4.441	F	8400	\$12,096,000.00	5
2242299	B	GRAND CONCOURSE	E 138TH ST			O	1	S	5/9/2005	4.933	F	9500	\$13,680,000.00	1
2242259	B	GRAND CONCOURSE	E 161ST ST			O	1	S	10/18/2004	3.583	F	24100	\$34,704,000.00	4
2242280	B	GRAND CONCOURSE	E 167TH ST			O	2	S	9/22/2004	4.544	F	42900	\$61,776,000.00	4
2242300	B	GRAND CONCOURSE	E 170TH ST			O	2	S	6/24/2004	4.789	F	39300	\$56,592,000.00	4
2242319	B	GRAND CONCOURSE	E 174TH ST	T		O	1	S	4/9/2004	4.067	F	14900	\$21,456,000.00	4
2242329	B	GRAND CONCOURSE	E 175TH ST	T		O	1	S	10/5/2004	4.800	F	11900	\$17,136,000.00	4
2242380	B	GRAND CONCOURSE	E 204TH ST			O	1	S	5/5/2005	5.391	G	9272	\$13,351,680.00	7
2242330	B	GRAND CONCOURSE	E TREMONT AVE			O	1	S	10/20/2005	5.983	G	11700	\$16,848,000.00	5
2242340	B	GRAND CONCOURSE	EAST KINGSBRIDGE			O	2	S	10/20/2004	4.714	F	16500	\$23,760,000.00	7
2241409	B	GRAND CONCOURSE	METRO NORTH RR HUD	TCM		O	1	S	4/7/2004	3.844	F	16100	\$23,184,000.00	4
2240390	K Q	GRAND ST BRIDGE	NEWTOWN CREEK			WMO	2	S	9/3/2004	4.486	F	5100	\$7,344,000.00	5
2249100	R	GRANITE AVE	B&O RAILROAD	O		O	4	S	4/23/2004	6.034	V	7300	\$10,512,000.00	1
2249370	R	GREAVES AVE	SIRT SOUTH SHORE	S		O	1	S	10/17/2005	6.750	V	3950	\$5,688,000.00	3
2240370	K Q	GREENPOINT AVE BRIDGE	NEWTOWN CREEK	L		WMO	12	S	10/21/2005	5.250	G	76106	\$109,592,640.00	2
2231370	K	GUIDER AV RAMP TO BSHP	BSHP			A	4	S	5/10/2004	3.903	F	12800	\$18,432,000.00	13
2241860	B	GUN HILL RD	METRO NORTH RR HAR	M		O	2	S	4/20/2004	4.103	F	9000	\$12,960,000.00	12
2242430	B	GUN HILL ROAD	BRONX BLVD			O	4	S	6/25/2004	4.982	F	9400	\$13,536,000.00	12
2242440	B	GUN HILL ROAD	BRONX RIVER			WO	1	S	3/1/2004	5.167	G	8700	\$12,528,000.00	12
2241910	B	GUN HILL ROAD	NYCTA-DYRE AVE LN	T		O	1	S	9/14/2004	6.906	V	75000	\$108,000,000.00	11
2231610	Q	GUY R. BREWER BLVD	BSOP			A	2	S	4/22/2005	6.569	V	12342	\$17,772,480.00	13
2249380	R	GUYON AVE	SIRT SOUTH SHORE	S		O	3	S	10/18/2005	4.869	F	6900	\$9,936,000.00	3
2240231	K	HAMILTON AVE BRIDGE	GOWANUS CANAL			WMO	3	S	8/31/2005	4.028	F	7300	\$10,512,000.00	7
2240232	K	HAMILTON AVE BRIDGE	GOWANUS CANAL			WMO	3	S	8/31/2005	4.125	F	7300	\$10,512,000.00	6
2065930	Q	HAMILTON PLACE	495I (L.I.E.)			A	2	S	6/4/2004	6.347	V	11111	\$15,999,840.00	5
2249520	R	HANNAH ST	SIRT SOUTH SHORE	S		O	10	S	12/7/2005	4.893	F	10020	\$14,428,800.00	1
2249180	R	HARBOR ROAD	B&O RAILROAD	O		O	4	S	5/9/2005	6.356	V	6615	\$9,525,600.00	1
2233059	M	HARLEM RIVER DRIVE	RAMP TO HRD N.B.			A	11	S	4/13/2005	3.522	F	51000	\$73,440,000.00	11
2231780	Q	HEMPSTEAD AVE	BCIP			A	2	S	4/22/2004	4.210	F	14200	\$20,448,000.00	13
2266149	Q	HEMPSTEAD AVE	CROSS ISLAND PKWY			A	2	S	5/5/2004	4.172	F	9500	\$13,680,000.00	13
2267250	M	HHP	AMTRAK 30TH ST LINE	A		A	55	S	10/29/2004	3.710	F	40000	\$57,600,000.00	7
2229530	B	HHP	BROADWAY			A	1	S	9/27/2005	4.574	F	7500	\$10,800,000.00	8
2229440	B	HHP	KAPPOCK ST			A	1	S	9/30/2005	5.069	G	3900	\$5,616,000.00	8
2266229	M	HHP	PED UNDERPASS @ 148 ST			A	1	S	3/5/2004	5.476	G	1800	\$2,592,000.00	9
2266230	M	HHP	PED UNDERPASS INWD PK			A	1	S	2/2/2004	6.211	V	800	\$1,152,000.00	12
2266240	M	HHP	PED UNDERPASS INWD PK			A	1	S	2/3/2004	5.762	G	1100	\$1,584,000.00	12
2229309	M	HHP	RIVERSIDE PARK			A	1	S	2/20/2004	5.267	G	2400	\$3,456,000.00	7
2229349	M	HHP	W 158 ST	A		A	44	S	8/12/2004	4.268	F	140000	\$201,600,000.00	12
2229312	M	HHP NB	RAMP TO 96 ST			A	1	S	2/27/2004	4.364	F	2000	\$2,880,000.00	7
2229322	M	HHP NB	RAMP TO 96 ST			A	1	S	3/8/2004	5.300	G	2000	\$2,880,000.00	7
M00004	M	HHP ON/OFF RMP-79 EB	PEDESTRIAN PATH			A	1	C	7/12/2004	4.900	F	900	\$1,296,000.00	7
M00003	M	HHP ON/OFF RMP-79 WB	PEDESTRIAN PATH			A	1	C	7/1/2004	4.833	F	900	\$1,296,000.00	7
2229311	M	HHP SB	RAMP TO 96 ST			A	1	S	2/26/2004	4.273	F	2000	\$2,880,000.00	7
2229321	M	HHP SB	RAMP TO 96 ST			A	1	S	3/8/2004	5.200	G	2000	\$2,880,000.00	7
2229289	M	HHP VIADUCT	W 72 ST TO W 79 ST	A		A	145	S	12/7/2004	3.478	F	236100	\$339,984,000.00	7
2246580	M	HIGH BRIDGE PDOVP	87I - HARLEM RIVER		P	WA-PED	11	P	10/1/85	5.651	G	34115	\$49,125,600	12
2230000	K	HIGHLAND BLVD E.B.	JACKIE ROBINSON PKWY			A	1	S	4/22/2004	4.667	F	4900	\$7,056,000.00	5
2230220	K	HIGHLAND BLVD NB	VERMONT AVE			A	1	S	6/16/2005	6.127	V	3995	\$5,752,800.00	5
2230010	K	HIGHLAND BLVD W.B.	JACKIE ROBINSON PKWY			A	1	S	4/22/2004	4.933	F	3500	\$5,040,000.00	5
2230020	K	HIGHLAND BLVD W.B.	JACKIE ROBINSON PKWY			A	2	S	4/22/2004	4.974	F	4700	\$6,768,000.00	5
2248280	Q	HIGHLAND PK PED.	PEDESTRIAN PATH		P	O-PED	1	C	12/22/2004	3.667	F	1856	\$2,672,640.00	5
2243780	K	HIGHLAWN AVE	BMT SEA BEACH	T		O	1	S	9/9/2005	6.440	V	6960	\$10,022,400.00	11
2244120	K	HILL DRIVE	PROSPECT PK LAKE		P	WO	3	S	4/20/2005	3.873	F	7800	\$11,232,000.00	55
2231840	Q	HILLSIDE AVE	BCIP			A	2	S	4/30/2004	4.079	F	9672	\$13,927,680.00	13
2247320	Q	HONEYWELL ST	AMTRAK & LIRR YARD	AL		O	22	S	12/16/2005	6.236	V	99036	\$142,611,840.00	2
2300130	Q	HOOK CREEK	HOOK CREEK BRIDGE			WO	3	S	7/21/2005	6.339	V	18302	\$26,354,880.00	13
2232040	M	HOUSTON ST	FDR DRIVE			A	2	S	4/12/2005	3.318	F	11010	\$15,854,400.00	3
223204B	M	HOUSTON ST RAMP TO FDR	RELIEF			AR	4	S	2/5/2004	4.417	F	7642	\$11,004,480.00	3
2267240	M	HRD NB RAMP	HARLEM RIVER DR			A	55	S	10/20/2005	3.083	F	122900	\$176,976,000.00	12
2249300	R	HUGUENOT AVE	SIRT SOUTH SHORE	S		O	2	S	10/4/2005	4.924	F	4900	\$7,056,000.00	3
2240450	Q	HUNTERS PT AVE BRIDGE	DUTCH KILLS			WMO	4	S	5/26/2004	5.167	G	12168	\$17,521,920.00	2
2241190	B	HUNTS POINT AVE	AMTRAK	A		O	1	S	7/27/2004	4.984	F	13700	\$19,728,000.00	2
2241959	B	HUTCHINSON RVR PKWY	AMTRAK	A		O	1	S	8/6/2004	5.746	G	15444	\$22,239,360.00	10
2075859	B	HUTCHINSON RVR PKWY	HUTCHINSON RIVER			WMA	7	S	11/1/2005	4.922	F	60500	\$87,120,000.00	10

2005 BRIDGES AND TUNNELS ANNUAL CONDITION REPORT

INVENTORY SORTED BY FEATURE CARRIED														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2243140	K	NEWKIRK AVE	BMT SUBWAY, BRIGHTON	T		O	3	S	8/26/2005	4.250	F	4100	\$5,904,000.00	14
2240240	K	NINTH ST BRIDGE	GOWANUS CANAL			WMO	3	S	6/14/2005	6.613	V	5772	\$8,311,680.00	6
2269760	R	NORTH RAMP	SIRT		F	O	9	S	11/22/2005	4.347	F	17589	\$25,328,160.00	1
2240440	Q	NORTHERN BLVD	ALLEY CREEK			WO	2	S	6/2/2004	4.750	F	8300	\$11,952,000.00	11
2231870	Q	NORTHERN BLVD	BCIP			A	2	S	8/17/2004	6.431	V	9400	\$13,536,000.00	11
2055802	Q	NORTHERN BLVD E.B.	FLUSHING RIVER			WO	40	S	8/30/2004	4.507	F	78894	\$113,607,360.00	7
2055801	Q	NORTHERN BLVD W.B.	FLUSHING RIVER			WO	40	S	8/30/2004	4.817	F	71900	\$103,536,000.00	7
2243500	K	NOSTRAND AVE	LIRR BAY RIDGE	N		O	2	S	11/16/2004	5.186	G	4320	\$6,220,800.00	14
2240138	B M	NYCTA IRT	HARLEM RVR/BROADWAY	T		WMO	3	S	10/27/2005	4.882	F	19520	\$28,108,800.00	12
2243480	K	OCEAN AVE	LIRR BAY RIDGE	N		O	2	S	11/12/2004	5.000	G	5000	\$7,200,000.00	14
2240320	K	OCEAN AVE PED BRDG	SHEEPSHEAD BAY			WO-PED	30	C	5/2/2003	4.070	F	4000	\$5,760,000.00	15
2243439	K	OCEAN PKWY	LIRR BAY RIDGE	N		O	1	S	11/18/2004	5.218	G	7000	\$10,080,000.00	12
2249269	R	PAGE AVE	SIRT SOUTH SHORE	S		O	4	S	10/7/2005	6.306	V	30420	\$43,804,800.00	3
2245470	M	PARK AVE N.B	E 45TH ST			O	1	S	7/25/2005	4.865	F	2400	\$3,456,000.00	5
2245460	M	PARK AVE S.B.	E 45TH ST			O	1	S	7/8/2005	4.730	F	2400	\$3,456,000.00	5
2246550	M	PARK AVE VIADUCT	E 42ND ST			O	10	S	11/1/2005	4.597	F	22150	\$31,896,000.00	6
2247600	Q	PARK LANE SOUTH	LIRR MONTAUK DIV	AL		O	1	S	5/4/2004	6.983	V	3024	\$4,354,560.00	9
2242099	B	PARK ROAD (204TH ST)	BRONX RIVER			WO	1	S	8/31/2004	4.172	F	4700	\$6,768,000.00	27
224001A	M	PARK ROW TO BKLN	WILLIAM ST N.B.			OE	4	S	4/6/2005	4.250	F	10167	\$14,640,480.00	1
2269780	R	PARKING ENTR RAMP	SIRT		F	O	3	S	11/1/2004	5.125	G	8589	\$12,368,160.00	1
2269730	R	PARKING EXIT RAMP	SIRT		F	O	10	S	11/30/2004	4.194	F	20727	\$29,846,880.00	1
2243020	K	PARKSIDE AVE	BMT SUBWAY, BRIGHTON	T		O	6	S	9/28/2004	4.000	F	48700	\$70,128,000.00	14
2247060	Q	PARSONS BLVD	LIRR N SIDE DIV	L		O	1	S	5/6/2004	5.176	G	4200	\$6,048,000.00	7
224001C	M	PEARL ST TO BKLN	LAND ADJ TO BRDG			OE	9	S	4/7/2005	3.814	F	6489	\$9,344,160.00	3
224001F	M	PEARL ST TO FDR DR	LAND ADJ TO BRDG			OE	3	S	4/11/2005	5.254	G	5200	\$7,488,000.00	1
2246160	M	PED BET 73ST&74ST	THE LAKE		P	WO-PED	1	C	6/1/2002	5.000	G	1655	\$2,383,200.00	64
222928C	M	PED BR AT 73RD ST	HHP - AMTRAK		P	A-PED	3	C	6/8/2002	4.000	F	3480	\$5,011,200.00	7
2246090	M	PED BRDG OPP 65 ST	TRANSVERSE RD #1		P	O-PED	1	C	2/14/2004	4.655	F	2300	\$3,312,000.00	64
2247630	Q	PED BRG NEAR UNION TPK	ABANDONED LIRR			O-PED	8	C	7/8/2004	5.318	G	900	\$1,296,000.00	5
2246440	M	PED IN CTR OF PK	TRANSVERSE RD NO.2		P	O-PED	1	C	10/23/2004	4.259	F	5900	\$8,496,000.00	64
2246340	M	PED WALK OPP 77ST	STREAM TO LAKE		P	WO-PED	4	C	12/29/2004	4.871	F	455	\$655,200.00	64
2246380	M	PED WALK OPP 86ST	BRIDLE PATH		P	O-PED	1	C	12/3/2004	5.190	G	714	\$1,028,160.00	64
2246390	M	PED WALK OPP 86ST	BRIDLE PATH		P	O-PED	1	C	12/3/2004	4.627	F	1095	\$1,576,800.00	64
2246620	M	PEDESTRIAN BRIDGE	E 128TH ST			O-PED	18	C	10/1/2004	4.720	F	2300	\$3,312,000.00	11
2246030	M	PEDESTRIAN BRIDGE	POND		P	O-PED	1	C	7/29/2004	4.310	F	1400	\$2,016,000.00	64
M00001	M	PEDESTRIAN TUNNEL	BROADWAY TO			O-PED	1	C	3/9/2004	5.000	G	2000	\$2,880,000.00	12
2241380	B	PELHAM BAY PK PED	AMTRAK	A	P	O-PED	1	C	11/13/1978	5.109	G	4223	\$6,081,120.00	28
2231519	K	PENNSYLVANIA AVE	BSHP			A	2	S	4/28/2005	6.181	V	6640	\$9,561,600.00	56
2243870	K	PITKIN AVE	LIRR BAY RIDGE	N		O	3	S	11/3/2004	4.471	F	5600	\$8,064,000.00	16
2243210	K	PRESIDENT ST	FRANKLIN SHUTTLE	T		O	2	S	9/17/2004	5.314	G	2500	\$3,600,000.00	9
2232167	M	PROMENADE OVER FDR	FDR/E79TH ST-E91ST ST		P	A-PED	53	S	8/3/2005	3.571	F	93000	\$133,920,000.00	8
2244010	K	PROSPECT PK E DRIVE	ENDALE ARCH E DRIVE		P	O	1	C	5/7/2002	4.367	F	900	\$1,296,000.00	55
2268760	M	PS-5 PEDESTRIAN BR.	TENTH AVENUE			O-PED	5	C	6/3/2003	5.837	G	1500	\$2,160,000.00	12
2240639	K Q	PULASKI BRIDGE	NEWTOWN CREEK			WMO	44	S	7/7/2004	4.817	F	205770	\$296,308,800.00	2
2230530	Q	QUEENS BLVD	278I (B.Q.E.)			A	2	S	8/25/2004	4.625	F	23500	\$33,840,000.00	2
2230869	Q	QUEENS BLVD	ACCESS RD BQE S.B.			A	1	S	6/18/2004	4.205	F	7900	\$11,376,000.00	2
2247310	Q	QUEENS BLVD	AMTRAK & LIRR YARD	L		O	19	S	9/10/2004	6.577	V	92400	\$133,056,000.00	2
2230209	Q	QUEENS BLVD	JACKIE ROBINSON PKWY	T		A	5	S	4/23/2004	4.857	F	90000	\$129,600,000.00	9
2240047	M Q	QUEENSBORO BRIDGE(LL)	EAST RIVER	L		WEO	53	S	11/23/2004	4.543	F	626900	\$902,736,000.00	6
2240048	M Q	QUEENSBORO BRIDGE(UL)	EAST RIVER-LL			WEO	37	S	12/5/2004	4.623	F	322300	\$464,112,000.00	6
223201D	M	RAMP TO N.B. FDR DRIVE	FDR & SOUTH ST.			AR	22	S	3/22/2004	5.393	G	15825	\$22,788,000.00	1
222934A	M	RAMP TO N.B. HHP	AMTRAK WEST SIDE	A		AR	26	S	9/1/2004	3.875	F	10800	\$15,552,000.00	12
2249270	R	RICHMD VALLY ROAD	SIRT SOUTH SHORE	S		O	4	S	10/5/2005	5.284	G	9300	\$13,392,000.00	3
2240350	R	RICHMOND AVE	RICHMOND CREEK			WO	3	S	6/16/2005	5.819	G	32589	\$46,928,160.00	2
2244150	K	RIDGE BLVD	SHORE RD DRIVE			O	1	S	5/5/2005	6.800	V	4350	\$6,264,000.00	10
2240660	Q	RIKERS ISLAND BRIDGE	RIKERS ISL CHANNEL			WO	56	S	7/5/2005	4.282	F	183100	\$263,664,000.00	1
2241430	B	RIVER AVE	METRO NORTH RR HUD	M		O	1	S	6/22/2005	6.281	V	5040	\$7,257,600.00	4
2229510	B	RIVERDALE AVE	HHP			A	2	S	9/14/2005	4.000	F	5200	\$7,488,000.00	8
2246660	M	RIVERSIDE DRIVE	W 125TH ST & OTHERS			O	27	S	7/18/2005	4.389	F	148300	\$213,552,000.00	9
2246980	M	RIVERSIDE DRIVE	W 138TH ST			O	1	S	3/5/2004	4.900	F	6700	\$9,648,000.00	9
2267130	M	RIVERSIDE DRIVE	W 145TH ST			O	1	S	6/20/2005	5.000	G	5800	\$8,352,000.00	9
2246720	M	RIVERSIDE DRIVE	W 158TH ST			O	77	S	11/18/2005	3.639	F	181400	\$261,216,000.00	9
2246970	M	RIVERSIDE DRIVE	W 96TH ST			O	3	S	6/21/2005	5.500	G	10600	\$15,264,000.00	7
2269240	M	RIVERSIDE DRIVE	W. 155TH ST			O	1	S	6/20/2005	4.640	F	4397	\$6,331,680.00	9
2248369	Q	ROCKAWAY BLVD	THURSTON BASIN			WO	2	S	7/19/2005	5.158	G	6000	\$8,640,000.00	83
2230587	Q	ROOSEVELT AVE	278I (B.Q.E.)			A	2	S	2/13/2004	4.559	F	6600	\$9,504,000.00	2
2240507	Q	ROOSEVELT AVE	678I - VAN WYCK EXPWY			WA	27	S	12/8/2004	3.254	F	84424	\$121,570,560.00	81
2247380	Q	ROOSEVELT AVE	CONRAIL HELLGATE	C		O	2	S	6/28/2004	4.958	F	5200	\$7,488,000.00	2
2267160	Q	ROOSEVELT AVE	FLUSHING MDW PK ROAD			O	4	S	9/13/2005	4.683	F	7280	\$10,483,200.00	84

