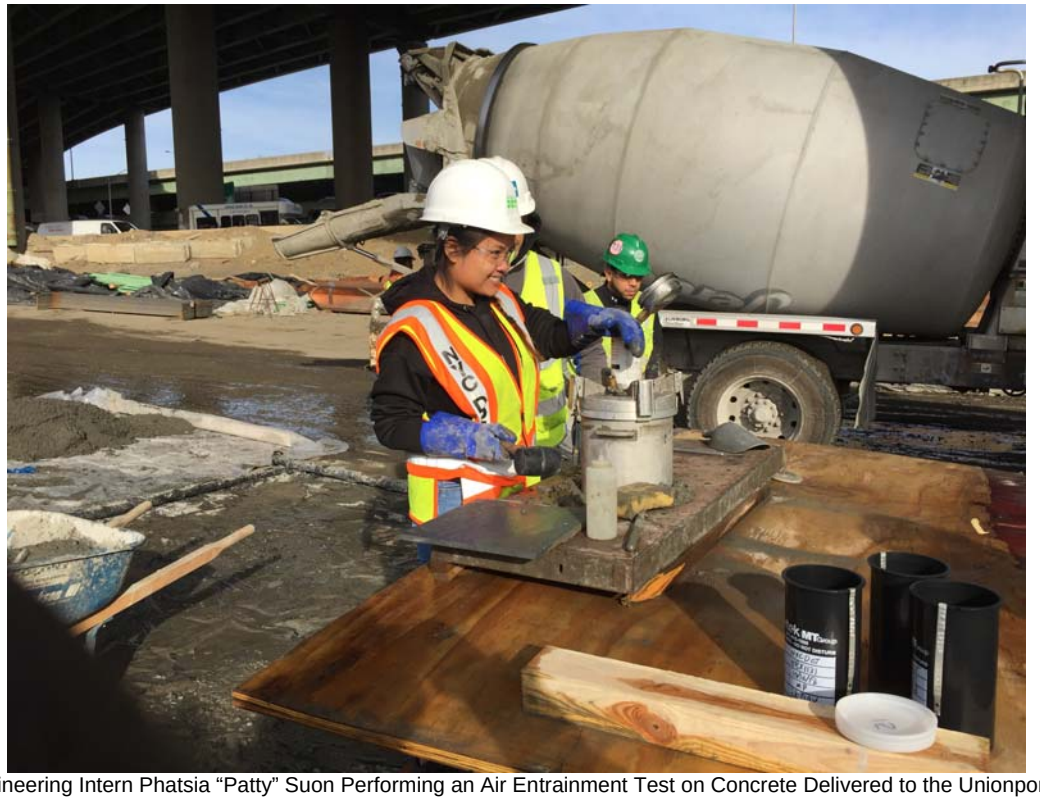
2018 NYC DOT
Bridges & Tunnels
Annual Condition Report

NEW YORK CITY DEPARTMENT OF TRANSPORTATION
DIVISION OF BRIDGES
2018 BRIDGES AND TUNNELS ANNUAL CONDITION REPORT



Civil Engineering Intern Phatsia “Patty” Suon Performing an Air Entrainment Test on Concrete Delivered to the Unionport Bridge Construction Project Site. Ms. Suon Joined the Agency in August 2018.

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Polly Trottenberg, Commissioner
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Margaret Forgione, Chief Operations Officer
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Acknowledgements

Research and Analysis

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Photography

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Cover Photograph

Executive Director of Bridge Inspections and Bridge Management Kevin McAnulty and Assistant Civil Engineer Sarah Jurado operating the Lidar (3D laser scanning tool) under the East Drive Bridge (East Wood Arch) in Prospect Park in July 2019. (Credit: Jaclyn Whitney)

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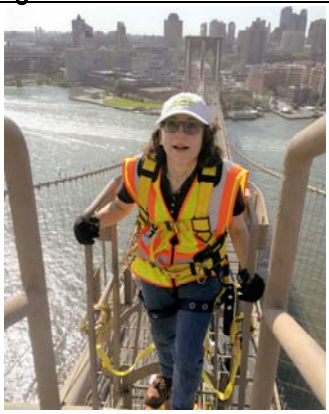
A Message from the Commissioner



Dear Friends,

On behalf of the many dedicated women and men of the Division of Bridges, I am pleased to present the 2018 edition of the New York City Department of Transportation's Annual Bridges and Tunnels Condition report.

It is no understatement that bridges are among the City's most overlooked infrastructure. In over five years as DOT Commissioner, I am so proud to have brought greater attention to the great work we are doing on our 790 bridges. Among those recent achievements:

- We have made enormous investments to build entirely new bridges, from the City Island and Unionport Bridges in the Bronx to the six major bridges along the Belt Parkway in Brooklyn. These new bridges are all 21st-century structures designed to last into the 22nd century!
- We made dramatic changes to some of our bridges to better and more safely connect the City's growing and critical bike network. We added a new bike lane on the Pulaski Bridge from Queens to Brooklyn, and as part of a report called *Connecting Communities*, we committed to doing the same kind of work as we systematically rehabilitate the bridges that connect Manhattan and the Bronx over the Harlem River.
- And of course, the jewels in DOT's bridge crown, the iconic East River crossings, have also received plenty of attention. On the Brooklyn Bridge, we began a creative campaign in 2016 that targeted so-called "love locks" being left by tourists on the Brooklyn Bridge, which has dramatically and successfully curbed a practice that had threatened one of the world's most historic landmarks. Further uptown, on the Williamsburg Bridge, with a lot of hard work and over $1.5 billion in investment over the last twenty-five years, DOT has completely replaced nearly every element of the "Willy B," turning around a bridge once considered so dangerous, it had been threatened with permanent closure in 1988.

In this report, we give the status of each and every one of our bridges, along with a few tunnels DOT controls. Across all five boroughs, these structures serve as key links that connect New Yorkers to schools, jobs, and family. They also serve as critical arteries for freight, helping New York City remain economically healthy and competitive. We also provide important information on our efforts over the past year to ensure that these structures continue to remain safe and reliable for all those who use them.

I want to acknowledge the almost 800 professionals who work day in and day out to oversee and perform this critical work, jobs which often come with considerable danger. In fact, during 2018, a senior electrician in the Division of Bridges, George Staab, was fatally injured while repairing a moveable bridge along the Hutchinson River Parkway.

With George's tragic death in a work zone, DOT lost a great employee -- and this has only reminded us of the importance and the seriousness of the work he and his colleagues do, from major capital projects, but also regular maintenance and repair work.

Our engineers, bridge inspectors, movable bridge operators, and those in countless other roles, show true dedication, ingenuity and professionalism in their work. I want to thank them all for their service to the City of New York.

Sincerely,

Polly Trottenberg

Commissioner

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

The New York City Department of Transportation's Division of Bridges is comprised of four 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, 4 vehicular tunnels, and 53 culverts presently under the jurisdiction of the New York City Department of Transportation (NYCDOT). In addition to broad supervision, the Chief Bridge Officer also provides overall executive and administrative direction for the Division of Bridges, and ensures that all contractors are promptly paid.

Reporting to the Chief Bridge Officer, the **Community Affairs Unit** maintains liaison with all stakeholders: elected officials, community boards, community groups, and civic/neighborhood associations. The Unit takes a pro-active approach in addressing design issues and coordinating construction by working with communities throughout the life of a project. The unit is committed to strategic community interaction that considers the cultural and linguistic diversity of the city and employs a variety of communication tools including social media to ensure the delivery of timely information. This enables the Division to proceed with its capital program as well as on-going maintenance projects with community input and full awareness. Partnering with stakeholders creates opportunities for success.

The **Bureau of Bridge Maintenance, Inspections and Operations** employs 460 engineering, professional, administrative, and skilled trades employees in the maintenance and smooth operation of New York City's elevated infrastructure, and in specialized skilled trades and contract supervision functions. It is composed of seven 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 and 4 vehicular tunnels. The Flags staff is on call 24 hours a day to respond to bridge emergencies. The section can be alerted to flag conditions by city and state inspectors and other sources, such as the Communications Center. All conditions undergo an evaluation involving review of the flag report and photographs of the condition, and, if necessary, a visit to the site. Subsequently, a "flag packet" describing the type of repair or response that is required is created and routed to an appropriate group, in-house or contractor, for elimination. The section monitors the status of each flag, reporting on all activities on a monthly basis.

Bridge and Tunnel Operations is responsible for operating the 23 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 2018, Bridge Operations effected a total of 5,125 openings, 4,268 of which allowed 7,803 vessels to pass beneath the bridges. The remaining 857 openings were for operational and maintenance testing. The section also operates the city's mechanically-ventilated tunnels, performing electrical maintenance and monitoring of the tunnels' electrical and mechanical systems.

The ***Bridge Repair*** section is composed of two major units. *Bridge Repair* performs repairs to resolve 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, brick and masonry repairs, concrete deck repairs, 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. Examples of this work in 2018 included repairs of the Harper Street and Hamilton Avenue Asphalt plant machinery, replacing the steel grating on the Grand Street Bridge over Newtown Creek, installing jersey barriers on the eastbound Belt Parkway at Bay 8th Street exit ramp to block a the sinking roadway near the catch basin, the demolition of the Siah Armajani Lighthouse and Pedestrian Bridge, and repairing the bollards at the Jay Street entrance to the Manhattan Bridge. Examples of installing roadway plates to address PIA flag

conditions included the Brooklyn-Queens Expressway over Cadman Plaza, the Clearview Expressway over Union Turnpike, and the Van Wyck Expressway at 87th Avenue.

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-three 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.

The *East River and Movable Bridges Preventive Maintenance* unit administers federal funds for selected preventive maintenance activities on the East River and movable bridges. This unit is also responsible for highly specialized work such as the lubrication of cables inside anchorages, cleaning and lubrication of solid rod suspender bearings, operation and maintenance of travelling platforms on the East River bridges, and selected projects to replace the wearing surface on suspended spans. Work is performed with a combination of in-house and contracted personnel.

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

The ***Preventive Maintenance*** section is a vital part of the overall bridge program. This section is responsible for functions including debris removal, mechanical sweeping, pothole repairs, participating in the removal of homeless encampments, and drain cleaning; as well as emergency response, such as snow removal, oil/cargo spills, overpass hits, and assisting with expansion joint and through-hole repairs. The section also performs some corrective repair work such as asphalt deck repairs, sidewalk patching, and fence and guide rail repairs. Preventive Maintenance is responsible for conducting the Department's anti-icing operations on the four East River bridges.

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

The in-house program also performs graffiti removal on all NYC DOT bridges and 24 New York State highways, responds to emergency flag repairs alongside the in-house repair forces (to perform surface preparation prior to, and painting upon completion of, the steel work), assists Agency personnel in snow removal from the East River Bridges and priority bridge overpasses, and performs environmental clean-up after the repair forces finish their repair work.