INVENTORY SORTED BY FEATURE CARRIED														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2240640	M Q	ROOSEVELT ISLAND	E. RIVER E. CHANNEL			WMO	8	S	6/15/2004	4.222	F	36500	\$52,560,000.00	8
2249420	R	ROSE AVE	SIRT SOUTH SHORE	S		O	2	S	11/4/2005	5.712	G	3800	\$5,472,000.00	2
2249410	R	ROSS AVE	SIRT SOUTH SHORE	S		O	2	S	10/26/2005	5.500	G	3800	\$5,472,000.00	2
2248200	Q	RUST ST	FLUSHING AVE			O	1	S	7/11/2005	5.078	G	2940	\$4,233,600.00	5
2231560	Q	S CONDUIT BLVD	BSOP			A	2	S	4/6/2004	5.690	G	15776	\$22,717,440.00	10
2242210	B	S OF ALLERTON AVE	BRONX RIVER			WO	3	S	7/17/2004	4.763	F	6200	\$8,928,000.00	27
2249770	R	S OF BROOKS LAKE	STREAM IN PARK		P	WO-PED	3	C	11/23/2004	5.129	G	696	\$1,002,240.00	1
2230370	K	SACKETT ST	278I (B.Q.E.)			A	2	S	3/23/2004	4.694	F	5000	\$7,200,000.00	6
226771D	M	SB HHP RAMP TO 79 ST	79 ST BT BASIN GAR		P	AR	4	S	5/27/2005	4.645	F	2601	\$3,745,440.00	7
2244470	K	SEELEY ST	PROSPECT AVE			O	1	S	6/3/2005	4.100	F	7700	\$11,088,000.00	7
2249290	R	SEGUINE AVE	SIRT SOUTH SHORE	S		O	1	S	10/10/2005	6.016	V	2200	\$3,168,000.00	3
2248240	Q	SERVICE RD TURNAROUND	OVER FLUSHING AVE			O	1	S	7/11/2005	5.250	G	2940	\$4,233,600.00	5
2241390	B	SHORE RD CIRCLE	AMTRAK	A		O	2	S	6/13/2005	3.254	F	4800	\$6,912,000.00	10
2240200	B	SHORE ROAD	HUTCHINSON RIVER			WMO	7	S	9/3/2004	4.597	F	4800	\$6,912,000.00	28
2249120	R	SIMONSON AVE	B&O RAILROAD	O		O	3	S	4/22/2005	6.093	V	5819	\$8,379,360.00	1
2249860	R	SLATER BLVD	NEW CREEK			WO	1	S	4/14/2005	5.673	G	2037	\$2,933,280.00	2
2249200	R	SOUTH AVE	B&O RAILROAD	O		O	3	S	10/3/2005	6.927	V	8322	\$11,983,680.00	1
2244440	K	SOUTH OF TILLARY ST	NAVY ST			O-PED	1	C	5/4/2004	4.480	F	6200	\$8,928,000.00	2
2242029	B	SOUTHERN BLVD	BRONX PELHAM PKWY			O	2	S	4/13/2004	4.684	F	12900	\$18,576,000.00	27
2242220	B	SOUTHERN BLVD	BRONX RIVER			WO	2	S	3/2/2004	4.105	F	4800	\$6,912,000.00	27
2241080	B	SOUTHERN BLVD	CONRAIL PT MORRIS	C		O	1	S	11/5/2004	4.185	F	3900	\$5,616,000.00	1
2231630	Q	SPRINGFIELD BLVD	BSOP			A	2	S	4/15/2004	4.682	F	8500	\$12,240,000.00	13
2268770	Q	SPRINGFIELD BLVD	EQUES. PATH (ABAND.)			O	1	S	4/27/2005	4.667	F	1470	\$2,116,800.00	13
2243180	K	ST JOHNS PLACE	FRANKLIN SHUTTLE	T		O	1	S	9/28/2005	6.781	V	2200	\$3,168,000.00	9
2241700	B	ST PAULS PL PED BRDG	METRO NORTH RR HAR	M		O-PED	2	C	7/30/2004	5.423	G	600	\$864,000.00	3
2241060	B	ST. MARYS & CONCORD	CONRAIL PT MORRIS	C		O	1	S	9/3/2004	5.333	G	4500	\$6,480,000.00	1
2230610	Q	STEINWAY ST	278I E.B. (B.Q.E.)			A	1	S	1/13/2004	4.028	F	4200	\$6,048,000.00	1
2230600	Q	STEINWAY ST	278I W.B. (B.Q.E.)			A	1	S	1/13/2004	4.167	F	4200	\$6,048,000.00	1
2243170	K	STERLING PLACE	FRANKLIN SHUTTLE	T		O	1	S	8/5/2005	6.500	V	2300	\$3,312,000.00	8
223201C	M	STH ST RMP TO FDR	SOUTH ST			AR	8	S	2/19/2004	4.701	F	39150	\$56,376,000.00	1
223201B	M	STH ST RMP TO FDR S.B.	SOUTH ST			AR	10	S	2/23/2004	3.821	F	44625	\$64,260,000.00	1
2240540	K	STILLWELL AVE	CONY ISLAND CRK			WO	2	S	6/7/2005	6.292	V	17000	\$24,480,000.00	13
2230350	K	SUMMIT ST PED BRDG	278I (B.Q.E.)			A-PED	2	S	3/8/2004	4.671	F	1400	\$2,016,000.00	6
2231650	Q	SUNRISE HWY W.B.	BLP E.B.			A	1	S	4/7/2004	4.623	F	4100	\$5,904,000.00	13
2231660	Q	SUNRISE HWY W.B.	BLP W.B.			A	2	S	4/7/2004	4.531	F	5350	\$7,704,000.00	13
2231800	Q	SUPERIOR ROAD	BCIP			A	2	S	3/22/2004	4.364	F	7000	\$10,080,000.00	13
2243890	K	SUTTER AVE	LIRR BAY RIDGE	N		O	3	S	11/4/2004	6.681	V	5497	\$7,915,680.00	16
2241040	B	THIRD AVE	CONRAIL PT MORRIS	C		O	1	S	11/3/2004	4.563	F	2700	\$3,888,000.00	1
2240310	K	THIRD AVE	GOWANUS CANAL			WO	1	S	6/13/2005	4.055	F	3200	\$4,608,000.00	6
2240069	B M	THIRD AVE BRIDGE	HARLEM RIVER			WMO	32	S	9/7/2004	7.000	V	79950	\$115,128,000.00	11
2240250	K	THIRD ST	GOWANUS CANAL			WMO	5	S	6/17/2005	4.931	F	4900	\$7,056,000.00	6
2247300	Q	THOMPSON AVE	AMTRAK YARD	L		O	14	S	9/8/2004	5.264	G	61280	\$88,243,200.00	2
2241170	B	TIFFANY ST	AMTRAK	A		O	1	S	7/6/2005	5.627	G	7267	\$10,464,480.00	2
224004H	Q	TO 21ST ST FROM NY	22ND ST			OE	43	S	12/10/2004	4.310	F	48100	\$69,264,000.00	2
224001B	M	TO BKLN FRM FDR	FRANKFRT & CITY			OE	31	S	3/12/2004	4.148	F	51400	\$74,016,000.00	1
224005B	B	TO BRUCKNER BLVD	RELIEF			OR	5	S	8/3/2005	3.833	F	12100	\$17,424,000.00	1
224006A	B	TO BRUCKNER BLVD	RELIEF			OR	11	S	12/8/2005	6.732	V	11100	\$15,984,000.00	1
224004B	M	TO E 60TH ST FROM QNS	FIRST AVE			OE	13	S	7/23/2004	5.764	G	14800	\$21,312,000.00	6
224004C	M	TO E 62ND ST FROM QNS	E 60TH ST			OE	10	S	7/29/2004	4.985	F	16720	\$24,076,800.00	6
224001D	M	TO FDR DR N.B.	PEARL STREET			OE	30	S	5/16/2005	5.208	G	49600	\$71,424,000.00	1
2245480	M	TO GWB OPP W 171ST ST	RIVERSIDE DRIVE			O	1	S	6/29/2004	5.333	G	10800	\$15,552,000.00	12
224007A	M	TO MADISON AVENUE	RELIEF			OR	7	S	4/30/2004	5.592	G	19880	\$28,627,200.00	11
224004E	Q	TO NY FR THOMSON AVE	JACKSON AVE			OE	94	S	10/29/2004	4.906	F	104600	\$150,624,000.00	2
224004G	Q	TO NY FROM 11TH ST	TERRAIN (CHAMBER)			OE	36	S	10/5/2004	4.634	F	8360	\$12,038,400.00	1
224004F	Q	TO NY FROM 21ST ST	21ST ST (QUEENS)			OE	63	S	12/9/2004	4.652	F	63310	\$91,166,400.00	2
224001G	M	TO PARK ROW	ROSE ST			OE	11	S	5/3/2005	4.681	F	16551	\$23,833,440.00	1
224001E	M	TO PEARL ST	LAND ADJ TO BRDG			OE	3	S	5/2/2005	5.225	G	5300	\$7,632,000.00	6
224004A	M	TO QNS FRM E 59TH ST	FIRST AVE			OE	13	S	7/22/2004	5.732	G	14800	\$21,312,000.00	6
224004D	M	TO QNS FROM E 58TH ST	E 59TH ST			OE	12	S	8/25/2004	4.660	F	11781	\$16,964,640.00	6
224004I	Q	TO THOMSON AVE FROM NY	JACKSON AVE			OE	39	S	11/23/2004	5.016	G	59100	\$85,104,000.00	2
2249040	R	TOMPKINS AVE	B&O RR (ABANDONED)			O	1	S	3/25/2004	6.250	V	5096	\$7,338,240.00	1
2249840	R	TOMPKINS AVE	GREENFIELD AVE			O	1	S	3/18/2004	5.106	G	2562	\$3,689,280.00	1
2249510	R	TOMPKINS AVE	WILLOW AVE, SIRT	S		O	2	S	12/6/2004	5.475	G	5378	\$7,744,320.00	1
2249230	R	TRACY AVE PED BRDG	SIRT SOUTH SHORE	S		O-PED	9	C	4/2/2004	2.744	P	200	\$288,000.00	3
2246410	M	TRANSVERSE RD. #1	PED WALK NEAR 5 AV		P	O	1	S	2/27/2004	4.364	F	1739	\$2,504,160.00	8
2249870	R	TRAVIS AVE	MAIN CREEK			WO	1	S	8/3/2005	6.100	V	1537	\$2,213,280.00	2
2246560	M	TUDOR CITY PLACE	E 42ND ST			O	1	S	3/17/2004	5.133	G	6600	\$9,504,000.00	6
2249170	R	UNION AVE	B&O RAILROAD	O		O	4	S	4/26/2005	5.426	G	6500	\$9,360,000.00	1
2230360	K	UNION ST	278I (B.Q.E.)			A	2	S	3/9/2004	4.486	F	5000	\$7,200,000.00	6
2243200	K	UNION ST	FRANKLIN SHUTTLE	T		O	2	S	9/20/2004	5.065	G	4100	\$5,904,000.00	9
2240270	K	UNION ST	GOWANUS CANAL			WMO	5	S	8/23/2004	4.153	F	4900	\$7,056,000.00	6
2247040	Q	UNION ST	LIRR N SIDE DIV	L		O	1	S	6/20/2005	6.391	V	3313	\$4,770,720.00	7
2231850	Q	UNION TPKE	BCIP			A	2	S	5/9/2005	4.318	F	13600	\$19,584,000.00	13
2248129	Q	UNION TPKE	CREEDMOORE HOSP RD			O	1	S	6/3/2005	4.867	F	3500	\$5,040,000.00	13
2230180	Q	UNION TPKE	JACKIE ROBINSON PKWY			A	1	S	2/25/2004	5.984	G	5359	\$7,716,960.00	82

INVENTORY SORTED BY FEATURE CARRIED														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2241330	B	UNIONPORT ROAD	AMTRAK	A		O	1	S	8/13/2004	4.875	F	4400	\$6,336,000.00	9
2246570	M	UNITED NATIONS PL	FIRST AVE TUNNEL			OT	2	S	7/21/2004	4.843	F	95000	\$136,800,000.00	6
2231910	Q	UTOPIA PKWY	BCIP			A	2	S	2/5/2004	5.136	G	7200	\$10,368,000.00	7
2229550	B	VAN CRTLDT EQUES	HHP		P	A-PED	2	C	9/17/2004	5.178	G	2100	\$3,024,000.00	26
2229540	B	VAN CRTLDT PARK	HHP		P	A-PED	2	C	9/17/2004	4.742	F	3900	\$5,616,000.00	26
2249130	R	VAN NAME AVE	B&O RAILROAD	O		O	3	S	4/13/2005	5.492	G	5474	\$7,882,560.00	1
2249140	R	VAN PELT AVE	B&O RAILROAD	O		O	3	S	4/15/2005	5.780	G	5000	\$7,200,000.00	1
2246670	M	W 134 ST VIADUCT	RIVERSIDE DRIVE			O	4	S	10/14/2005	4.944	F	7500	\$10,800,000.00	9
2245230	M	W 148TH ST PED BRDG	AMTRAK 30 ST BRANCH	A	P	O-PED	3	C	4/20/2004	3.509	F	1100	\$1,584,000.00	9
2245240	M	W 151ST ST FOOTBR	CONRAIL 30 ST BR	A	P	O-PED	2	C	6/8/2002	3.462	F	1020	\$1,468,800.00	9
2246710	M	W 153 ST	A.C. POWELL BLVD			O	1	S	2/25/2004	4.389	F	3082	\$4,438,080.00	10
2245290	M	W 155TH ST PED BRDG	AMTRAK 30 ST BRANCH	A		O-PED	3	C	4/21/2004	4.262	F	800	\$1,152,000.00	9
2245250	M	W 158TH ST	AMTRAK 30 ST BRANCH	A		O	7	S	9/29/2005	6.431	V	29170	\$42,004,800.00	12
2245260	M	W 173RD ST PED BRDG	AMTRAK 30 ST BRANCH	A	P	O-PED	2	C	4/22/2004	4.611	F	1500	\$2,160,000.00	12
2246600	M	W 176TH ST PED BRDG	APPROACH TO G.W.B.			O-PED	1	C	3/3/2004	4.600	F	1200	\$1,728,000.00	12
2246489	M	W 181 ST	RAMP TO WASH BR			O	1	S	2/10/2004	4.633	F	8200	\$11,808,000.00	12
2229400	M	W 181ST ST PED BRDG	HHP N.B.		P	A-PED	6	C	2/5/2003	4.652	F	1500	\$2,160,000.00	12
2241940	B	W 205TH ST	NYCTA IND YARDS	T		O	4	S	9/13/2004	6.778	V	32508	\$46,811,520.00	7
2240120	B M	W 207TH/W FORDHAM RD	HARLEM RIVER			WMO	5	S	6/30/2004	5.667	G	31784	\$45,768,960.00	12
2241489	B	W 225TH ST	CONRAIL PUTNAM	C		O	2	S	5/26/2004	5.313	G	10900	\$15,696,000.00	7
2241490	B	W 230TH ST	CONRAIL PUTNAM	C		O	1	S	3/31/2005	5.844	G	5600	\$8,064,000.00	8
2241509	B	W 231ST ST	CONRAIL PUTNAM	C		O	1	S	11/18/2004	5.765	G	4723	\$6,801,120.00	8
2241510	B	W 233RD ST	CONRAIL PUTNAM	C		O	1	S	4/1/2005	5.275	G	3760	\$5,414,400.00	8
2241520	B	W 234TH ST	CONRAIL PUTNAM	C		O	1	S	4/4/2005	5.412	G	3770	\$5,428,800.00	8
226672A	M	W 31ST ST	AMTRAK LAYUP TRACKS	A		O	9	S	12/10/2004	3.683	F	8800	\$12,672,000.00	4
224501B	M	W 33RD ST	AMTRAK 30 ST BRANCH	A		O	8	S	4/5/2004	4.639	F	16500	\$23,760,000.00	4
224501C	M	W 33RD ST	LAND ADJ TO AMTRAK	A		O	2	S	7/8/2005	4.750	F	4620	\$6,652,800.00	4
224501D	M	W 34TH ST	AMTRAK 30 ST BRANCH	A		O	4	S	7/8/2005	4.653	F	11800	\$16,992,000.00	4
224501E	M	W 35TH ST	AMTRAK 30 ST BRANCH	A		O	3	S	9/20/2004	4.208	F	6500	\$9,360,000.00	4
224501F	M	W 36TH ST	AMTRAK 30 ST BRANCH	A		O	7	S	9/15/2004	3.940	F	16400	\$23,616,000.00	4
2245060	M	W 37TH ST	AMTRAK 30 ST BRANCH	A		O	3	S	11/7/2005	6.270	V	7600	\$10,944,000.00	4
2245070	M	W 38TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	9/16/2004	4.077	F	6200	\$8,928,000.00	4
2245080	M	W 39TH ST	AMTRAK 30 ST BRANCH	A		O	3	S	9/16/2004	4.196	F	6300	\$9,072,000.00	4
2245440	M	W 40TH ST	AMTRAK 30 ST BRANCH	A		O	4	S	12/5/2005	4.042	F	9400	\$13,536,000.00	4
2245330	M	W 41ST ST	AMTRAK 30 ST BRANCH	A		O	3	S	9/24/2004	4.164	F	6200	\$8,928,000.00	4
2245210	M	W 42ND ST	AMTRAK 30 ST BRANCH	A		O	4	S	10/4/2004	4.841	F	9155	\$13,183,200.00	4
2245090	M	W 43RD ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/8/2004	4.485	F	4100	\$5,904,000.00	4
2245100	M	W 44TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/8/2004	4.662	F	4300	\$6,192,000.00	4
2245110	M	W 45TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/9/2004	5.662	G	4100	\$5,904,000.00	4
2245120	M	W 46TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/21/2004	4.441	F	4100	\$5,904,000.00	4
2245130	M	W 47TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/21/2004	4.721	F	4100	\$5,904,000.00	4
2245140	M	W 48TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	4/21/2004	4.618	F	4100	\$5,904,000.00	4
2245150	M	W 49TH ST	AMTRAK 30 ST BRANCH	A		O	3	S	11/2/2004	4.500	F	4100	\$5,904,000.00	4
2245340	M	W 50TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	11/10/2004	4.647	F	4100	\$5,904,000.00	4
2245160	M	W 51ST ST	AMTRAK 30 ST BRANCH	A		O	2	S	11/2/2004	4.882	F	4300	\$6,192,000.00	4
2245170	M	W 52ND ST	AMTRAK 30 ST BRANCH	A		O	2	S	11/2/2004	5.088	G	4300	\$6,192,000.00	4
2245180	M	W 53RD ST	AMTRAK 30 ST BRANCH	A		O	2	S	11/10/2004	5.162	G	5100	\$7,344,000.00	4
2245350	M	W 54TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	11/10/2004	5.540	G	4700	\$6,768,000.00	4
2245360	M	W 55TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	12/6/2004	5.485	G	4300	\$6,192,000.00	4
2245370	M	W 56TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	12/6/2004	5.368	G	4400	\$6,336,000.00	4
2245220	M	W 57TH ST	AMTRAK 30 ST BRANCH	A		O	3	S	12/6/2004	4.838	F	9100	\$13,104,000.00	4
2245190	M	W 58TH ST	AMTRAK 30 ST BRANCH	A		O	2	S	12/6/2004	4.588	F	4100	\$5,904,000.00	4
2245420	M	W 65TH ST E.B.	BRIDLE PATH W END			O	1	S	6/2/2004	4.900	F	1600	\$2,304,000.00	64
2229290	M	W 79 ST	AMTRAK	A		A	1	S	10/13/2004	4.559	F	4500	\$6,480,000.00	7
2231860	Q	W ALLEY ROAD	BCIP			A	2	S	8/18/2005	5.579	G	7200	\$10,368,000.00	11
2244020	K	W DR OV WK-MA.ENT	MEADOWPORT ARCH		P	O	1	S	4/5/2005	5.964	G	2500	\$3,600,000.00	55
2241470	B	W FORDHAM RD	METRO NORTH RR HUD	M		O	4	S	6/27/2005	5.806	G	16052	\$23,114,880.00	7
2241460	B	W TREMONT AVE	METRO NORTH RR HUD	M		O	8	S	1/20/2005	4.328	F	12900	\$18,576,000.00	5
2269260	K	W. 8TH STREET	SURF AVE.		P	O-PED	55	C	6/10/2004	3.846	F	14742	\$21,228,480.00	13
2269210	M	W.68TH STREET	AMTRAK	A		O	3	S	9/28/2005	6.780	V	5382	\$7,750,080.00	7
2269190	M	W.70TH STREET	AMTRAK	A		O	3	S	10/14/2005	6.417	V	17258	\$24,851,520.00	7
2241070	B	WALEY AVE	CONRAIL PT MORRIS	C		O	1	S	11/5/2004	6.567	V	2535	\$3,650,400.00	1
2241410	B	WALTON AVE	METRO NORTH RR HUD	M		O	1	S	4/6/2004	5.328	G	3600	\$5,184,000.00	4
2240620	M	WARDS ISLAND PED BRDG	HARLEM RIVER			WMO-PED	10	C	7/29/2003	4.049	F	12600	\$18,144,000.00	11
2243250	K	WASHINGTON AVE	FRANKLIN SHUTTLE	T		O	1	S	9/16/2004	6.391	V	3657	\$5,266,080.00	9
2066919	B M	WASHINGTON BRIDGE	HARLEM RIVER			WO	9	S	11/16/2004	4.821	F	128339	\$184,808,160.00	12
2246080	M	WEST DRIVE	BRIDLE PATH @ 64TH ST		P	O	1	S	6/2/2004	4.667	F	2000	\$2,880,000.00	64
2246330	M	WEST DRIVE	FEEDER TO LAKE		P	WO	1	S	2/23/2004	5.000	G	6700	\$9,648,000.00	64
2246000	M	WEST DRIVE	PED BET 61ST & 62ST		P	O	1	S	6/2/2004	5.267	G	2500	\$3,600,000.00	64
2246430	M	WEST DRIVE	PED OPP 109TH ST		P	O	1	S	2/26/2004	4.317	F	1200	\$1,728,000.00	64
2246360	M	WEST DRIVE	PED WALK OPP 82 ST		P	O	1	S	2/25/2004	5.682	G	3100	\$4,464,000.00	64
2246120	M	WEST DRIVE	TRANSVERSE RD #1		P	O	1	S	3/31/2004	4.833	F	7900	\$11,376,000.00	64
2246240	M	WEST DRIVE	TRANSVERSE RD #2		P	O	1	S	4/5/2004	4.167	F	7200	\$10,368,000.00	64
2246260	M	WEST DRIVE	TRANSVERSE RD #3		P	O	1	S	3/3/2004	4.800	F	5100	\$7,344,000.00	64
2246280	M	WEST DRIVE	TRANSVERSE RD #4		P	O	1	S	4/1/2004	4.033	F	4700	\$6,768,000.00	64