The ***Bridge Inspections and Bridge Management*** section performs three essential functions: *Bridge Inspections (*including *In-Depth Inspections), Bridge Management,* and *Research and Development.*

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

In-Depth Inspections are more detailed in scope than the federally-mandated biennial and interim inspections. Their findings can be used for advanced structural analysis, ultimately resulting in a legally binding load-rating of the structure. Two in-depth inspections teams are currently staffed and fully equipped. To that end, the Bridge Management Unit acquired a LIDAR high-definition laser scanning system. The system supplements In-Depth Inspection reports with high-precision 3-D laser scans of bridges. The scans can be used to verify existing drawings or provide as-built drawings where none currently exist. Once the scans are processed, 3D CAD models can be generated. The 3D models can then provide cross sectional details, accurate vertical clearance measurements or even before and after scans for bridges that are frequently damaged by impacts from trucks. The first in-depth inspection reports have already been transmitted to the Load Rating Unit within the Bureau of Engineering Review and Support.

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

This Section is also responsible for investigating new materials and methods to improve existing bridge conditions. It sponsors a series of lectures by experts on subjects relevant to design, construction, and maintenance, such as seismic retrofitting of bridges, salt substitutes, cathodic protection against corrosion, concrete patching materials, new paint strategies, non-destructive bridge testing, and deck resurfacing. The unit also participates in research programs with interested transportation and infrastructure entities. In conjunction with the Port Authority, MTA Bridges and Tunnels, and NYS Bridge Authorities, it sponsored a report on suspension bridge cables that led to a federal project for the entire United States. A number of articles on bridge management are published by the unit in technical journals in the United States, Japan, France, and elsewhere. This section created the system for generating bridge inspection reports with portable computers; a similar system is now being adopted by the NYSDOT.

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

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

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

The **Bureau of Bridge Capital Design & Construction** is responsible for carrying out major capital improvement projects on New York City-owned bridges and tunnels throughout the five boroughs. From the City's 794 structures, the Department prioritizes selections for bridge projects that may include extensive reconstruction or complete replacement. The budget of this program in the current 10-Year Plan exceeds 5 billion dollars and consists of a combination of Federal, State and City funding. The Bureau manages the design and construction activities for these projects by contracting with private engineering and construction firms. Engineering firms provide Design, Construction Support and Resident Engineering/Inspection services under the direction, supervision and leadership of our staff. Construction firms serve as the builders for the projects. The Bureau has a staff of about 140 engineering and administrative professionals and is organized into the following sections:

The **East River Bridges Section** conducts projects on the four bridges that span the East River. These iconic long-span bridges carry thousands of vehicles a day and are among the City's most valued assets. The three suspension bridges consist of the Brooklyn Bridge, Manhattan Bridge and Williamsburg Bridge which span

between lower Manhattan and Brooklyn. The fourth of the East River Bridges is the Ed Koch - Queensboro Bridge, a steel cantilevered truss that crosses from midtown Manhattan to Queens.

The **Movable Bridges Section** manages projects on the 23 movable bridges along with 4 tunnels. The movable bridges open and close for passing marine vessels and come in a number of varieties such as bascule, vertical lift, swing span and retractable. These bridges are situated along waterways in Manhattan, Brooklyn, Queens and the Bronx. The four tunnels that fall under DOT jurisdiction are located within Manhattan at Park Avenue, First Avenue, Battery Park and West Street.

The **Roadway Bridges Section** is responsible for projects on the more than 700 City-owned fixed span bridges located throughout the five boroughs. These range from short-span pedestrian bridges to long viaducts carrying expressways. The Roadway Bridges Section is further organized into two groups based on boroughs. Manhattan and Brooklyn form one of the groups while the other consists of the Bronx, Queens and Staten Island.

The **Component Rehabilitation Section** carries out projects on select deficient portions of bridges. The work is intended to focus on discreet elements rather than being a comprehensive overhaul. These projects are planned for bridges that have some substandard components but are otherwise in fair to good condition in order to extend their service life before the next capital rehabilitation project is required. Typically several bridges can be combined under one contract so that improvements can be compiled efficiently.

The **Specialty Engineering/Emergency Contracts Section** provides technical expertise and versatility in categories such as declared emergencies, design-build contracts and other diverse work. Specialty Contracts may include projects that do not fit neatly into defined categories such as the reconstruction of ferry terminal ramps or a promenade spanning over a highway. This highly adaptable group has also been called in on more conventional bridge reconstruction projects as well when circumstances arise.

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

In-House Design staff (comprised of the Structural, Electrical, and CADD Groups) perform difficult and technically complex work in the fields of structural/seismic design and street/highway design related to bridges, prepare plans, specifications, and estimates for bridge rehabilitation/replacement projects that enable the Division to restore bridges considered "structurally deficient," to a "very good" condition rating. This Unit also handles urgent Division projects, as well as special repair projects of the **Bureau of Bridge Maintenance, Inspections and Operations**. Over the last 10 years, In-House Design has completed contract documents for the following replacement/rehabilitation/demolition projects: Belt Parkway Bridge over Paerdegat Basin, 145th Street Bridge over Harlem River, Greenpoint Avenue Bridge over Newtown Creek, Bryant Avenue Bridge over Amtrak and CSXT, Henry Hudson Parkway Viaduct over Amtrak from West 72nd Street to West 82nd Street, Henry Hudson Parkway Viaduct over Amtrak from West 94th Street to West 98th Street, and the demolition of the Siah Armajani Lighthouse and Pedestrian Bridge. In-House Design also provided plans, working drawings, and shop drawings for in-house built projects such as the Hamilton Avenue Asphalt Plant conveyor supports, the concrete barrier at Cross Bay Boulevard from the Addabbo Bridge to East 1st Road, the pedestrian fencing at the Navy Street Pedestrian Bridge, and the bridge railing at Van Name Street Bridge. The Unit has also developed NYCDOT standard pedestrian fencing drawings for bridges, and manages the current Bidscope System used by the Division.

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

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

The *Specifications Unit* prepares and reviews contract bid documents and specifications for all Federal and City-funded, private developer, City-let in-house and consultant-designed bridge and various other construction projects, processes the contracts for bidding, after ensuring that they comply with the City, New York State and

Federal standards, prepares, reviews, and transmits advertisement packages, addenda, maintains and updates City-let bridge construction boiler plates in compliance with FHWA and NYSDOT Engineering bulletins and instructions, and updates and maintains an inventory of all NYC and NYS special specifications used in bridge and other construction projects. This Unit approves and issues item numbers for newly written special specifications for the city funded projects. In addition, they review contract drawings for compliance with contract bid proposal books.

The *Survey Unit* performs field surveys and visual inspections of bridges and retaining walls, monitoring of cracks and longitudinal and transverse movements in bridge structures as well as foundation settlement. This Unit surveys bridge girder alignments and twisted movements in steel girders and floor beams due to damage by oversized trucks or fires, prepares and verifies elevations in the field to find existing vertical clearances of bridge structures, and performs various field feasibility studies in bridge construction projects for planning purposes.

The *Records Management and Electronic Media Unit* establishes drafting guidelines and digital media standards for the preparation and archiving of contract plans. It reviews design contract plans, as-built plans, and shop drawings, in printed format as well as PDF and CAD digital formats for compliance with such guidelines and standards, and provides technical guidance to drawing preparers including the In-House Design group, consultants, and contractors. This unit also maintains an as-built drawing database for city-owned and maintained bridges, and regularly updates it with new as-built plans as they become available after project closing. It also responds to requests for as-built plans from in-house groups, City and State agencies, consulting firms, and private developers, following established drawing security protocols.

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

The ***Engineering Review Section*** consists of two major groups:

Group 1 reviews bridge design projects, retaining wall projects, and bridge hold permit applications.

Bridge design project review involves the review of preliminary and final design plans, Design Approval Documents (DAD), structural/geotechnical/utilities design calculations in compliance with NYSDOT, AASHTO, and NYCDOT standards and specifications, and cost estimates. These personnel are also involved in managing ESA Task Orders, consultant payments, and other agency/private developer projects.

The Group manages the NYC DOT-owned retaining walls database, manages the consultant program for the periodic inspection of all the retaining walls Citywide, and files inspection reports to NYC Department of Buildings annually. The retaining walls that are in fair to poor condition are brought into the capital plan for rehabilitation. The design and construction is managed by the New York City Department of Design and Construction. The Project Capital Engineering Group from NYC DOT oversees the budgeting and DDC's work.

The Group is also involved in the review of construction permit applications, specifically those that come through BridgeHold for any proposed construction work within 100 feet of any City-owned bridge structure, tunnel or retaining wall.

Group 2 is responsible for project scope development and budgeting, overweight truck permit review, land use planning, and load rating.

Project scope development involves the review of inspection reports, as-built drawings, and structural condition ratings, the performance of field inspections to develop scopes of work for the rehabilitation of deficient bridges, and the initiation of the procurement of Design Consultant contracts. These personnel also review quarterly budgetary plans for bridge rehabilitation projects in coordination with the Bureau of Bridge Maintenance, Inspections and Operations, and the Capital Procurement and Capital Planning Sections.

Overweight Truck Permit personnel, in coordination with the Division's Truck Permit Unit, review the engineering aspects of overweight and over-dimensional truck and self-propelled crane permit applications, to ensure the safety of City owned bridges.

Land Use Planning personnel review bridge design projects with a prime focus on legal grade changes, land use, and easements, and initiate Uniform Land Use Review Procedures (ULURP) applications for legal grade changes, permanent and temporary easements, and land acquisitions for bridge projects. They coordinate with the Department of City Planning (DCP), Community Boards, the Borough President offices, and the City Planning Commission.

Load Rating personnel review As-Built plans and in-depth inspection reports. They perform load rating analyses and maintain the record of safe load-carrying capacity of the City owned bridges.

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 also has direct contracts with private inspection/testing firms. This centralized arrangement with the outside resources enables the Quality Assurance Section to deliver services required for various bridge projects in the construction phase in the most cost-effective and timely manner. The section is comprised of four specialized units: *Fabrication Engineering, Materials Engineering, Field Operations, and Environmental Engineering.*

The *Fabrication Engineering Unit* is responsible for off-site inspections of structural steel, precast/prestressed concrete bridge components, and structural timber/lumber. It directs consultants during shop drawing review, RFI review and administers the "In-Process Shop Inspection Program" for structural steel and prestressed concrete bridge components, as well as other related metal materials. The Unit achieves this task by inspecting and approving fabrication facilities, directing inspection agencies during inspections, reviewing and approving shop drawings, weld procedures, fabrication procedures, repair procedures, transportation procedures, and erection procedures. Off-site inspection at fabrication plants is accomplished through the use of resources from private inspection agencies retained by the Quality Assurance Section. The Unit also makes shop visits to resolve any urgent or complicated shop fabrication issues.