INVENTORY SORTED BY FEATURE CARRIED														
BIN	BO RO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	OTHR OWNR	TYPE	SPANS	R T N G S R C	INSPECTION DATE	RATING	VRB L RTN G	DECK AREA	REPLACEMENT COST	CD
2249710	R	WEST FOOTBRIDGE	CLOVE LAKE		P	WO-PED	2	C	12/2/2004	4.862	F	899	\$1,294,560.00	1
2244100	K	WEST FOOTBRIDGE	PROSPCT PK STREAM		P	WO-PED	1	C	9/9/2003	4.577	F	308	\$443,520.00	55
2267380	M	WEST STREET	RECTOR ST			AT	1	S	11/4/2005	5.033	G	25760	\$37,094,400.00	1
2241230	B	WESTCHESTER AVE	AMTRAK	A		O	3	S	8/11/2004	6.250	V	15600	\$22,464,000.00	2
2240180	B	WESTCHESTER AVE	BRONX RIVER			WO	1	S	7/1/2005	4.932	F	5476	\$7,885,440.00	2
2241000	B	WESTCHESTER AVE	CONRAIL PT MORRIS	C		O	1	S	9/2/2004	5.085	G	1740	\$2,505,600.00	1
2075837	B	WESTCHESTER AVE	HUTCHINSON RVR PKWY			A	2	S	4/5/2004	4.389	F	15858	\$22,835,520.00	10
2241329	B	WHITE PLAINS ROAD	AMTRAK	A		O	1	S	8/13/2004	4.891	F	6900	\$9,936,000.00	9
2248020	Q	WHITELAW PED BRDG	CONDUIT AVE			O-PED	7	C	3/15/2004	4.718	F	5500	\$7,920,000.00	10
1065210	Q	WHITESTONE EXP NB	BCIP (2065210)			A	1	S	7/8/2004	4.683	F	2500	\$3,600,000.00	7
2241369	B	WILLIAMSBRIDGE RD	AMTRAK	A		O	2	S	8/5/2004	4.836	F	10400	\$14,976,000.00	11
2240039	K M	WILLIAMSBURG BRIDGE	EAST RIVER	T		WEO	53	S	10/28/2004	4.556	F	824000	\$1,186,560,000.00	3
2240059	B M	WILLIS AVENUE	HARLEM RIVER			WMO	26	S	9/30/2005	3.222	F	94700	\$136,368,000.00	11
2266139	Q	WINCHESTER BLVD N.B.	BCIP			A	1	S	4/16/2004	4.633	F	6400	\$9,216,000.00	11
2266129	Q	WINCHESTER BLVD S.B.	BCIP			A	1	S	4/6/2004	4.592	F	4400	\$6,336,000.00	11
2248019	Q	WOODHAVEN BLVD	ATLANTIC AVE			O	3	S	6/10/2004	4.472	F	19400	\$27,936,000.00	9
2248159	Q	WOODHAVEN BLVD	QUEENS BLVD			O	2	S	7/7/2004	4.288	F	11500	\$16,560,000.00	6
2230540	Q	WOODSIDE AVE	278I (B.Q.E.)			A	1	S	1/5/2004	5.266	G	7500	\$10,800,000.00	2
2247400	Q	WOODSIDE AVE	CONRAIL	C		O	1	S	8/12/2005	5.067	G	8200	\$11,808,000.00	2
2247120	Q	WOODSIDE AVE	LIRR MAIN LINE	L		O	3	S	7/27/2005	4.444	F	14900	\$21,456,000.00	2
2242200	B	YANKEE STDM PED BRDG	E 153 ST, METRO NORTH	M	P	O-PED	5	C	7/29/2004	4.556	F	4200	\$6,048,000.00	4
790		BRIDGES				4531			SPANS			14535728	\$20,931,448,320.00	

STATEN ISLAND CULVERTS							
BIN	BORO	FEATURE CARRIED	FEATURE CROSSED		BRIDGE TYPE	SPANS	SOURCE
R00003	R	DELAFIELD AVE	RAYMOND PLACE		O	1	CITY
R00004	R	DICKIE AVE	NEAR COLUMBUS PLACE		O	1	CITY
R00005	R	BIDWELL AVE	COLUMBUS PLACE		O	1	CITY
R00006	R	LIVERMORE AVE	WATCHOGUE ROAD		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	IDLESE PLACE		O	1	CITY
R00022	R	IDLESE 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
R00039	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
R00044	R	REID AVE	HURBERT ST		O	1	CITY
R00046	R	RICHMOND TERRACE	SNUG HARBOR		O	2	CITY
R00047	R	SIMONSON AVE	WALKER ST		O	1	CITY
R00048	R	VAN NAME AVE	WALKER AVE		O	1	CITY
R00049	R	VAN PELT AVE	WALKER ST		O	1	CITY
R00050	R	UNION AVE	NETHERLAND AVE		O	1	CITY
R00051	R	HARBOR ROAD	DUBLIN PLACE		O	1	CITY
R00055	R	TRAVIS AVE	VICTORY BLVD		O	1	CITY
R00056	R	RICHMOND TERR	WESTERN AVE		WO	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
R00078	R	WILLOW BROOK ROAD	FILLMORE AVE		O	1	CITY
R00079	R	FILLMORE AVE	WILLOW BROOK ROAD		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
R00104	R	ST. GEORGE ROAD	ASCOTT AVE		O	1	CITY
R00106	R	ARTHUR KILL ROAD	RICHMONDTOWN ROAD		O	1	CITY
R00111	R	ELTINGVILLE BLVD	KATAN AVE		O	2	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
R00129	R	LAMOKA AVE	DEMOPOLIS AVE		O	1	CITY
R00130	R	DEMOPOLIS AVE	LAMOKA AVE		O	2	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

GLOSSARY

A brief 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.

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 Abutment.
(Credit: NYSDOT)

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.

APPROACH

Roadway at each end of a bridge, beyond the ABUTMENT, providing access to the bridge.

ARTERIAL BRIDGE

Any bridge upon which an arterial highway runs as it crosses streets, water, railroads, etc.

ASPHALT

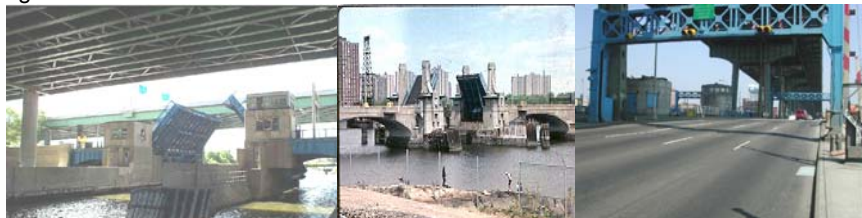
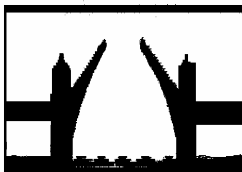
Black bituminous surface material made from aggregate and processed petroleum.

BACKFILL

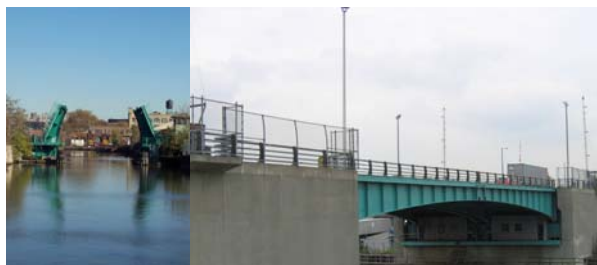
Material used to refill an excavated area.

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**, **Pelham**, **Hamilton Avenue**, Third Street, **Union Street**, and **Greenpoint Avenue** Bridges.



Unionport Bridge. (Credit: NYSDOT) Pelham Bridge. (Credit: Peter Basich)
Hamilton Avenue Bridge. (Credit: NYSDOT)



Union Street Bridge. Greenpoint Avenue Bridge.
(Greenpoint Credit: Michele N. Vulcan)

BASE COURSE

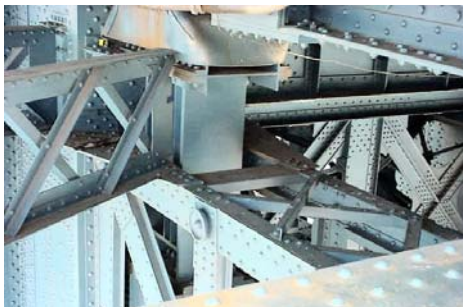
The layer of compacted ASPHALT directly under the WEARING SURFACE.

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)

BID

A contractor's formal proposal, including prices, to perform the work set out in the project SPECIFICATIONS.

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

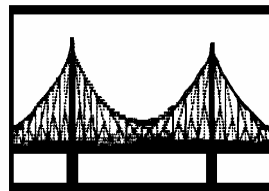
Bridges in which the superstructure is directly supported by cables, or stays, passing over or attached to towers located at the main piers.

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.

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 **Queensboro Bridge** is a notable example of this type of structure.



Queensboro Bridge. (Credit: Peter Basich)

CATCH BASIN

A receptacle, commonly box shaped and fitted with a grilled 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.

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.

CLEARANCE

The unobstructed vertical and horizontal space provided between two objects.

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.

CORROSION

The general disintegration of surface metal through oxidation.

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.

DEAD LOAD

The weight of the bridge itself without any traffic or external loads.

DECK

The supporting slab and wearing surface of a bridge.

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.

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.

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)

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.
(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.

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.

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.

GRIZZLY

A coarse screen used to remove oversize pieces from ASPHALT or earth.

GUTTER

A paved drain commonly constructed in conjunction with the curbs of the roadway.

JACKING

The mechanical lifting or sliding of an element.

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.)

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

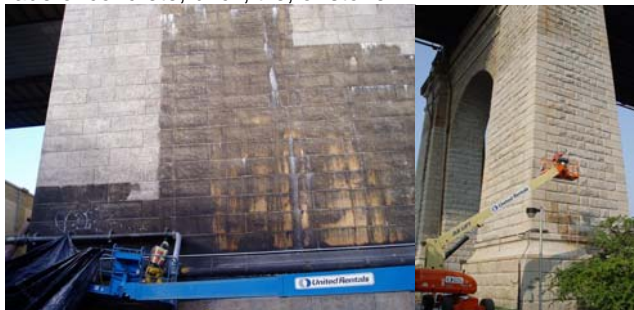
The control plan for traffic around and through a construction site.

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 Queensboro Bridge.

MEDIAN

A strip of land between opposing lanes of roadway traffic; also known as a median strip.

MILESTONE

A measurable goal which marks a point of achievement on the way to completing the project.

MONITORING INSPECTION

Inspection of a condition known have a potential for developing into a hazard to the structure or the public.

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.

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.



A Bulb of the Queensboro Bridge Necklace Lights.
(Credit: Peter Basich)

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.

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 and West 8th 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.



Left Side of Pier 1 of Hamilton Avenue Bridge. Pier 17 of Rikers Island 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.

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.

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.

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.

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.

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.

REBAR, or REINFORCING BAR

Steel bars placed within concrete to add strength (tensile load-bearing capacity) to the structure.

RECONSTRUCTION

Reconstruction of severely deteriorated bridges includes extensive rehabilitation, as well as partial or complete replacement, either in-kind or newly designed.

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.

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. (Credit: NYSDOT)

RETROFIT

Upgrading parts of an existing structure to meet current standards.

RIPRAP

Irregularly broken, random-sized pieces of rock used for a foundation or to prevent soil erosion.

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.

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.

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 and Madison Avenue Bridges. (Credit: NYSDOT)

SET

When the consistency of mortar changes from plastic to hard.

SHORING

Temporary bracing to support a structure.

SOFFIT

The underside of a structural component, such as a beam or arch.

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.

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.

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 181st Street. This bridge opened to traffic in December 1888 and, with its approaches, is 2,375 feet long.



Washington Bridge. (Credit: Peter Basich) (Second View Credit: NYSDOT)

STEM

The vertical part of a retaining wall, usually made of concrete or masonry.

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 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.



Division Engineers Installing Strain Gauges in 1995 on the Greenpoint Avenue Bridge

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 & Riveter Joseph Antony Repairing a Red-Flagged Stringer on the Bridge. (Credit: Hany Soliman)

SUBSTRUCTURE

The name given to those elements below a bridge's road deck system, namely the ABUTMENTS, ANCHORAGES, BEARINGS, and PIERS.

SUPERSTRUCTURE

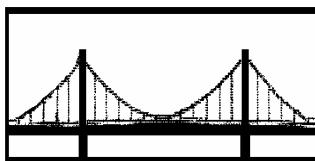
The superstructure is all that part of a structure above the bearings of simple and continuous spans, skewbacks of arches and top of footings of rigid frames; excluding backwalls, WINGWALLS and wing protection railings.

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.

SUSPENSION BRIDGES

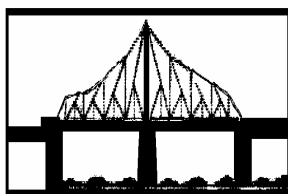
Suspension bridges are high level bridges with spans that usually exceed 1,500 feet in length. Supported by large wire CABLES that are anchored to masses of concrete and which pass over the tops of towers, the road DECK is suspended at regular intervals by smaller cables called suspenders. While the 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.



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**, **145th Street**, **University Heights**, **Grand Street** and **Macombs Dam** Bridges.



Madison Avenue Bridge and 145th Street Bridge. (Credit: Peter Basich)



University Heights Bridge. (Credit: Peter Basich) Grand Street Bridge. (Credit: NYSDOT) Macombs Dam Bridge. (Credit: Michele N. Vulcan)

THERMAL CAPACITY

The ability of MASONRY to hold heat and/or cold.

THERMAL MOVEMENT

The movement of a bridge structure due to a change in temperature.

TIME AND MATERIALS CONTRACT

A contract in which the contractor's labor and material costs are reimbursed at a predetermined rate of profit.

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.



Williamsburg Bridge Tower. (Credit: Peter Basich) Inspectors on Manhattan Bridge Tower. (Manhattan Credit: NYSDOT)

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.

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 174th 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. (2nd View Credit: Peter Basich)
Ninth Street Bridge. (Credit: Bojidar Yanev)

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.

WEARING SURFACE

The topmost layer of material applied on the DECK or roadway that receives the traffic loads; also known as wearing course.

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 Wingwalls. (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.

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. Hutchinson River Parkway Under Westchester Avenue. (Hutchinson Credit: Anthony Napolitano) 161st Street Pedestrian Bridge Over Major Deegan Expressway.

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.



Drain Truck on Brooklyn Bridge Ramp. (Credit: Peter Basich)

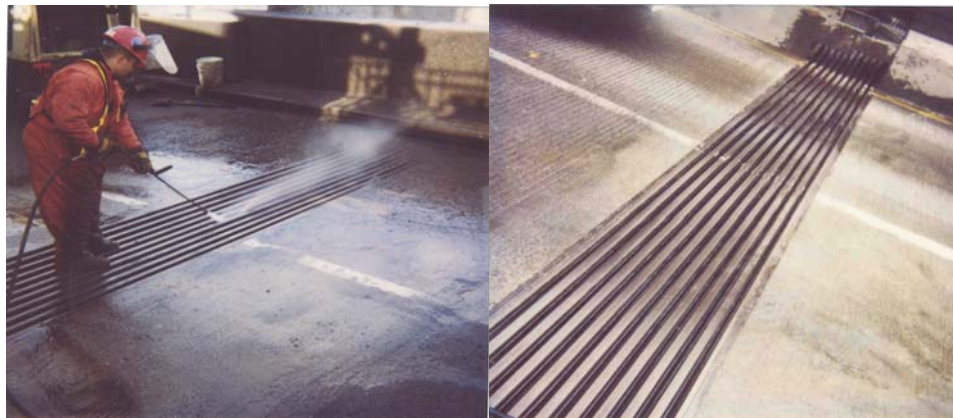
COMPONENTS OF THE PREVENTIVE MAINTENANCE PROGRAM*



Cleaning Catch Basins on the Manhattan Bridge

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.