Discrepancies from the approved shop drawings and approved fabrication procedures observed in the shop by inspection firm personnel are reported to the engineers in the Unit who possess the specialized knowledge, experience and engineering judgments in the fields of structural steel and precast/prestressed concrete fabrication to make the determination of whether or not to accept, reject or repair the material which affects the quality of constructed work valued in excess of $300 million yearly. The Unit follows the same technical guidelines and operates in the same fashion as the NYSDOT-Structures Unit.

The *Materials Engineering Unit* is responsible for reviewing and approving a wide variety of construction materials (other than those handled by the Fabrication Engineering Unit), by confirming compliance with the specifications through on-site and off-site inspections, sampling and testing, or manufacturer's certification. Some of the materials handled in this Unit are concrete, asphalt, soils, reinforcing steel, bridge bearings, high-strength structural steel fasteners, expansion joints, and anti-corrosion coatings.

The Unit also reviews requests to substitute contract-specified materials to ensure that those request are well-justified and that the alternate materials are equivalent or superior, thus establishing work of uncompromised quality. The unit is also responsible for implementing the Independent Assurance Sampling and Testing (IAST) Program which ensures that the personnel involved in the inspection and testing of materials are well-trained and their testing equipment are calibrated and maintained in good working conditions so as to develop confidence in their acceptance or rejection of materials at construction sites or off-site locations.

The *Field Operations Unit* ensures that materials approved by the above two units are incorporated into the rehabilitation/reconstruction work in strict accordance with plans, specifications and acceptable construction practice. This is accomplished by overseeing all construction activities in the field, e.g., the installation of reinforcing steel, structural steel and precast concrete units, the driving of piles and caisson foundations, the placement of structural and tremie concrete, asphalt, specialized deck overlays, and shotcrete, the structural lifting operations, and the preparation of subgrade and backfilling operations. The engineers of the Unit conduct meetings prior to these operations to ensure that both consultant and contractor are apprised of the specifications requirements and that the contractor's operations are well-planned to entail quality, thus avoiding project delays resulting from the potential removal and replacement of deficient work.

The engineers of the Unit provide assistance to REI staff in the interpretation of NYSDOT specifications and the requirements of MURK to ensure that the project record is developed and maintained accordingly, thus ensuring that items of work being advanced for payments have the proper supporting documentation. Their findings, observed during construction operations and review of the project record, are sent to the REI and the contractor though the project team for necessary corrective measures.

The *Environmental Engineering Unit* oversees implementation of the Final Environmental Impact Statement on bridge construction projects involving the removal and disposal of lead-based paint. The Unit's active

involvement in training the supervisors and overseeing the abrasive blasting operations has resulted in the successful completion of various paint removal projects. This unit also oversees the proper and safe disposal of other hazardous waste and regulated waste encountered during construction activities.

In addition to enforcing the lead paint removal protocols, the Unit manages other environmental concerns. These issues include, but are not limited to, asbestos abatement, PCB remediation, soil sampling, groundwater sampling, remediation of contaminated soils and groundwater, worker exposure to environmental contaminants, management of waste oil, storage of hazardous waste, management of storm water runoff, soil erosion controls, management of concrete washout wastewater, site safety, and OSHA compliance. Typically, the unit participates in the design stage to ensure that any environmental issues are addressed during the construction phase of the project. During construction, the unit provides on-site quality assurance oversight and environmental management to ensure compliance with environmental regulations and contract documents. The role of this Unit in ensuring public safety has been recognized and commended by the community.

The unit continues to monitor impacts to the City's waterways for numerous projects. This includes dredging and dewatering activities, such as the Macombs Dam fender rehabilitation project, Belt Parkway Bridges project, Harlem River Drive over 127th Street, Unionport Bridge over Westchester Creek, and the reconstruction of the City Island Bridge. This work often includes dewatering of cofferdams and drill casings, dredge spoil dewatering, and treatment of water for discharge to recharge basins or to surface waters. Potential contaminants such as turbidity, pH, and suspended solids are monitored for compliance with regulatory standards.

The unit is responsible for site-specific discharge monitoring in conjunction with the NYS SPDES Discharge Permits for discharges at the Eastern Boulevard Bridge, Hunters Point Avenue Bridge, Greenpoint Avenue Bridge, Cropsey Avenue Bridge, Manhattan Plaza Underpass, Battery Park Underpass, and the Metropolitan Avenue Bridge. The unit continues to provide environmental oversight and compliance on major capital projects such as the Park Avenue Tunnel rehabilitation, Macombs Dam Bridge, Henry Hudson Viaduct, Broadway Bridge, Roosevelt Avenue Bridge, Hutchinson River Parkway, Manhattan Bridge, Ed Koch – Queensboro Bridge, Belt Parkway Bridges over Mill Basin and Gerritsen Inlet, the Harlem River Drive over 127th Street Viaduct, and the Unionport Bridge, as well as other Component Rehabilitation and Roadway Bridge projects.

The Unit is currently monitoring completed mitigation projects such as the Floyd Bennett Field Wetland Mitigation and the Wetland Mitigation at Bergen Beach, which were initiated to compensate for disturbance of wetlands during construction activities such as at the Belt Parkway bridges. Wetland mitigation projects were also completed at Turtle Cove in the Bronx as part of the City Island Bridge Reconstruction project. Future wetland mitigation will take place as part of the Unionport Bridge reconstruction in the Bronx and the culvert reconstruction projects on Staten Island.

The Unit also provides input and technical services for the East Side Coast Resiliency Project, which will consist of the construction of flood walls, levees and gates to protect lower Manhattan in the event of future flooding from storm events such as Superstorm Sandy. In addition, the Unit works with other City agencies in the development of guidelines and standards for the implementation of the NYC MS4 permit system, which addresses the discharge of stormwater to NYC waterways.