Expansion Joint Cleaning on the Manhattan Bridge. Clean Expansion Joint on the Manhattan Bridge

Cleaning of Open Grating Decks

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.



Mechanical Sweeper – Side and Rear Views. (Credit: Peter Basich)

*COMPONENTS OF THE PREVENTIVE MAINTENANCE PROGRAM**

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.

Roadway Surface Maintenance

Crack Sealing in Pavement and Curblin 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.

Repair of Sidewalks and Curbs Sidewalk repair to restore sidewalk to original condition. Curb repair to be undertaken along with this task.



Repaired Bullnose Curb and Sidewalk at Crotona Avenue. (Credit: Joseph Saverino)

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.



Asphalt Trailer and Tar Kettle. (Credit: Peter Basich)

COMPONENTS OF THE PREVENTIVE MAINTENANCE PROGRAM*



Masonry Crews and Highway Repairers Repairing Recurrent Potholes on the Eastbound Brooklyn-Queens Expressway, Just Past the Middagh Street Underpass. Break-Out and Removal of the Old Asphalt Roadway and Concrete Deck. (Credit: Anthony Napolitano)



Installing New Concrete With Rebar in the Cutout on the Eastbound BQE. (Credit: Anthony Napolitano)



Rolling and Tamping the Asphalt on the Eastbound BQE. (Credit: Anthony Napolitano)



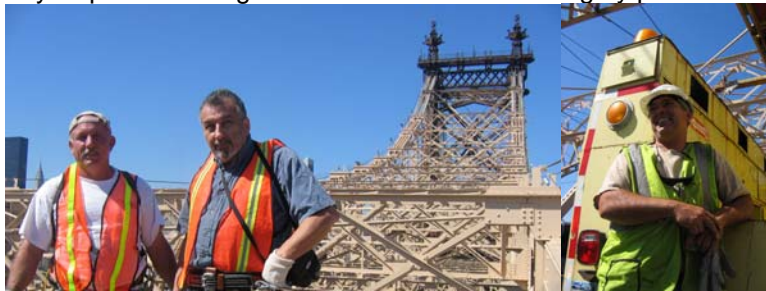
Sealing the Edges of the Cutout With Asphalt Cement to Prevent Water From Seeping In. Closeup of Part of the Completed Concrete Deck Repair on the Eastbound BQE. (Credit: Anthony Napolitano)

COMPONENTS OF THE PREVENTIVE MAINTENANCE PROGRAM*

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.



Electrician Robert Stackpole and Supervisor Electrician Ben Cipriano Atop the Queensboro Bridge. Electrician Helper Richard Parisi. (Credit: Peter Basich)



Changing a Bulb on the Queensboro Bridge Necklace Lighting. (Credit: Peter Basich)

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.

COMPONENTS OF THE PREVENTIVE MAINTENANCE PROGRAM*



Inspecting the Eyebars in the Brooklyn Anchorage of the Manhattan Bridge. (Credit: NYSDOT)
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. (Credit: Anatoly Orlov)

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.



Abrasive Blasting. Platform Installed for Painting of the Queensboro Bridge (Credit: Vadim Sokolovsky)
Containment on Queensboro Bridge Manhattan Ramp. (Credit: Peter Basich)

COMPONENTS OF THE PREVENTIVE MAINTENANCE PROGRAM*



Inside the Queensboro Bridge Containment. Roadway Containment.
(Roadway Credit: Michele N. Vulcan)

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.

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. 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 a single finish coat are applied by brush or roller. Occasionally, when there is no danger of overspray, spray painting may be performed.

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.

COMPONENTS OF THE PREVENTIVE MAINTENANCE PROGRAM*



Spot Cleaning Before Painting on the Williamsburg Bridge. Primer Coating on the Williamsburg Bridge.



Salt Splash Painting on the Williamsburg Bridge.
(Credit: Fouad Althaibani)



Containment Examples. (Queensboro Credit: Peter Basich)

COMPONENTS OF THE PREVENTIVE MAINTENANCE PROGRAM*



Bridge Painters on the Willis Avenue Platform. Bridge Painters Robert Avellino and Joseph Guzzetta; Deputy Director of In-House Painting Earlene Powell; Bridge Painter Andrew Law; Supervisor Bridge Painter Hughie Flood; and Bridge Painter Joao Nascimento.

*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 2005

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 (INCLUDES ASSISTANTS)	19	70
BRIDGE PAINTERS	7	37
BRIDGE REPAIRERS/RIVETERS	2	41
CARPENTERS	3	14
CEMENT MASONS	-	5
DEBRIS REMOVERS	-	1
ELECTRICIANS (INCLUDES HELPERS)	4	23
HIGHWAY REPAIRERS (INCLUDES ASSISTANTS & SEASONAL WORKERS)	22	85
MACHINISTS	-	1
MOTOR GRADER OPERATORS	-	1
OILERS	-	12
STATIONARY ENGINEERS (ELECTRIC)	-	1
TRACTOR OPERATORS	-	1
TRAFFIC DEVICE MAINTAINERS	-	3
TOTALS	59 SUPERVISORS	298 MECHANICS

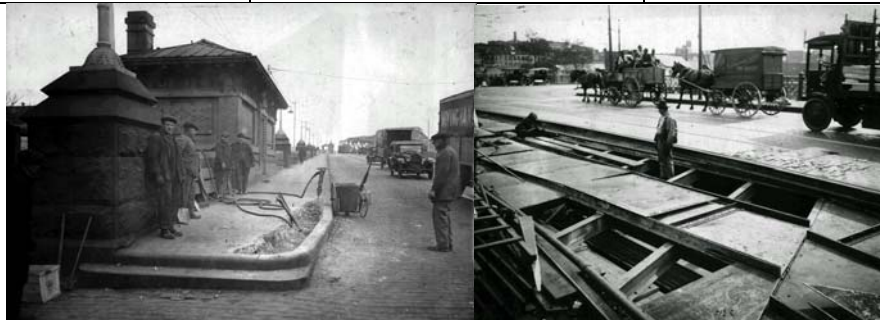


Bridge Operator Mary Harrigan at the Union Street Bridge. (Credit: Adal Maldonado)
 Bridge Repairer/Riveters Repairing the Willis Avenue Bridge Grating. (Credit: Reza Taheri)

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
TOTALS	42 SUPERVISORS	441 MECHANICS



Willis Avenue Bridge Curbing and Road Repair in the Early 1920's.

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 OSHA Approved Respirator & Filters Work Gloves Long Cuff Work Gloves Unlined Work Gloves Lined Chipping Hammer Clip Boards Deceleration Lanyards Flashlight (2 "D" Cell) Safety Vest Belt With Two Drop Forged D-Rings 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	5 Boro Map Binoculars Telephone Directory Broom Camera 35mm Digital Camera Hand Compass Screwdriver Set (Regular) Screwdriver Set (Phillips) Dye Penetrant Kit Lantern D-Meter With Test Block Marking Paint Spray Retract Survey Rod 25' Sledge Hammer (8 lbs.) Thermometer Spray Penetrating Oil Cell Phone/Radio Vernier Calipers Wrenches 12" Tool Pouch Lumber Crayons Awl Spray Paint Calipers Drafting Equipment Hacksaw Hacksaw Blades (Extra) Paint Scraper Inspection Mirror Level 24" Pliers 8" Plumb Bob Pocket Knife Ruler 25' or 30' (Metal) Ruler 100' (Fiberglass) Scraper Blades (Extra) Snips Wire Brush Folding Ruler 8' Rope ½" With 100' Coil Handheld Computer	Clip Boards Flashlight (3 "D" Cell) Fire Extinguisher First Aid Kit 3 Flags Step Ladder 6' or 8' 10 Traffic Cones Tool Chest Put In Trucks By Highway Repairs When Needed Generator Oil For Generator Approved Safety Gasoline Can Bolt Cutter Extension Ladder 32' Extension Ladder 24' Extension Ladder 16' Shovel Push Broom Dust Pan & Sweep Broom Water Cooler Flood Lights  Division Personnel Inspecting Paerdegat Bridge Utilizing a Barge. (Credit: Avelino Leyco Jr.)

*New York City Department of Transportation, Division of Bridges. *Inspections and Bridge Management Section Equipment Checklist*. 2003.

JANUARY

Relax Magazine

"Imagine - Tall Towers"

"Milieu"

"Jet Set"

"You Here With Me"

"Cosmetic Surgery Live 2"

"Trouble"

"Nailed Right In"

FEBRUARY

"The Cut"

"Rent"

"Amici Forever"

"Kid America Adventure Hour"

MARCH

"Bar Chefs"

RCI Ventures Magazine

"Brooklyn, the Musical" Commercial

"Colors"

"Call Me"

"Rent"

"Like A Springsteen Song"

"Ambition"

APRIL

"Untitled CPI"

"Mean Streets"

"Grounded"

"The Girl Next Door"

"Big Opera Has Come From New York!"

"J Soul Brothers"

Replay Jeans Commercial

"Trip"

"Am Bràighe Æs Am Bayou" ("From Braes to the Bayou")

"The History of Capitalism"

Trojan Commercial

WABC Eyewitness News

Commercial

MAY

"Trip"

Grazia Magazine

"The Wandering Golfer"

"Spit"

"Boarding Now"

Budweiser Commercial

Digital Still Photography

Television

Short Film

Video

Short Film

Television

Short Film

Motion Picture

Television

Motion Picture

Video

Television Pilot

Television Documentary

Still Photography

Television

Short Film

Short Film

Motion Picture

Digital Film

Television

Motion Picture

Short Film

Video

Television Pilot

Television Documentary

Documentary

Television

Television

Television Documentary

Television Documentary

Television

Television

Television

Still Photography

Television

Documentary

Television

Television

Brooklyn Bridge Walkway

Pulaski Bridge Walkway

Manhattan Bridge Bicycle Path

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Williamsburg Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Williamsburg Bridge Roadway

Brooklyn Bridge Walkway

Queensboro Bridge Roadway

Queensboro Bridge Roadway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Manhattan Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Delancey Street Pedestrian Bridge

Wards Island Pedestrian Bridge

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Brooklyn Bridge Walkway

Broadway Bridge Walkway

Brooklyn Bridge Walkway

Manhattan Bridge Roadway

MOTION PICTURE, TELEVISION, VIDEO, & STILL PHOTOGRAPHY HIGHLIGHTS



Two Time Academy Award-Winning Cinematographer Robert Richardson Shooting the Budweiser TV Commercial on the Manhattan Bridge in May 2005. (Credit: Sasha Tsyrlin)

Fashion Institute of Technology
Red Magazine
"The Groomsman"

Still Photography
Still Photography
Motion Picture

Brooklyn Bridge Walkway
Brooklyn Bridge Walkway
City Island Road Bridge over
Eastchester Bay
Brooklyn Bridge Walkway
Brooklyn Bridge Walkway
Brooklyn Bridge Walkway
Brooklyn Bridge Walkway
Brooklyn Bridge Walkway
Brooklyn Bridge Roadway
Brooklyn Bridge Walkway

"Texas Ranch House"
"Brit School"
Bambini Magazine
Northern Quilted Tissue Commercial
"Devdas"
"Around the World"
"Beautiful People"

Television
Television Documentary
Still Photography
Television
Motion Picture
Television
Television

JUNE

Prima Magazine
Pepsi Commercial (Brazil)

Still Photography
Television

Brooklyn Bridge Walkway
Brooklyn Bridge Walkway
Manhattan Bridge Roadway
Willis Avenue Bridge

"Rescue Me"

Television



Shooting the TV series "Rescue Me" at the Willis Avenue Bridge in June 2005. (Credit: Peter Basich)

Outside Magazine

Still Photography

Brooklyn Bridge Bicycle Path
Manhattan Bridge Bicycle Path
Williamsburg Bridge Bicycle Path
Queensboro Bridge Roadway
Brooklyn Bridge Walkway
Boston Post Road Bridge
Brooklyn Bridge Walkway
Brooklyn Bridge Walkway
Madison Avenue Bridge
Brooklyn Bridge Roadway
Brooklyn Bridge Walkway
Brooklyn Bridge Walkway
Manhattan Bridge Walkway
Brooklyn Bridge Walkway
Brooklyn Bridge Walkway
Brooklyn Bridge Walkway

"Os Desafinados"
The Playmaker Magazine
"One Armed Drifter"
Brides Magazine
Verizon Commercial
"A Man's Man"
Rolling Stone Magazine
Allure Magazine
Nike Incorporated

Motion Picture
Still Photography
Motion Picture
Still Photography
Television
Motion Picture
Still Photography
Still Photography
Still Photography

Dr. Scholl's Shoes
"Meet Our People"
Elle Magazine (Germany)

Still Photography
Training Film
Still Photography

MOTION PICTURE, TELEVISION, VIDEO, & STILL PHOTOGRAPHY HIGHLIGHTS

Nike Commercial
"Lucky Number Slevin"
"Get Rich or Die Trying"

Television
Motion Picture
Motion Picture

Brooklyn Bridge Walkway
Queensboro Bridge Roadway
East 167th Street Underpass of the
Grand Street Concourse

JULY

"Forever"
"Night Train"
Jane Magazine
Texman Clothing
Vogue Magazine
"The Gents"
Fevier & Company
Toyota Motors Commercial
Susan G. Komen Breast Cancer
Foundation Public Service
Announcement
Oggi Magazine
Neiman Marcus Catalogue
American Express Commercial
Vogue Magazine (Japan)
"Naked Science"
"Horizon/Epigenetics"
"Departure Lounge"
Teen Vogue Magazine
"Stella"

Television
Television
Still Photography
Still Photography
Still Photography
Short Film
Still Photography
Television
Television

Brooklyn Bridge Roadway
Brooklyn Bridge Roadway
Brooklyn Bridge Walkway
Brooklyn Bridge Walkway
Brooklyn Bridge Walkway
Manhattan Bridge Arch Entrance
Brooklyn Bridge Walkway
Manhattan Bridge Roadway
Williamsburg Bridge Walkway

AUGUST

Glamour Magazine (Spain)
Ping Golf Club Commercial
"Love Generation"
"Fast Track"

Still Photography
Television
Music Video
Motion Picture

American Airlines Commercial

Television

Brooklyn Bridge Walkway
Brooklyn Bridge Walkway
Brooklyn Bridge Walkway
Clove Road Bridge over SIRT
South Shore
Park Avenue Viaduct over East
42nd Street
Park Avenue Tunnel
Brooklyn Bridge Walkway and
Roadway
Brooklyn Bridge Walkway

"Backyard Habitat for Animal
Planet"
"Bring In the Rain"
"Inside Man"
"Good Deal with Dave Lieberman"
Saks Fifth Avenue
"Helen on Her Own"

Television
Music Video
Motion Picture
Television
Still Photography
Short Film

Williamsburg Bridge Roadway
Brooklyn Bridge Roadway
Brooklyn Bridge Walkway
Manhattan Bridge Colonnade
Brooklyn Bridge Walkway

SEPTEMBER

"Advance Warning"
"The Prelude"
"Panorama"
"A Day in the Life of a Mercedes
Driver Around the World"
Glamorous Magazine (Japan)
"Be Real"
Television for the Deaf and Hard of
Hearing Public Service
Announcement
Caprisa Luggage
GQ Magazine
Oil of Olay Commercial
Vanidad Magazine
"Everyday"
"Janeman"

Television
Short Film
Television Documentary
Video
Still Photography
Television Documentary
Television
Still Photography
Still Photography
Television
Still Photography
Training Film
Motion Picture

Brooklyn Bridge Walkway
Manhattan Bridge Colonnade
Manhattan Bridge Walkway
Brooklyn Bridge Walkway
Brooklyn Bridge Roadway
Brooklyn Bridge Walkway
Williamsburg Bridge Walkway
Brooklyn Bridge Walkway
Brooklyn Bridge Walkway
Brooklyn Bridge Roadway
Brooklyn Bridge Walkway
Brooklyn Bridge Walkway
Brooklyn Bridge Walkway

MOTION PICTURE, TELEVISION, VIDEO, & STILL PHOTOGRAPHY HIGHLIGHTS

<i>"Call to Greatness"</i>	<i>Television</i>	<i>Brooklyn Bridge Walkway and Roadway</i>
OCTOBER		
<i>"Call to Greatness"</i>	<i>Television</i>	<i>Brooklyn Bridge Walkway</i>
<i>"Architecture=e2"</i>	<i>Television Documentary</i>	<i>Brooklyn Bridge Walkway</i>
<i>"Janeman"</i>	<i>Motion Picture</i>	<i>Brooklyn Bridge Roadway</i>
		<i>Queensboro Bridge Roadway</i>
<i>"If I Didn't Care"</i>	<i>Motion Picture</i>	<i>Pulaski Bridge Walkway</i>
<i>DKNY In-Store Promotion</i>	<i>Video</i>	<i>Brooklyn Bridge Walkway and Roadway</i>
<i>"Path of Most Resistance"</i>	<i>Short Film</i>	<i>Brooklyn Bridge Walkway</i>
<i>Mercedes-Benz Commercial</i>	<i>Video</i>	<i>Brooklyn Bridge Roadway</i>
<i>Nokia</i>	<i>Still Photography</i>	<i>Brooklyn Bridge Walkway</i>
<i>"Word"</i>	<i>Television Documentary</i>	<i>Brooklyn Bridge Roadway</i>
<i>Costal Living Magazine</i>	<i>Still Photography</i>	<i>Brooklyn Bridge Walkway</i>
		<i>Manhattan Bridge Walkway</i>
		<i>Williamsburg Bridge Walkway</i>
		<i>Queensboro Bridge Walkway</i>
		<i>Wards Island Pedestrian Bridge</i>
		<i>Macombs Dam Bridge</i>
<i>"Across the Universe"</i>	<i>Motion Picture</i>	<i>Eagle Avenue over East 161st Street</i>
<i>"Kank"</i>	<i>Motion Picture</i>	<i>Brooklyn Bridge Walkway</i>
<i>"Best View in NYC"</i>	<i>Television</i>	<i>Brooklyn Bridge Walkway</i>
<i>"Beautiful Ohio"</i>	<i>Motion Picture</i>	<i>Grand Street Bridge</i>
<i>National Geographic Channel Commercial</i>	<i>Television</i>	<i>Brooklyn Bridge Walkway</i>
<i>"Naked Science"</i>	<i>Television Documentary</i>	<i>Brooklyn Bridge Walkway</i>
<i>REV'IT Motorcycle Apparel & Accessories</i>	<i>Still Photography</i>	<i>Manhattan Bridge Roadway</i>
NOVEMBER		
<i>"Click"</i>	<i>Motion Picture</i>	<i>Brooklyn Bridge Walkway</i>
<i>Food Network Commercial</i>	<i>Television</i>	<i>Under the Williamsburg Bridge at Delancey Street</i>
<i>Lincoln Navigator Promotion</i>	<i>Video</i>	<i>Queensboro Bridge</i>
<i>"The Aerialist"</i>	<i>Short Film</i>	<i>Queensboro Bridge Walkway</i>
<i>"Superman Returns"</i>	<i>Still Photography</i>	<i>Brooklyn Bridge Walkway</i>
<i>YMCA</i>	<i>Still Photography</i>	<i>Brooklyn Bridge Walkway</i>
<i>"Kank"</i>	<i>Motion Picture</i>	<i>Brooklyn Bridge Walkway</i>
<i>Foam Magazine</i>	<i>Still Photography</i>	<i>Brooklyn Bridge Walkway</i>
<i>"A Crime"</i>	<i>Motion Picture</i>	<i>Manhattan Bridge Walkway</i>
		<i>Brooklyn Bridge Roadway</i>
<i>"Fulda World"</i>	<i>Television</i>	<i>Brooklyn Bridge Walkway</i>
DECEMBER		
<i>"El Cantante"</i>	<i>Motion Picture</i>	<i>Riverside Drive over West 155th Street</i>
<i>Credit Suisse</i>	<i>Still Photography</i>	<i>Brooklyn Bridge Walkway</i>
<i>"Psychics"</i>	<i>Television Documentary</i>	<i>Brooklyn Bridge Walkway</i>
<i>"Delirious"</i>	<i>Motion Picture</i>	<i>Pulaski Bridge Roadway</i>
<i>"Richard & Judy Show"</i>	<i>Television</i>	<i>Brooklyn Bridge Walkway</i>
<i>"Thinking of You In the Woods of Heaven"</i>	<i>Motion Picture</i>	<i>Manhattan Bridge</i>