The Unit also oversees and provides quality assurance management of field coating application on bridge construction and maintenance projects. These responsibilities include overseeing the quality of materials and equipment being used on projects and to provide inspection oversight to ensure that proper SSPC or NACE steel cleaning and painting guidelines and standards are followed.

Current major bridge projects served by the Quality Assurance Section include: Unionport Bridge over Westchester Creek, the rehabilitation of the stone masonry walls of the Brooklyn Bridge approaches and ramps, Belt Parkway Bridge over Mill Basin, City Island Bridge over Eastchester Bay, Harlem River Drive over East 127th Street Viaduct, Macombs Dam Bridge, Roosevelt Avenue Bridge over Van Wyck Expressway, reconstruction of the Park Avenue Tunnel, Atlantic Avenue Bridge over LIRR, rehabilitation of Broadway Bridge over the Harlem River, structural and component rehabilitation of the Manhattan Bridge, replacement of the upper roadways of the Ed Koch – Queensboro Bridge, rehabilitation of the Henry Hudson Parkway Viaduct from West 72nd Street to West 82nd Street, and West 94th Street to West 98th Street, Restoration of the Electrical and Mechanical Systems for 12 Movable Bridges,–Westchester Avenue Bridge over Hutchinson River Parkway, Metropolitan Avenue and Fresh Pond Road over LIRR, the rehabilitation /reconstruction of eight culverts, and the restoration of the Tunnel

Systems at the Battery Park Underpass and West Street Underpass. In addition, the Section provides services to the Component Rehabilitation Section and the Bridge Painting Section on an as-needed basis.

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 four primary sections: ***Office of the Assistant Commissioner, Administration and Finance, Capital Coordination, and the Truck Permit Unit.*** Each highly-specialized section is designed to address those issues and requirements that are critical to the operation of the respective Bureaus within the Division.

In addition to the Division-wide responsibility for conflict resolution, Equal Employment Opportunity coordination, confidential investigations, Bridges' litigation claims, 311 Siebel complaints, Bridges' Engineering Service Agreements, space allocation, and special projects, the ***Assistant Commissioner*** oversees, on an executive level, the following areas and functions:

The ***Senior Director of the Administration and Finance Section*** oversees and administers all administrative/personnel-related functions for the Division, acting as a liaison with the Central Personnel Coordinator in NYCDOT Personnel including, but not limited to, recruiting for vacancies (this includes reviewing for completeness and submitting the necessary paperwork, and reviewing and distributing candidates' resumes); maintaining all Managerial Position Descriptions; maintaining all Division organization charts; scheduling training; confidential investigations; maintaining records of IFA-funded positions; initiating and assisting in resolving disciplinary/grievance actions; serving as Conflicts of Interest and Financial Disclosure Officer; collecting and reviewing managerial and non-managerial performance evaluations; absence control; providing interpretive advice to Division management regarding City and Agency policy and procedures; and overseeing telephone and facility-related issues for personnel located at 55 Water Street and 59 Maiden Lane in Manhattan.

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

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

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

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

The ***Senior Director of 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 $10.7 billion. This plan is designed to rehabilitate the City's bridges. Responsibilities include: administering and participating in the development and implementation of planning capital projects; acting as liaison with oversight agencies, DOT Administration and all responsibility centers within Bridges; reviewing and processing transfer of fund requests in an attempt to resolve funding issues; and

maintaining the Division's registration report for all current year capital contracts. In addition, this section coordinates the Division's submission of Initial Financial Plans, Annual Financial Plan and Construction Management Plans prepared by Project Mangers that must be submitted to the Office of Finance, Contracts & Program Management.

The Senior Director of the Capital Coordination Section also oversees the following three units:

The *Project Delivery Section* monitors and collects data for all current and future capital Bridge projects from the identification and initiation phase through design and construction completion. The unit serves as a liaison with internal Agency divisions, sharing project schedule data related to procurement registration, Capital Commitment Plan forecasts, and project status.

The *Capital Consultant Section* serves as a liaison between the Division of Bridges and the Office of the Agency Chief Contracting Officer, other Agency Divisions, and the various consulting firms involved with the procurement process. The duties of this unit include: overseeing the Division's capital consultant contract procurement from scope to registration and preparing status reports. Certificates to Proceed [CPs] are a critical component for the registration of any Construction, Consultant Programs, Force Account, Change Order and Engineering Service Agreement and assigned ESA tasks. Coordinating the submission of New and Revised Certificates to Proceed for submission to the Capital Budget is overseen by this Unit.

The *Capital Contract Change Order and Force Account Section* serves as a liaison between the Division of Bridges and the Office of the Agency Chief Contracting Officer, other Agency Divisions, the public and private railroads; processes the Division's change orders through registration, and coordinates Railroad Force Account Agreements and railroad invoice payments for Division construction projects.

Railroad Force Account Agreements are a vital component in the rehabilitation/reconstruction program since train traffic affects 320 (40.5%) of City-owned bridges. The Railroad Coordinator provides a single point of contact for all railroad issues. The coordinator informs managers of "typical" railroad problems and attempts to avoid them through proactive measures. Upon registration of the railroad force account contracts between the City of New York and the respective railroad, Notices to Proceed [NTPs] are issued, and invoices are generated. The invoices, once approved by the engineers for the railroad and the corresponding DOT Project Manager, are sent to the Railroad Coordinator for processing and actual payment by the New York City Comptroller's Office.