SUGGESTED READING

- Abdel-Sayed, George, Bakht, Baidar, and Jaegar, Leslie G. (editors). *Soil-Steel Bridges: Design and Construction*. McGraw-Hill Professional, 1994.
- Annan, Jason, and Gabriel, Pamela. *Great Cooper River Bridge*. University of South Carolina Press, 2002.
- Azizinamini, Atorod, Yakel, Aaron, Abdelrahman, Magdy, (editors), and United Engineering Foundation. *High Performance Materials in Bridges: Proceedings of the International Conference*. American Society of Civil Engineers, August 2003.
- Beard, Jeffrey L., Wundram, Edward C., and Loulakis, Michael C. *Design-Build: Planning Through Development*. McGraw-Hill Professional, 2001.
- Bennett, David. *The Architecture of Bridge Design*. American Society of Civil Engineers, 1997.
- Bennett, David. *Creation of Bridges: From Vision to Reality - the Ultimate Challenge of Architecture, Design, and Distance*. Book Sales Incorporated, 1999.
- Berlow, Lawrence H. *The Reference Guide to the World's Famous Landmarks: Bridges, Tunnels, Dams, Roads and Other Structures*. Oryx Press, 1997.
- Beskos, D. E., and Anagnostopoulos, S. A. (editors). *Computer Analysis and Design of Earthquake Resistant Structures: A Handbook (Advances in Earthquake Engineering, Volume 3)*. Computational Mechanics, December 1997.
- Bettigole, Neal H., and Robison, Rita. *Bridge Decks: Design, Construction, Rehabilitation, Replacement*. American Society of Civil Engineers, 1997.
- Billington, David P. *Robert Maillart and the Art of Reinforced Concrete*. MIT Press, 1991.
- Billington, David P. *Robert Maillart: Builder, Designer, and Artist*. Cambridge University Press, 1997.
- Billington, David P. *The Tower and the Bridge: The New Art of Structural Engineering*. Princeton University Press, 1985.
- Blakstad, Lucy (editor). *Bridge: The Architecture of Connection*. Birkhauser Verlag, 2002.
- Branco, Fernando, A., and De Brito, Jorge. *Handbook of Concrete Bridge Management*. American Society of Civil Engineers, 2003.
- Brown, David J. *Bridges*. Hungry Minds, Inc., 1993.
- Brown, David J. *Bridges: Three Thousand Years of Defying Nature*. Motorbooks International, October 2001.
- Canel, Annie, Oldenziel, Ruth, and Zachman, Karin, (editors). *Crossing Boundaries, Building Bridges : Comparing the History of Women Engineers, 1870s-1990s*. Gordon & Breach Publishing Group, 2000.
- Canter, Larry W. *Environmental Impact Assessment*. McGraw-Hill Science/Engineering/Math, 2nd edition, 1995.
- Chatterjee, Suhken. *Design of Modern Steel Bridges*. Blackwell Science Inc., 2nd edition, 2003.
- Chen, Wai-Fah, and Duan, Lian, (editors). *Bridge Engineering Handbook*. CRC Press, 1999.
- Cheung, M. S., Li, W., and Chidiac, S. E. *Finite Strip Analysis of Bridges*. E & F N Spon, 1996.
- Choi, Ying-Kit. *Principles of Applied Civil Engineering Design*. American Society of Civil Engineers, 2004.
- Committee on History and Heritage of American Civil Engineering. *American Wooden Bridges*. American Society of Civil Engineers, 1976.
- Conwill, Joseph D. *Images of America: Vermont Covered Bridges*. Arcadia Publishing, 2004.
- Cook, Martin. *Medieval Bridges*. Shire Publications, 1999.
- Cortright, Robert S. (photographer) *Bridging: Discovering the Beauty of Bridges*. Bridge Ink, 1998.
- Cossons, Neil, and Trinder, Barrie. *Iron Bridge: Symbol of the Industrial Revolution*. Phillimore & Company, Limited, 2002.
- Creazza, G., and Mele, M. (editors). *Advanced Problems in Bridge Construction*. Springer-Verlag New York, Incorporated, 1991.
- Dale, Frank T. *Bridges over the Delaware River: A History of Crossings*. Rutgers University Press, 2003.
- Day, Robert W. *Geotechnical Earthquake Engineering Handbook*. McGraw-Hill, 2001.
- Delony, Eric. *Landmark American Bridges*. American Society of Civil Engineers, 1993.
- Derucher, Kenneth N., Minor, John, and White, Kenneth R. (editor). *Bridge Maintenance Inspection and Evaluation*. Marcel Dekker, 2nd edition, 1992.

SUGGESTED READING

- Dillon, Richard, Moulin, Thomas, and Denevi, Don (editors). *High Steel: Building the Bridges Across San Francisco Bay*. Celestial Arts, reissue edition, 1998.
- Dupre, Judith, and Gehry, Frank O. (introduction). *Bridges: A History of the World's Most Famous and Important Spans*. Black Dog & Leventhal, 1997.
- Eggert, Helmut, and Kauschke, Wolfgang. *Structural Bearings*. John Wiley & Sons, 2003.
- Evans, Benjamin D., and Evans, June R. *Pennsylvania's Covered Bridges: A Complete Guide*. University of Pittsburgh Press, revised and updated edition, 2001.
- Evans, Benjamin D., and Evans, June R. *New England's Covered Bridges: A Complete Guide*. University Press of New England, 2004.
- Fowler, John, Baker, Benjamin, Boyd Whyte, Iain (illustrator), MacDonald, Angus J., and Baxter, Colin (photographer). *John Fowler, Benjamin Baker: Forth Bridge*. Edition Axel Menges, 1998.
- Frampton, Kenneth, Tischhauser, Anthony, and Webster, Anthony C. (editors). *Calatrava Bridges*. Birkhauser (Architectural), 3rd edition, 2004.
- Frangopol, Dan M. *Bridge Safety and Reliability*. American Society of Civil Engineers, 1999.
- Fuller, Robert G., Lang, Charles R., and Lang, Roberta H., eds. *Twin Views of the Tacoma Narrows Bridge Collapse*. American Association of Physics Teachers, 2000.
- Gere, James M. *Mechanics of Materials*. Brooks/Cole Publishing, 5th edition, 2000.
- Ghosh, Uptal K. *Repair & Rehabilitation of Steel Bridges*. Balkema Publishers, 2000.
- Gimsing, Niels J. *Cable Supported Bridges : Concept and Design*. John Wiley & Sons, 2nd edition, 1997.
- Gohler, Bernhard, and Pearson, Brian. *Incrementally Launched Bridges: Design and Construction*. John Wiley & Sons, 2000.
- Gottemoeller, Frederick. *Bridgescape: The Art of Designing Bridges*. John Wiley & Sons, 2nd edition, 2004.
- Graf, Bernhard. *Bridges That Changed the World*. Prestel USA, 2002.
- Grigg, Neil S., Criswell, Marvin E, Fontane, Darrell G., and Siller, Thom. *Civil Engineering Practice in the Twenty-First Century : Knowledge and Skills for Design and Management*. American Society of Civil Engineers, 2001.
- Hadlow, Robert W. *Elegant Arches, Soaring Spans: C. B. McCullough, Oregon's Master Bridge Builder*. Oregon State University Press, 2001.
- Hambly, Edmund C. *Bridge Deck Behaviour*. E & F N Spon, 2nd edition, 1990.
- Hamill, Les. *Bridge Hydraulics*. E & F N Spon, 1998.
- Harding, J. E., Parke, G. E. R., and Ryall, M. J. (editors). *Bridge Management: Third International Conference on Bridge Management, 1996*. E & F N Spon, 1996.
- Harding, J. E., Parke, G. E. R., and Ryall, M. J. (editors). *Bridge Management: Inspection, Maintenance, Assessment, and Repair (First International Conference on Bridge Management, 1990)*. Elsevier Applied Science, 1990.
- Hare, Clive H. *Painting of Steel Bridges And Other Structures*. Van Nostrand Reinhold, 1990.
- Hobbs, Richard, and Holstine, Craig E. *Spanning Washington: Historic Highway Bridges Of The Evergreen State*. Washington State University, 2005.
- Hopkins, H. J. *A Span of Bridges: An Illustrated History*. Praeger Publishers, 1970.
- Horton, Tom, and Wolman, Baron (photographer). *Superspan: The Golden Gate Bridge*. Squarebooks, revised edition, 1998.
- Huxtable, Ada Louise. *The Architecture of New York*. Doubleday, 1964.
- Hyde, Charles K. *Historic Highway Bridges of Michigan*. Wayne State University Press, 1993.
- Ito, Manabu, Fujino, Yozo, Miyata, Toshio, and Narita, Nobuyuki (editor). *Cable-Stayed Bridges*. Elsevier Science Ltd., 1991.
- Jackson, Donald C., and McCullough, David G. (foreword). *Great American Bridges and Dams*. John Wiley & Sons, 1996.
- Jackson, Robert W. *Rails Across the Mississippi: A History of the St. Louis Bridge*. University of Illinois Press, 2001.
- Jaffe, Rochelle C. *Masonry Instant Answers (Instant Answer Series)*. McGraw-Hill Professional, 2003.
- Johnson, Stephen, and Leon, Roberto T. *Encyclopedia of Bridges and Tunnels*. Facts on File, 2002.

SUGGESTED READING

- Kappos, Andreas J. (editor). *Dynamic Loading and Design of Structures*. E & F N Spon, 2001.
- Kidney, Walter C., and Hare, Clyde (photographer). *Pittsburgh's Bridges: Architecture and Engineering*. Landmark Store, 1999.
- Klein, Lawrence A. *Sensor Technologies and Data Requirements for ITS Applications*. Artech House, 2001.
- Koglin, Terry. *Movable Bridge Engineering*. John Wiley & Sons, 2004.
- Kranakis, Eda. *Constructing a Bridge: An Exploration of Engineering Culture, Design, and Research in Nineteenth-Century France and America*. MIT Press, 1997.
- Kratkey, Richard J. (Editor). *Assessment of Performance of Vital Long-Span Bridges in the United States*. American Society of Civil Engineers, 2003.
- Larsen, A., and Esdahl, S. (editors). *Bridge Aerodynamics: Proceedings of the International Symposium on Advances in Bridge Aerodynamics, Copenhagen Denmark, 10-13 May 1998*. Balkema Publishers, May 1998.
- Lee, David J. *Bridge Bearings and Expansion Joints*. E & F N Spon, 2nd edition, 1994.
- Leet, Kenneth M., and Uang, Chia-Ming. *Fundamentals of Structural Analysis*. McGraw-Hill Science/Engineering/Math, 2nd edition, 2004.
- Leonhardt, Fritz. *Bridges: Aesthetics & Design*. Butterworth-Heinemann, 1983.
- Malhotra, V. M., and Carino, N. J. (editors). *Handbook on Nondestructive Testing of Concrete*. Auerbach Publishing, 2nd edition, 2004.
- Mallett, G. P. *Repair of Concrete Bridges (State-Of-The-Art Review)*. American Society of Civil Engineers, 1994.
- Mao, Yi-sheng. *Bridges in China, Old and New: From the Ancient Chaochow Bridge to the Modern Nanking Bridge over the Yangtze*. Foreign Languages Press, 1978.
- Mason, Philip P. *Ambassador Bridge: A Monument to Progress*. Wayne State University Press, 1987.
- McKee, Brian J., and American Society of Civil Engineers. *Historic American Covered Bridges*. Oxford University Press, April 1997.
- McLeish, Andrew. *Underwater Concreting and Repair*. John Wiley & Sons, 1994.
- Measures, Raymond M. *Structural Monitoring With Fiber Optic Technology*. Academic Press, 2001.
- Melaragno, Michele G. *Preliminary Design of Bridges for Architects and Engineers*. Marcel Dekker, 1998.
- Middleton, William D. *The Bridge at Québec*. Indiana University Press, 2001.
- Middleton, William D. *Landmarks on the Iron Road: Two Centuries of North American Railroad Engineering*. Indiana University Press, 1999.
- Miller, William J., and Demerast (editor). *Crossing the Delaware: The Story of the Delaware Memorial Bridge, the Longest Twin Suspension Bridge in the World*. Koen Book Distributors, 2nd edition, 1997.
- Miyata, T., Fijisawa, N., and Yamada, H. (editors). *Long-Span Bridges and Aerodynamics: International Seminar on Long-Span Bridge Aerodynamics Perspective 8, Kobe, Japan, March 1-3, 1998*. Springer Verlag, December 1999.
- Mock, Elizabeth B. *The Architecture of Bridges*. Museum of Modern Art, 1949.
- Nardon, J. David. *Bridge and Structure Estimating*. McGraw-Hill Professional, 1995.
- Nelson, Joseph C. *Spanning Time: Vermont's Covered Bridges*. New England Press, 1997.
- Nicholson, John. *Building the Sydney Harbour Bridge*. Allen & Unwin Pty., Limited, 2000.
- Nowak, Andrzej S. (editor). *Bridge Evaluation, Repair and Rehabilitation*. Kluwer Academic Publishers, 1990.
- O'Brien, Eugene J., and Keogh, Damien L. *Bridge Deck Analysis*. E & F N Spon, 1999.
- O'Connor, Colin O., and Shaw, Peter A. *Bridge Loads*. Routledge, 2000.
- O'Connor, Colin O. *Spanning Two Centuries: Historic Bridges of Australia*. University of Queensland Press, 1985.
- Ostrow, Steven A., and Burgess, Tony (editor) *Bridges*. Michael Friedman Publishing Group Incorporated, 1997.
- Outerbridge, Graeme (photographer), and Outerbridge, David. *Bridges*. Harry N Abrams, 1989.
- Parmley, Robert O. *Civil Engineer's Illustrated Sourcebook*. McGraw-Hill Professional, 2003.

SUGGESTED READING

- Parsons Brinckerhoff, Silano, Louis G. (editor), and Deen, Tomas B. (foreword). *Bridge Inspection and Rehabilitation: A Practical Guide*. Wiley-Interscience, 1992.
- Pearce, Martin, and Jobson, R. *Bridge Builders*. John Wiley & Sons, 2002.
- Pennells, E. *Concrete Bridge Designer's Manual*. E & F N Spon, 2nd 1998.
- Petroski, Henry, and Kastenmeier, Edward (editor). *Engineers of Dreams: Great Bridge Builders and the Spanning of America*. Vintage Books, reprint, 1996.
- Plowden, David. *Bridges: The Spans of North America*. W.W. Norton & Company, reissue edition, 1984.
- Pollalis, Spiro N., and Diaz-Hermidas, Alberto (illustrator). *What Is a Bridge? : The Making of Calatrava's Bridge in Seville*. MIT Press; reprint, 2002.
- Priestly, M. J. N., Calvi, Glan Michele, and Seible, F. *Seismic Design and Retrofit of Bridges*. Wiley-Interscience, 1996.
- Pritchard, Brian. *Bridge Design for Economy and Durability: Concepts for New, Strengthened and Replacement Bridges*. American Society of Civil Engineers, 1992.
- Pritchard, Brian (editor), and Institution of Civil Engineers. *Bridge Modification 2: Stronger & Safer Bridges*. American Society of Civil Engineers, 2nd edition, 1997.
- Puckett, Jay A. (contributor), and Barker, Richard M. *Design of Highway Bridges: Based on AASHTO LRFD, Bridge Design Specifications*. John Wiley & Sons, 1997.
- Raina, V. K. *Concrete Bridges: Inspection, Repair, Strengthening, Testing and Load Capacity Evaluation*. McGraw-Hill Professional, 1996.
- Ratay, Robert T. (editor). *Forensic Structural Engineering Handbook*. McGraw-Hill Professional, 2000.
- Ratay, Robert T. *Structural Condition Assessment*. John Wiley & Sons, 2005.
- Reed, Robert. *Images of America: Indiana's Covered Bridges*. Arcadia Publishing, 2004.
- Richardson, Mark. *Fundamentals of Durable Reinforced Concrete*. E & F N Spon, 2002.
- Richman, Steven M. *The Bridges Of New Jersey: Portraits Of Garden State Crossings*. Rutgers University Press, 2005.
- Rosignoli, Marco. *Launched Bridges: Prestressed Concrete Bridges Built on the Ground and Launched into Their Final Position*. American Society of Civil Engineers, June 1998.
- Ruddock, Ted (editor). *Masonry Bridges, Viaducts and Aquaducts*. Ashgate Publishing Company, 2000.
- Russell, Jeffrey S. (editor). *Perspectives in Civil Engineering: Commemorating the 150th Anniversary of the American Society of Civil Engineers*. American Society of Civil Engineers, 2003.
- Ryall, M. J. *Bridge Management*. Butterworth-Heinemann, 2001.
- Schodek, Daniel L. *Landmarks in American Civil Engineering*. MIT Press, 1987.
- Scott, Quinta (photographer), and Miller, Howard S. *Eads Bridge*. Missouri Historical Society Press, 1999.
- Scott, R. *In the Wake of Tacoma : Suspension Bridges and the Quest for Aerodynamic Stability*. American Society of Civil Engineers, 2001.
- Seward, Derek. *Understanding Structures: Analysis, Materials, Design*. MacMillan Publishing Limited, 1998.
- Shank, William H. *Historic Bridges of Pennsylvania*. American Canal & Transportation Center, 1990.
- Sinopoli, A. (editor). *Arch Bridges: History, Analysis, Assessment, Maintenance and Repair*. A A Balkema, 1998.
- Smith, Dwight A., Norman, James, and Dykman, Pieter T. *Historic Highway Bridges of Oregon*. Oregon Historical Society, 2nd edition, 2000.
- Somayaji, Shan. *Civil Engineering Materials*. Prentice Hall College Division, 2nd edition, 2001.
- Stahl, Frank L., and Gagnon, Christopher P. *Cable Corrosion in Bridges and Other Structures: Causes and Solutions*. American Society of Civil Engineers, 1996.
- Sussman, Joseph M. *Perspectives on Intelligent Transportation Systems (ITS)*. Plenum US, 2005.
- Sweetman, John. *The Artist and the Bridge: 1700-1920*. Ashgate Publishing, Limited, 2000.
- Taly, Narendra, and Taly, Marendra. *Design of Modern Highway Bridges*. McGraw-Hill Higher Education, 1997.

SUGGESTED READING

- Thienel, Phillip M. *Mr. Lincoln's Bridge Builders: The Right Hand of American Genius*. White Mane Publishing Company, Incorporated, 2000.
- Tilly, Graham, Gifford, and Partners. *Bridge Conservation: A Guide to Good Practice*. Taylor & Francis, 2002.
- Tonias, Demetrios E., Garrabrant, Richard, and Chen, Stuart. *Bridge Engineering: Design, Rehabilitation, and Maintenance of Modern Highway Bridges*. McGraw-Hill Professional, 2nd edition, 2004.
- Troitsky, M. S. *Orthotropic Bridges Theory and Design*. James F. Lincoln Arc Welding Foundation, 1967.
- Troitsky, M. S. *Planning and Design of Bridges*. John Wiley & Sons, 1994.
- Troitsky, M. S. *Prestressed Steel Bridges: Theory and Design*. Van Nostrand Reinhold, 1990.
- Tsipis, Yanni. *Images of America: Boston's Bridges*. Arcadia Publishing, 2004.
- Van Der Zee, John. *The Gate: The True Story of the Design and Construction of the Golden Gate Bridge*. Simon & Schuster, 1987.
- Watson, Bruce, Brigham, Trevor, and Dyson, Tony. *London Bridge: 2000 Years of a River Crossing*. Museum of London Archaeology Service, 2002.
- Wells, Matthew, and Pearman, Hugh (introduction). *30 Bridges*. Watson-Guption Publications, 2002.
- White, Kenneth R., Minor, John, and Derucher, Kenneth N. *Bridge Maintenance Inspection and Evaluation*. Marcel Dekker, 2nd edition, 1992.
- White, Norval, and Willensky, Elliot, (editors). *A/A Guide to New York City, Third Edition*. Harcourt Brace Jovanovich, 1988.
- Whitney, Charles S. *Bridges of the World: Their Design and Construction*. Dover Publications, 2003.
- Williams, Alan. *Civil & Structural Engineering: Seismic Design of Buildings & Bridges*. Kaplan, 5th edition, 2005.
- Winpenny, Thomas R. *Without Fitting, Filing, or Chipping: An Illustrated History of the Phoenix Bridge Company*. Canal History & Technology Press, 1996.
- Wisely, William H., Fairweather, Virginia, and Caballeros, Harold A. *The American Civil Engineer 1852-2002: The History, Traditions, and Development of the American Society of Civil Engineers*. American Society of Civil Engineers, 2002.
- Wood, Miriam. *Covered Bridges of Ohio: An Atlas and History*. Thunder Bay Press, 1994.
- Xanthakos, Petros P. *Bridge Strengthening and Rehabilitation*. Prentice Hall, 1995.
- Xanthakos, Petros P. *Bridge Substructure and Foundation Design*. Prentice Hall, 1998.
- Xanthakos, Petros P. *Theory and Design of Bridges*. Wiley-Interscience, 1993.
- New York City Bridge Conference: A Special Issue of the Journal of Bridge Engineering: Proceedings of the 1st New York City Bridge Conference*. American Society of Civil Engineers, 2001.

New York City Bridges

- Bascope (Editor), and Gordon, Mary (Introduction). *Stone and Steel : Paintings & Writings Celebrating the Bridges of New York City*. David R. Godine, 1998.
- Dogancay, Burhan (photographer). *Bridge of Dreams: The Rebirth of the Brooklyn Bridge*. Hudson Hills Press, 1999.
- Haw, Richard. *The Brooklyn Bridge: A Cultural History*. Rutgers University Press, 2005.
- Latimer, Margaret Webb, Hindle, Brooke, and Kranzberg, Melvin (editors). *Bridge to the Future: A Centennial Celebration of the Brooklyn Bridge*. (Annals of the New York Academy of Sciences, Volume 424). New York Academy of Sciences, 1984.
- McCullough, David G. *The Great Bridge: The Epic Story of the Building of the Brooklyn Bridge*. Simon & Schuster, reprint, 1983.
- Nevins, Deborah, McCullough, David, Millstein, Barbara H., Fein, A., and Kachur, Lewis. *Great East River Bridge, 1883-1983: Celebrating The 100th Anniversary of the Brooklyn Bridge*. Brooklyn Museum (exhibition catalogue), 1983.
- Rastorfer, Darl. *Six Bridges: The Legacy of Othmar H. Ammann*. Yale University Press, 2000.
- Reed, Henry. *Bridges of Central Park*. Greensward Foundation, 1990.
- Reier, Sharon. *The Bridges of New York*. Dover Publications, Incorporated, 2000.

SUGGESTED READING

- Saunders, F. Wenderoth. *Building Brooklyn Bridge*. Little Brown, 1965.
- Shapiro, Mary J. *A Picture History of the Brooklyn Bridge*. Dover Publications, Incorporated, 1983.
- Steinman, David B. *The Builders of the Bridge: The Story of John Roebling and His Son*. Harcourt Brace, 1945.
- Sutherland, Cara. *Bridges of New York City (Portraits of America)*. Friedman/Fairfax Publishing, 2002.
- Talese, Gay, Davidson, Bruce (photographer), and Rethi, Lili (illustrator). *The Bridge: The Building of the Verrazano-Narrows Bridge*. Walker & Company, 2002.
- Trachtenberg, Alan. *Brooklyn Bridge : Fact and Symbol*. University of Chicago Press, 1979.
- Winpenny, Thomas R. *Manhattan Bridge: The Troubled Story of a New York Monument*. Moore, Hugh Historical Park & Museums, Incorporated, 2003.



Gapstow Bridge During the Exhibition *The Gates, Project for Central Park, 1979-2005*. (Credit: Russell Holcomb)

For Children

- Aaseng, Nathan. *Construction: Building the Impossible*. Oliver Press, Incorporated, 2000.
- Adkins, Jan (illustrator). *Bridges: From My Side to Yours*. Roaring Brook, 2002.
- Arnold, Caroline. *Golden Gate Bridge*. Watts Franklin, 1986.
- Baine, Celeste. *Is There A Civil Engineer Inside You? A Student's Guide to Exploring Civil Engineering*. Professional Publications, Incorporated, 2004.
- Barter, James. *The Golden Gate Bridge*. Gale Group, 2001.
- Baxter, Nicola. *Bridges*. Scholastic Library Publishing, 2000.
- Browne, Lionel. *Bridges :Masterpieces of Architecture*. Walter/McBean Gallery, San Francisco Art Institute, 1996.
- Carter, Polly, and Doty, Roy (illustrator). *The Bridge Book*. Simon & Schuster, 1992.
- Cooper, Jason. *Bridges*. Rourke Enterprises, Incorporated, 1991. (Also available in a Spanish edition.)
- Harris, David W. *The Newspaper Truss and Other Newspaper Bridges: A Learning CD*. BaHa Enterprises, CD-ROM, 2004.
- Harris, David W. *Truss Fun*. BaHa Enterprises, 2nd edition, 2004.
- Hill, Lee Sullivan. *Bridges Connect*. The Lerner Publishing Group, 1996.
- Johmann, Carol A., Rieth, Elizabeth J., and Kilne, Michael P. (illustrator). *Bridges: Amazing Structures to Design, Build & Test*. Williamson Publishing, 1999.
- Kahn, Jetty. *Women in Engineering Careers*. Capstone Press, 1999.
- Kaner, Etta, and Cupples, Pat (illustrator). *Bridges*. Kids Can Press, 1997.
- LaFontaine, Bruce. *Bridges of the World Coloring Book*. Dover Publications, Incorporated, 1995.

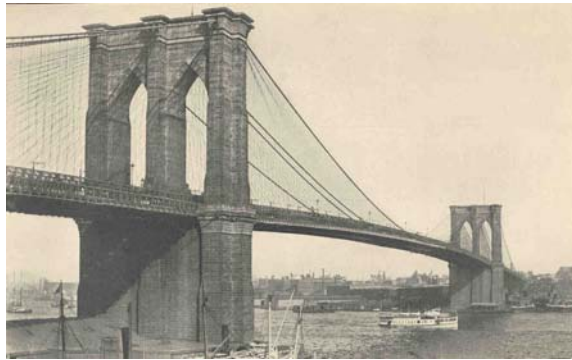
SUGGESTED READING

- Levy, Matthys, and Panchyk, Richard. *Engineering the City: How Infrastructure Works - Projects and Principles for Beginners*. Chicago Review Press, 2000.
- Macaulay, David. *Building Big*. Houghton Mifflin Company, 2000.
- Maxwell, Yolonda. *Famous Bridges of The World: Measuring Length, Weight, And Volume*. PowerKids Press, revised edition, 2005.
- Maze, Stephanie, O'Neill Grace, Catherine (contributor), and Menzel, Peter (illustrator). *I Want to Be... an Engineer*. Harcourt, 1997.
- Murray, Elaine, and Devillier, Christy (editor). *Golden Gate Bridge*. ABDO Publishing Company, 2002.
- Nardo, Don. *Roman Roads and Aqueducts*. Gale Group, 2000.
- Oxlade, Chris. *Bridges*. Raintree Steck-Vaughn Publishers, 1997.
- Parker, Janice. *Science of Structures*. Weigl Publishers, Incorporated, 2001.
- Pelta, Kathy. *Bridging the Golden Gate*. Lerner Publishing Group, 1993.
- Richards, Julie. *Bridges*. Smart Apple Media, 2003.
- Robbins, Ken. *Bridges*. Dial Books for Young Readers, 1991.
- Royston, Angela, and Shone, Rob (illustrator). *Tell Me about Buildings, Bridges and Tunnels*. Watts Franklin, 1991.
- Sheppard, Jeff, and Sorensen, Henri (illustrator). *I Know a Bridge*. Simon & Schuster Children's, 1993.
- Simon, Seymour. *Bridges (Seemore Readers)*. Chronicle Books, 2005.
- Simon, Seymour, Fauteux, Nicole, and Cushman, Doug (illustrator). *Let's Try It Out with Towers and Bridges: Hands-On Early-Learning Activities*. Atheneum, 2003.
- Steinman, David B., and Wiese, Kurt (illustrator). *Famous Bridges of the World*. Dover Publications, Incorporated, revised edition, 1961.
- Stone, Lynn M. *Bridges*. Rourke Publishing, 2002.
- Sturges, Philemon, and Laroche, Giles (illustrator). *Bridges Are to Cross*. Putnam Publishing Group Juvenile, 1998.
- Vanderwarker, Peter, and Keller, John (editor). *Big Dig: Reshaping an American City*. Little, Brown Children's Books, 2001.
- Willard, Keith, and Richardson, Adele. *Bridges*. The Creative Company, 2000.
- Wilson, Forrest. *Bridges Go from Here to There*. Wiley, John & Sons, Incorporated, 1993.
- Yuan, Margaret S. *The London Tower Bridge*. Blackbirch Press, 2004.
- Yuan, Margaret S. *Royal Gorge Bridge*. Blackbirch Press, 2003.
- Zaunders, Bo, and Munro, Roxie (illustrator). *The Great Bridge-Building Contest*. Harry N. Abrams, 2004.

For Children – Brooklyn Bridge

- Bildner, Phil, and Pham, LeUyen (illustrator). *Twenty-One Elephants*. Simon & Schuster Children's Publishing, 2005.
- Curlee, Lynn. *Brooklyn Bridge*. Simon & Schuster Trade, 2001.
- Kent, Zachary. *The Story of the Brooklyn Bridge*. Childrens Press, 1988.
- Mann, Elizabeth, and Witschonke, Alan (illustrator). *The Brooklyn Bridge: The Story of the World's Most Famous Bridge and the Remarkable Family That Built It*. Mikaya Press, 1996.
- Pascoe, Elaine. *The Brooklyn Bridge*. Blackbirch Press, Incorporated, 1999.
- Prince, April Jones, and Roca, Francois (illustrator). *Twenty-One Elephants and Still Standing*. Houghton Mifflin, 2005.
- Rose, Alan. *Build Your Own Brooklyn Bridge: Hours of Fun for the Ambitious Modeler*. The Putnam Publishing Group, 1980.
- St. George, Judith. *The Brooklyn Bridge: They Said It Couldn't Be Built*. Putnam, 1982.
- Veglahn, Nancy. *The Spider of Brooklyn Heights*. Charles Scribner's Sons, 1967.

SUGGESTED READING



Brooklyn Bridge in 1909.

CD, CD-ROM and Electronic Book

Hicks, Tyler Gregory. *Civil Engineering Formulas*. McGraw-Hill, Electronic Book - 2001.

McCullough, David G., and Herrmann, Edward (Narrator). *The Great Bridge: The Epic Story of the Building of the Brooklyn Bridge (Abridged)*. Audioworks, Audio CD and Audio Cassette, 2004.

Merritt, Frederick S., Loftin, M. Kent, and Ricketts, Jonathan T. (editors). *Merritt's Civil Engineers' Platinum Edition*. (includes print handbook). McGraw-Hill Professional, 1999.

Civil Engineer's Solutions Suite. McGraw-Hill Professional, 1998.

Structures 2005: Metropolis & Beyond. (Proceedings of the 2005 Structures Congress and the 2005 Forensic Engineering Symposium.) American Society of Civil Engineers, CD-ROM, April 2005.

Video, Videodisc, and DVD

Barnes, Michael. *Nova: Secrets of Lost Empires II - China Bridge*. WGBH Boston, 2000.

Burns, Ken. *Ken Burns' America: Brooklyn Bridge*. PBS Home Video, DVD-2003, Video - 1982.

Fuller, Robert G., Zollman, Dean A., and Campbell, Thomas C. *The Puzzle of the Tacoma Narrows Bridge Collapse*. John Wiley & Sons, Videodisc - 1982.

Klein, Larry. *Building Big with David Macaulay: Bridges*. WGBH Records, 2000.

Modern Marvels - Brooklyn Bridge (History Channel). A & E Home Video, DVD, 2005.

Modern Marvels: The Golden Gate Bridge. A & E Entertainment, Video, 1994, A & E Home Video, DVD, 2004.

Nova: Super Bridge. WGBH Boston Video, 1997.

In Memoriam

The 2005 edition of the New York City Bridges And Tunnels Annual Condition Report is dedicated to the memory of the following employees, whose wisdom and dedication to their work will be sorely missed. Their passing reminds us that the people of the Division of Bridges are the strength of the Agency, providing a tradition of quality service to the public.

Brian Primus, Research Assistant

April 1, 1956 -- June 8, 2005 11 $\frac{3}{4}$ years service

Mr. Primus joined DOT in 1993 as a Service Inspector in the Arterials Division. In 1997, he was promoted to Research Assistant in the in-house design section of the Division of Bridges' Bureau of Engineering Review and Support. Mr. Primus reviewed and prepared contract documents for various bridge reconstruction and rehabilitation projects, and accurately maintained reports associated with on-going projects.

Mr. Primus was known for his enthusiasm in taking on assignments, small or big, including the Bureau's check distribution coordination, serving as his floor's fire warden, and stepping up to be one of the traffic director volunteers in the aftermath of the 2003 ferry accident. His contributions to the Division will be greatly missed, as will his wonderful sense of humor.

Mallory Galella, Principal Administrative Associate

August 13, 1935 -- August 22, 2005 24 $\frac{1}{2}$ years service

Ms. Galella began her DOT service in 1980 in the Bridge Construction Section. She worked closely with the small group of engineers responsible for supervising the construction of city-owned bridges in the five boroughs. Her intellectual curiosity, enthusiasm and wit were valued by co-workers and supervisors alike. Before computers were commonplace, before faxes, cell phones, and personal digital assistants, Ms. Galella provided critical administrative support for everything from time cards and absence control to tracking progress payments to contractors. Her unstinting efforts during the unprecedented 1988 emergency repair of the Williamsburg Bridge are still appreciated by those who worked with her to reopen the bridge. Later, she transferred to the Office of the Agency Chief Contracting Officer, where her extensive administrative experience with bridges, contracts, contractors and consultants continued to benefit the Division, the Department and, ultimately, the public.



Brian Primus



Mallory Galella



2005 INVENTORY LOCATION MAPS

Five years ago, we added a new feature to the Inventory Location Maps; Community Board borders. With this added feature, the reader will be able to identify within which Community Board bridges are located.

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:

Bronx	26=Van Cortlandt Park	Brooklyn	55=Prospect Park
	27=Bronx Park		56=Gateway Nat'l Rec. Area/Floyd Bennett Field
	28=Pelham Bay Park	Queens	81=Alley Pond Park
Manhattan	64= Central Park		82=Cunningham Park
			83=JFK Airport
			84= Gateway Nat'l Rec. Area/Fort Tilden-Jacob Riis Park

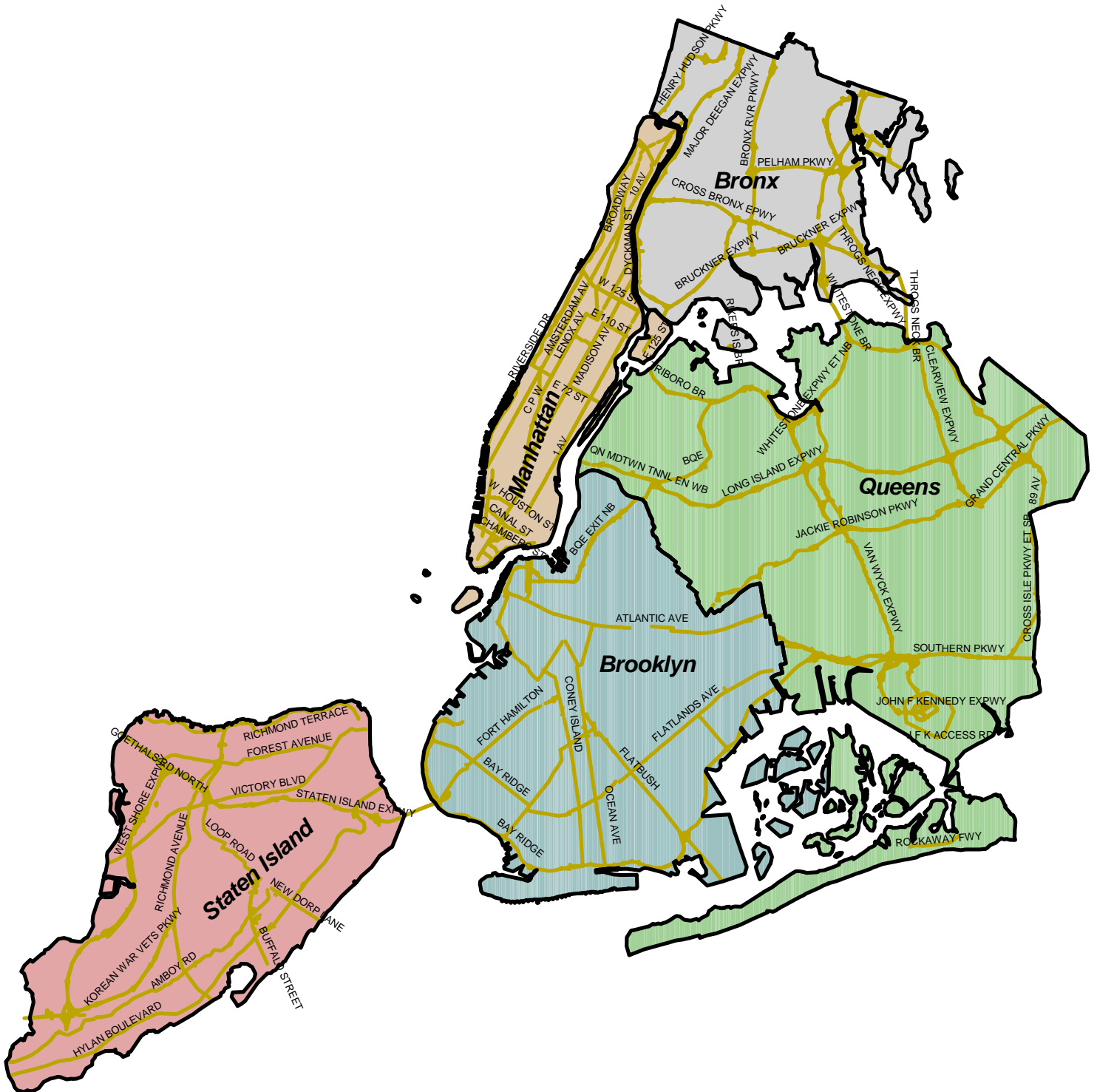
The Community Board listings correspond to those listed in the inventory, which begins on page 163.







As this is still a work in progress, some structures that fall on Community Board dividing lines are shown in only one Community Board. As the plotting of the maps is refined and further research conducted, all Community Boards a structure is in will be identified.