Due to the nature of bridge construction projects, change order work is often on the critical path. Any delay in the issuance of a change order affects the overall project, and adds substantial overruns to the final cost. A tracking process for change orders has been implemented that significantly reduces the time for the approval process.

The ***Senior Director of the Truck Permit Section*** issues approximately 500 Annual Overweight Load Permits (mostly renewals), and approximately 50,000 Daily Oversize/Over-dimensional/ OD permits (including OD permits for film production vehicles and Supersize Truck Permits), and 300 Annual Self Propelled Crane Permits, all in accordance with the New York City Department of Transportation Policy and Procedures and the New York City Traffic Rules and Regulations section 4-15.

Wide Building Load in July 2018.

BRIDGE CAPITAL PROGRAM

MANHATTAN BRIDGE

REHABILITATION ITEMS
TOTAL ESTIMATED COST

	Est. Cost ($ in millions)
• Contract 1 – Replacement of maintenance platform in the suspended span. (1982)	4.27*
• Contract 2 – Replace inspection platforms, subway stringers on approach spans. (1985)	6.30*
• Contract 3 – Partial rehabilitation of walkway. (1989)	3.00*
• Contract 4 – Installation of test panels. (1982)	1.55****
• Contract 5 – Repair Floor Beams (1982)	0.70*
• Contract 6 –Rehabilitate truss hangers on east side of bridge. (1989)	0.70*
• Contract 7 – Reconstruction of North Upper Roadway decks on approach spans and stiffening of the side spans. (1989)	40.3*
• Contract 8 – Rehabilitation of South Side Approach and Suspended Spans (1997)	141.55*
• Contract 8C – Reconstruction of Manhattan Bridge – Rehabilitation of North Spans (2001)	127.98*
• Contract 9 – Install truss supports on suspended spans. (1985)	0.05*
• Contract 10 – Rehabilitation of North Spans (2004).	184.78*
• Contract 11 – Rehabilitation of Lower Roadway includes Suspended and Approach Spans (2008)	143.80*
• Contract 12 – Eyebar rehabilitation – Manhattan Anchorage Chamber “C” 1988)	12.20*
• Contract 13 – Modifications to Traveler System (1992).	23.50*
• Contract 14 – Reconstruction of Manhattan Bridge – Rehabilitation of Cable and Suspender (2010)	147.50*
• Contract 15 – Structural and Component Rehabilitation (2018)	75.99**
TOTAL:	**$914.17**

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

ED KOCH QUEENSBORO BRIDGE

REHABILITATION ITEMS

TOTAL ESTIMATED COST

	Est. Cost ($ in millions)
• Contract 1 – Repair lower outer roadways / reconstruct two ramps in lower Queens. (1984)	18.80*
• Contract 2 – Reconstruct south upper roadway, replace inspection platforms, lighting. (1986)	31.50*
• Contract 3 A, B, C & D – Interim rehabilitation to lower deck and main bridge approaches and new median barrier. (1985)	5.80*
• Contract 3 – Reconstruct North Upper Roadway and Queens approaches A & B, Rehabilitate bearings at Queens approach. (1989)	50.00*
• Contract 3A – Reconstruct ramps C & D (Queensboro only, not Thompson Avenue). (1988)	10.40*
• Contract 3B – Rehabilitate bridge bearings, pier tops, and truss lower chords. (1989)	18.00*
• Contract 4 – Rehabilitate Queens approach trusses, lower inner roadways on the main span and approaches. (1996)	172.00*
• Contract 5 – Rehabilitate Lower Outer Roadways (2001)	221.00*
• Contract 5A – Cleaning and painting main bridge upper trusses. (2009)	168.24*
• Contract 6 – Miscellaneous Items – Component Rehabilitation.	43.88*
• Contract 7 – Seismic Retrofit (Contract Cancelled)	0.00
• Contract 8 – Installation of aviation lighting. (2010)	1.76*
• Contract 9 – Eyebar Investigation (2010)	0.62****
• Contract 10 – Replacement of Upper Roadways (2018)	274.15**
	TOTAL: $ 1,016.15

* Construction Complete
** In Construction
*** In Design
**** Research and Development

WILLIAMSBURG BRIDGE

REHABILITATION ITEMS
TOTAL ESTIMATED COST

	Est. Cost ($ in millions)
• Contract 1 – Replace main span outer roadway. (1983)	11.20*
• Contract 2 – Replace one third of suspenders. (1984)	3.20*
• Contract 3 – Repair Brooklyn Tower Pier 20E foundation, and replace bulkhead. (1986)	2.30*
• Contract 4P – Paint side spans and towers. (1985)	1.10*
• Contract 5P – Paint main and approach spans. (1989)	4.24*
• Contract 5R – Emergency interim repairs. (1989)	10.00*
• Contract 4H –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*
• Contract 4 – Rehabilitate main cables and new redundant suspender system. (1996)	88.30*
• Contract 4D – Demolish existing building under approaches. (1993)	1.50*
• Contract 4T – Testing Program for bored-in piles. (1993)	0.74*
• Contract 5 – Reconstruction of entire South Outer Roadways. (1998)	263.00*
• Contract 4T – Paint main and intermediate towers. (2001)	14.90 *(1)
• Contract 6 – Reconstruct BMT Subway structure (2000)	166.65*
• Contract 7 – Reconstruction of North Roadways (2002)	233.00*
• Contract 8 – Miscellaneous Rehabilitation of Main Bridge; Seismic Retrofitting of the bridge (2016)	280.00*
• Contract 9 – Painting of the South Side of the bridge and Miscellaneous Rehabilitation (2021)	200.00 to 300.00***
TOTAL:	**$ 1,286.66 to $ 1,386.66**