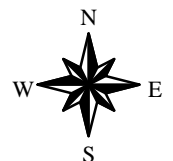


Brooklyn and Manhattan Bridges Viewed From the Roof of the Municipal Building. (Credit: Elias Scoropanos)

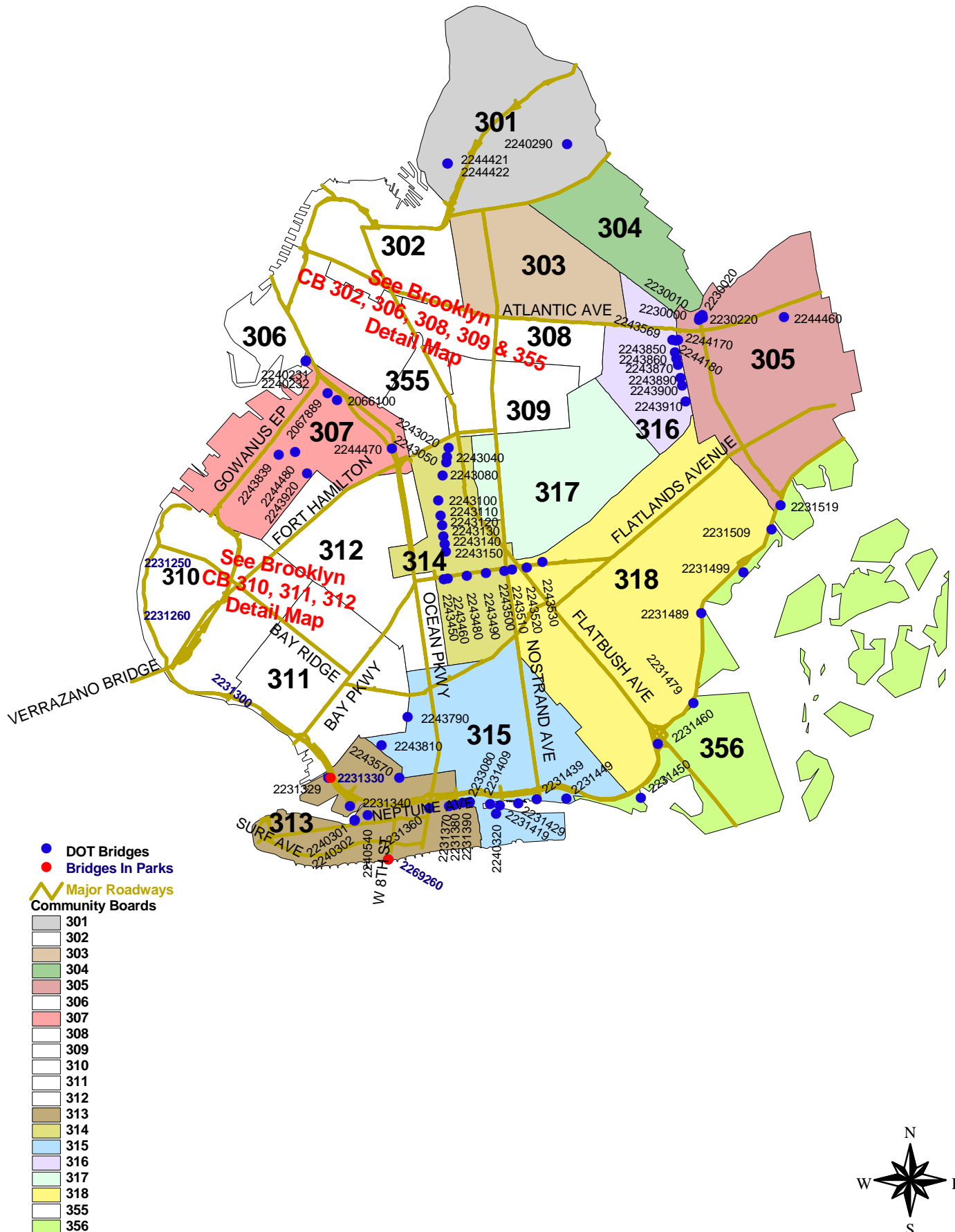
ALL BOROUGH MAP



-  Major Roadways
- Five Boroughs
-  Bronx
 -  Brooklyn
 -  Manhattan
 -  Queens
 -  Staten Island



BROOKLYN



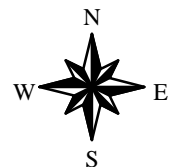
This map illustrates the Gowanus Expressway area, highlighting various zip codes and street names. The map is divided into several colored regions, each representing a different zip code area:

- 302 (Gray):** Located in the upper right, bounded by Kent Ave, BQE, and Flatbush Ave.
- 306 (Teal):** Located in the lower left, bounded by Gowanus Expwy and Flatbush Ave.
- 308 (Orange):** Located in the upper right, bounded by Flatbush Ave and Atlantic Ave.
- 309 (Green):** Located in the lower right, bounded by Atlantic Ave and Nostrand Ave.
- 355 (Pink):** Located in the lower center, bounded by Flatbush Ave, Atlantic Ave, and Parkside Ave.

Key streets shown include:

- Kent Ave
- BQE (Brooklyn-Queens Expressway)
- Flatbush Ave
- Atlantic Ave
- Gowanus Expwy
- Nostrand Ave
- Parkside Ave

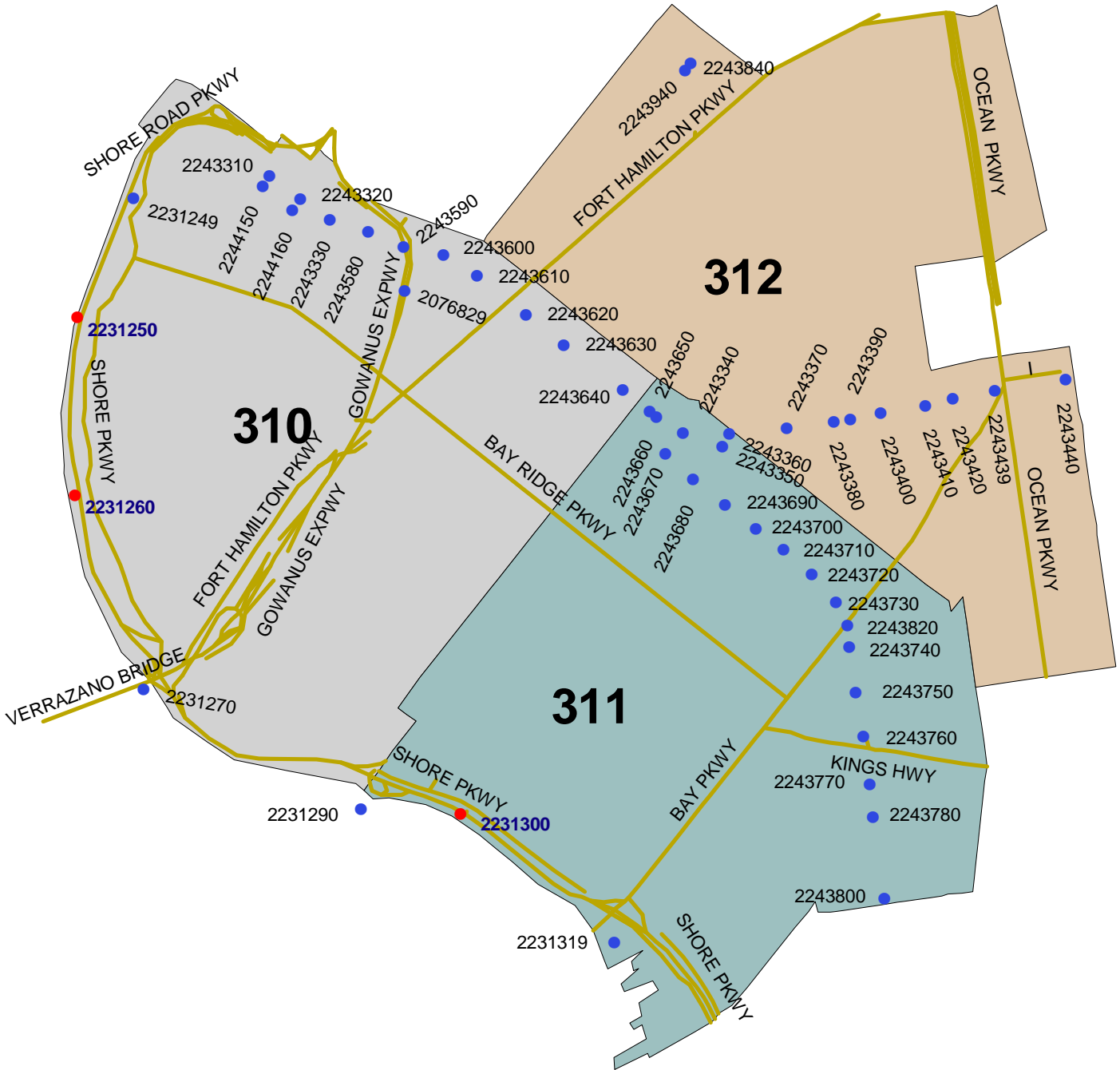
Zip codes and specific addresses are marked with blue dots, while some are marked with red dots. The map also shows the coastline and the location of the Gowanus Expressway interchange.



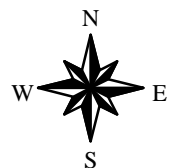
BROOKLYN

CB 310, 311, 312

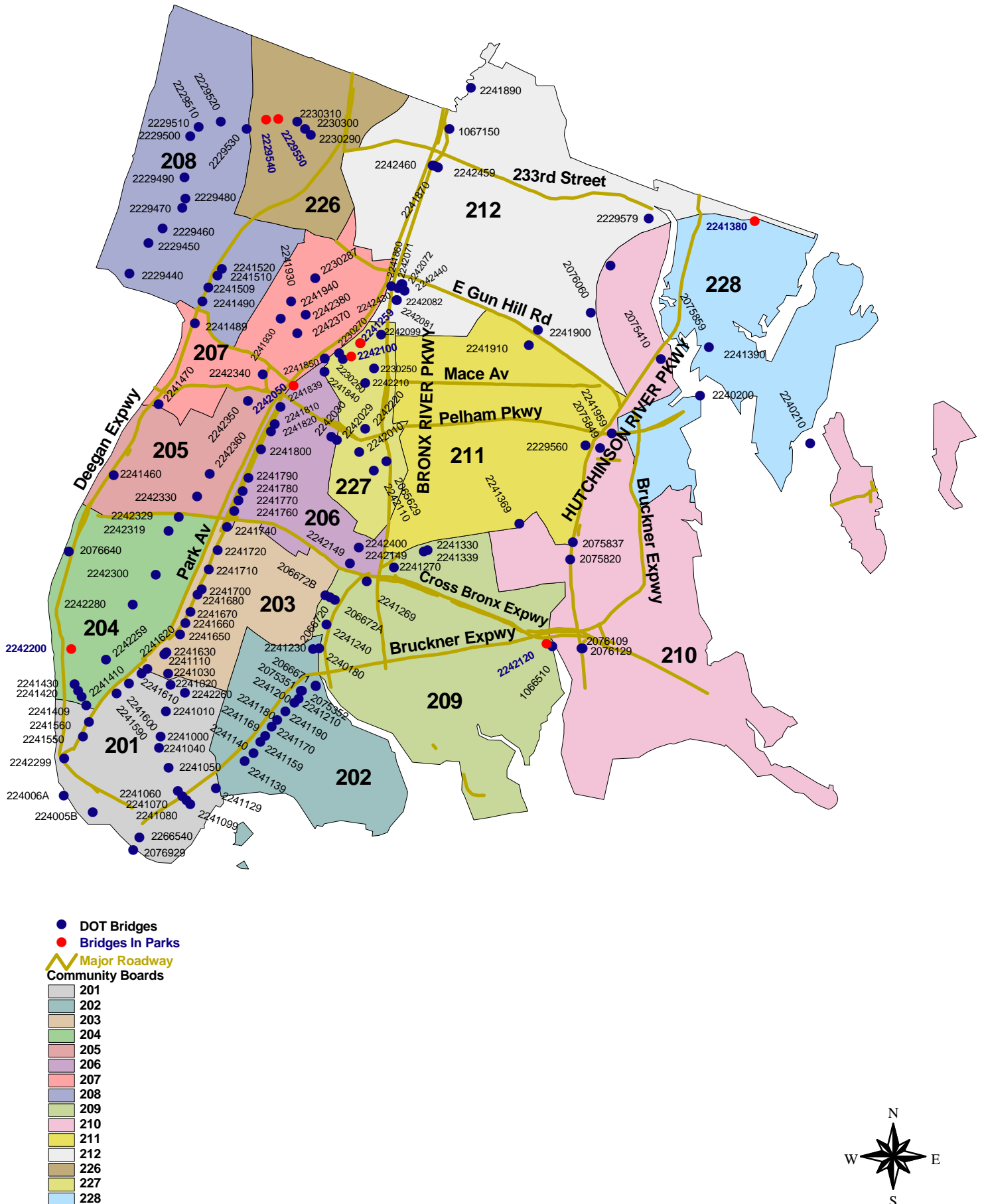
DETAIL



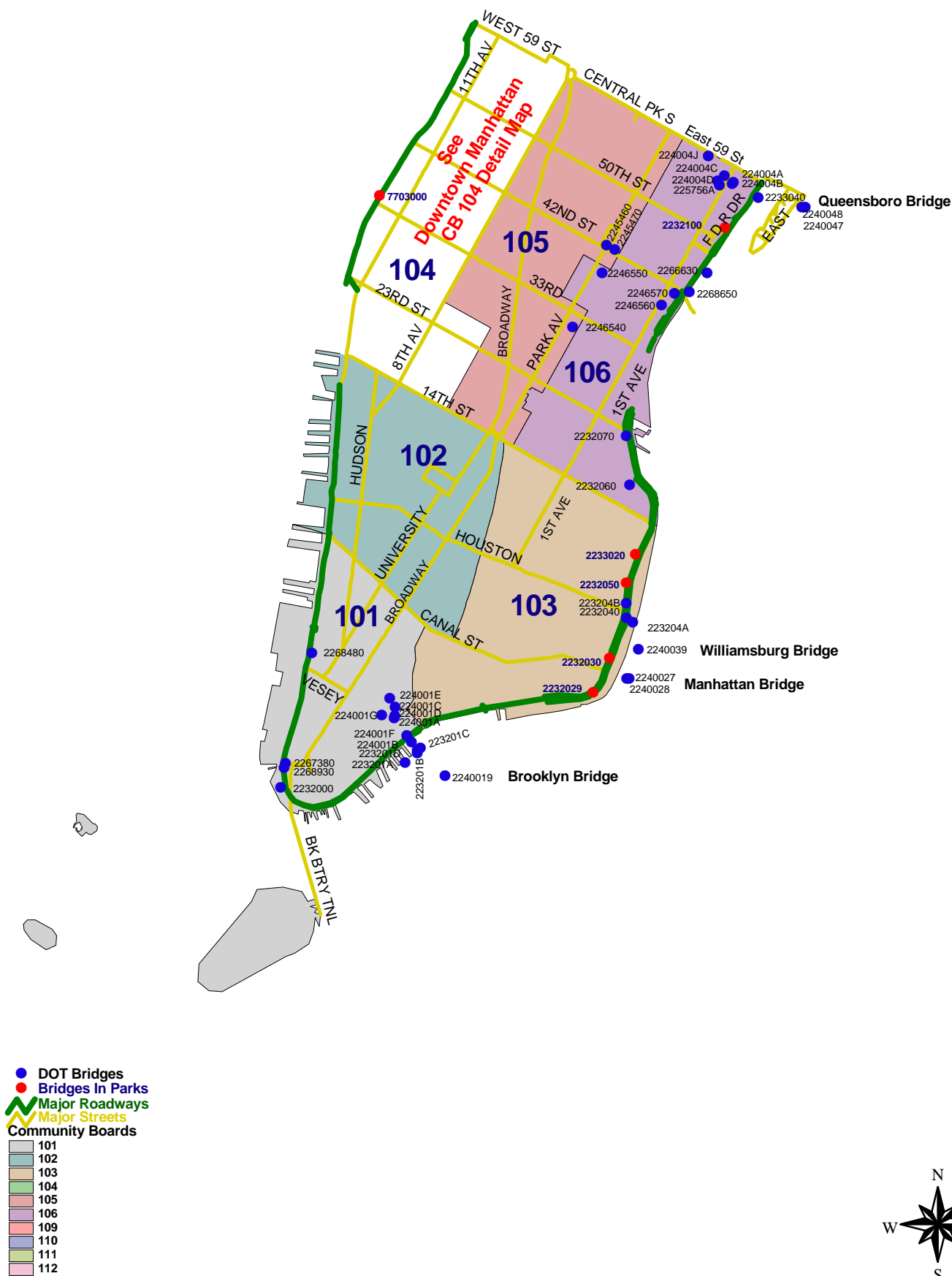
- DOT Bridges
- Bridges In Parks
- Major Roadways
- Community Boards
- 310
- 311
- 312



BRONX



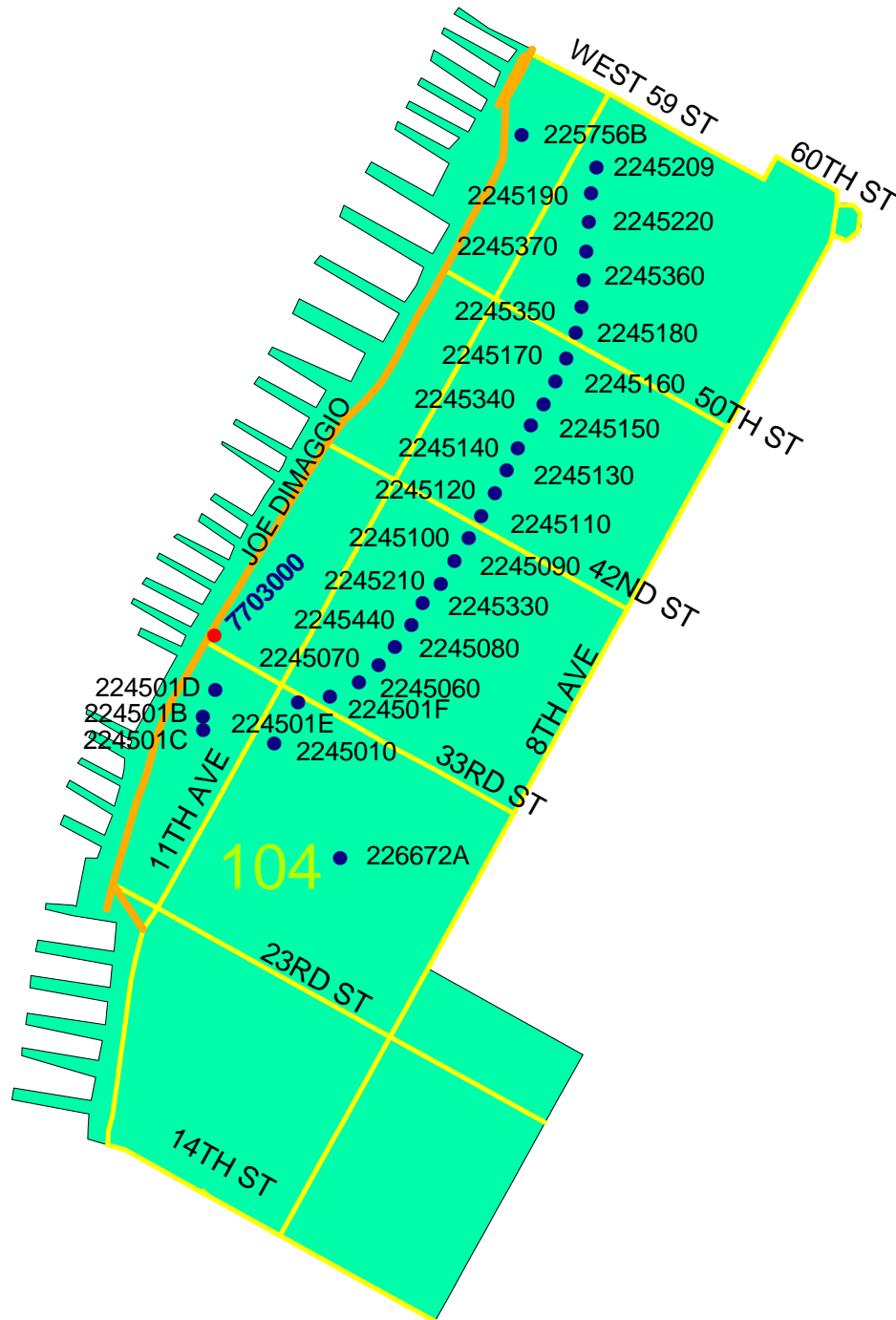
DOWNTOWN MANHATTAN



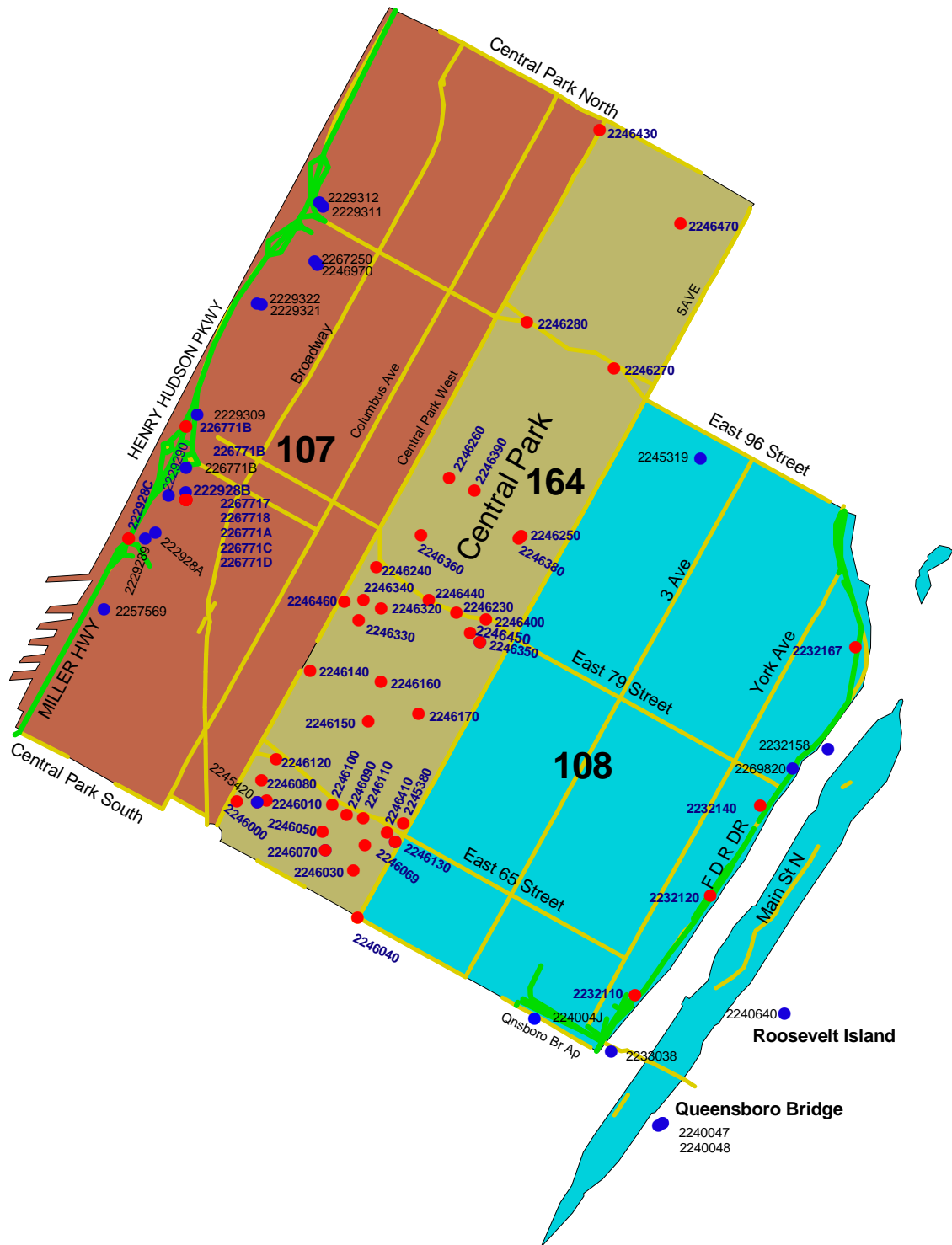
DOWNTOWN MANHATTAN

CB 104

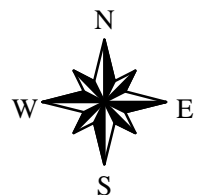
DETAIL



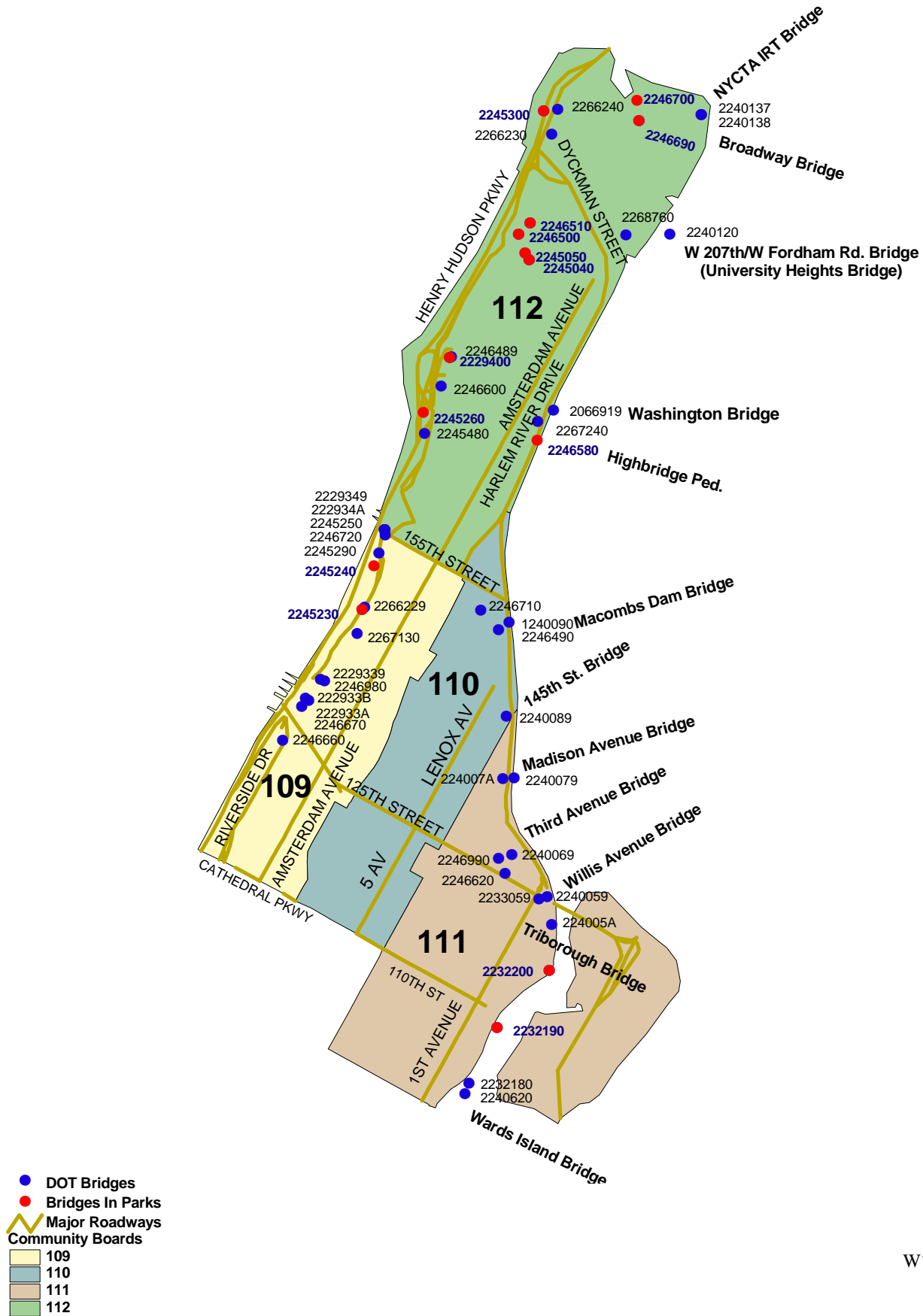
MIDTOWN MANHATTAN



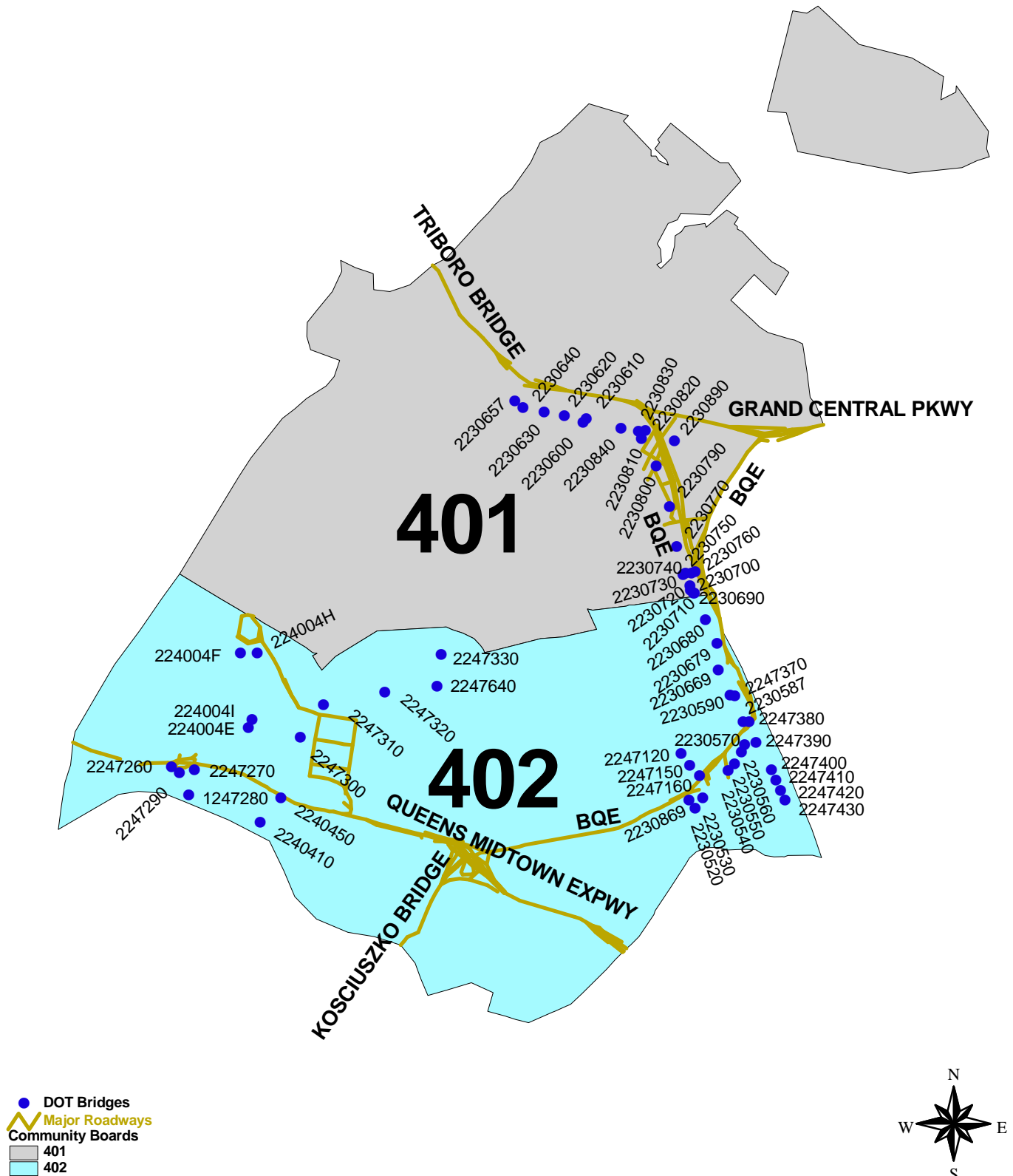
- DOT Bridges
- Bridges In Parks
- Major Roadways
- Major Streets
- Community Boards
- 107
- 108
- 164



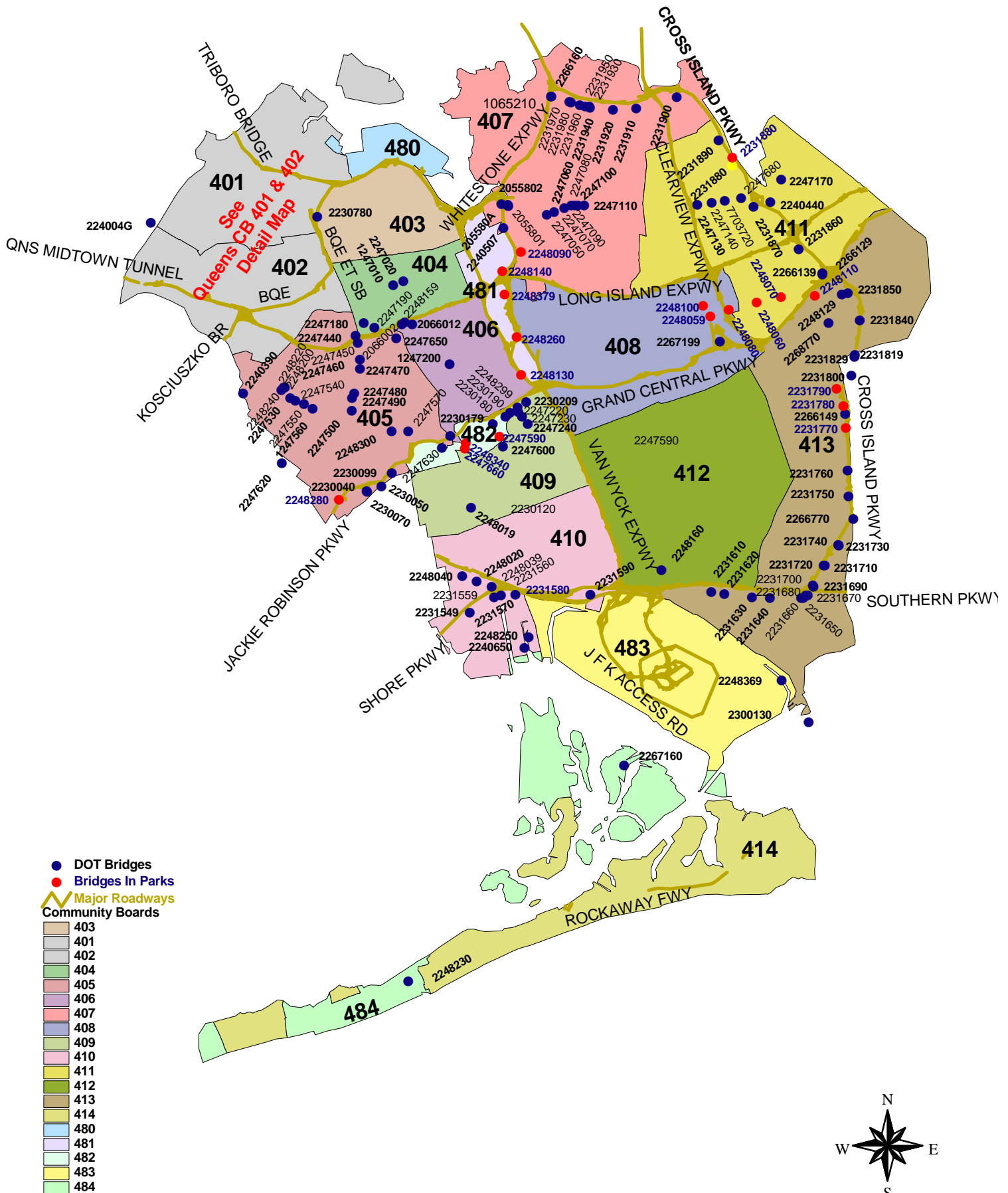
UPTOWN MANHATTAN



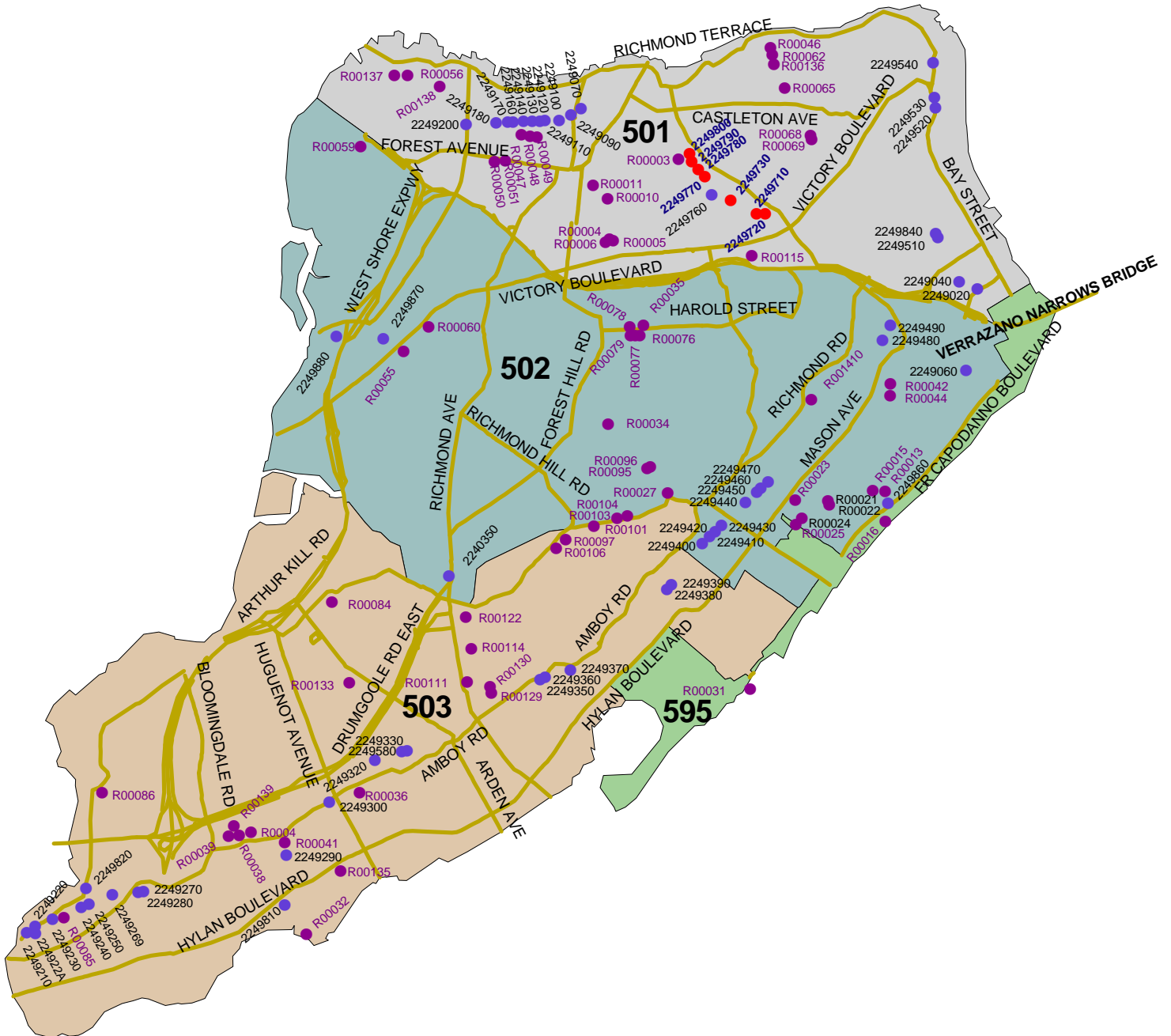
QUEENS CB 401 & 402 DETAIL



QUEENS



STATEN ISLAND



- DOT Bridges
- Bridges in Parks
- Culverts
- Major Roadways
- Community Boards**
- 501
- 502
- 503
- 595