* 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)
• Contract 1 – Brooklyn Tower protection and new sign gantries. (1981)	2.72*
• Contract 2 – Rehabilitate promenade between towers. (1983)	0.94*
• Contract 3 – Rehabilitate cables in anchorage and replace short rod suspenders; rehabilitate balance of promenade and construct bikeway and new pedestrian ramp. (1988)	22.68*
• Contract 4A – Rehabilitate and paint York, Main, William and Prospect Street structures and main bridge roadway deck overlay. (1988)	6.21*
• Contract 4 – Replace suspenders, cable posts, stay cables, hand-rope necklace lights, main cable wrapping; paint suspended spans. (1991)	53.57*
• Contract 5A – 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*
• Contract 5B – Rehabilitate ramp D and H in Manhattan; permanent improvement of promenade at Manhattan approach. (1993)	17.92*
• Contract 5 – Rehabilitate floor systems, stiffening trusses, roadways of suspended spans and Franklin Square trusses. (1994)	66.30*
• Contract 5D – Rehabilitate Manhattan traveler (electrical work). (1997)	1.83*
• Contract 5C – 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*
• Improvement of Manhattan end of promenade. (2001)	4.50*
• Contract 5T - Replacement of Travelers. (2009)	20.33*
• Contract 6 – Rehabilitation of Approach Spans and Ramps and Painting of Entire Bridge. (2010)	658.00*
• Contract 6A – Rehabilitation of Stone masonry Walls at Bridge Approach and Ramps (2017).	18.00***
• Contract 7 – Rehabilitation of Arch Block and Towers. (2019)	175.00 to 325.00**
TOTAL: $1,116.60 To $1,266.60	

* Construction Complete
** In Design
*** In Construction

Revised 2019

BRIDGES UNDER CONSTRUCTION

CALENDAR YEAR 2018

CONTRACT #	BRIDGE
HBX163	East 156th Street Bridge over CSX Pt Morris (Abandoned)
HBX163	East 161st Street Bridge over CSX Pt Morris (Abandoned)
HBX163	East 163rd Street Bridge over CSX Pt Morris (Abandoned)
HBX163	Third Avenue Bridge over CSX Pt Morris (Abandoned)
HBX163	Brooke Avenue Bridge over CSX Pt Morris (Abandoned)
HBX644S	Madison Avenue Bridge over Harlem River (Rehabilitation of Electrical and Mechanical Systems)
HBX1086	Westchester Avenue over Hutchinson River Parkway
HBX1131	Bruckner Expressway NB & SB Service Road (Unionport Bridge) over Westchester Creek
HBX1131	Unionport Bridge Ramp A (NYSDOT)
HBX1131	Unionport Bridge Ramp B (NYSDOT)
HBX1164	City Island Road Bridge over Eastchester Bay
SANDHB001	Battery Place over FDR Drive (Emergency Contract)
SANDHB001	West Street over Rector Street (Emergency Contract)
SANDHB002	Macombs Dam Bridge over Harlem River (Emergency Contract)
SANDHB002	145th Street Bridge over Harlem River (Emergency Contract)
SANDHB002	Third Avenue Bridge over Harlem River (Emergency Contract)
SANDHB002	Madison Avenue Bridge over Harlem River (Emergency Contract)
SANDHB002	Hunters Point Avenue Bridge over Dutch Kills (Emergency Contract)
SANDHB002	Carroll Street Bridge over Gowanus Canal (Emergency Contract)
SANDHB002	Ninth Street Bridge over Gowanus Canal (Emergency Contract)
SANDHB002	Third Street Bridge over Gowanus Canal (Emergency Contract)
SANDHB002	West 207th Street/West Fordham Road Bridge over Harlem River (Emergency Contract)
SANDHB002	Borden Avenue Bridge over Dutch Kills (Emergency Contract)
SANDHB002	Union Street Bridge over Gowanus Canal (Emergency Contract)
SANDHB002	Grand Street Bridge over Newtown Creek (Emergency Contract)
HBM551	East 34th Street over Park Avenue Tunnel
HBM1027	Harlem River Drive Viaduct, 127th Street (NB)
HBM1027	Harlem River Drive Viaduct, 127th Street (SB)
HBM1147	Broadway Bridge over Harlem River
HBM1165	Riverside Drive over West 158th St. - Amtrak [M]
BRX287S	Macombs Dam Bridge over Harlem River (Rehab of fender System & 155th St. Viaduct)
HBK643	Belt Parkway Bridge over Gerritsen Inlet
HBK1023	Belt Parkway Bridge over Mill Basin
HBK1201	Atlantic Avenue over LIRR Atlantic Avenue
HBM1172	Interim Repairs to HHP Viaduct over Amtrak (West 72nd Street to West 79th Street)
HBM1173	Interim Repairs to HHP Viaduct over Amtrak-West 96th Street (West 94th Street to West 98th Street)
HBQ1203	Roosevelt Avenue over Van Wyck Expressway
HBQ1112	Metropolitan Avenue (Fresh Pond) over LIRR Montauk Division (Emergency Contract) Restarted in 2018
HBRC036A	Galloway Avenue over Marianne Street
HBRC037A	Forest Avenue over Crystal Avenue
HBRC039A	Midland Avenue over Hylan Boulevard
HBRC040A	Rockland Avenue over Brielle Avenue
HBRC041A	Forest Avenue over Randall Avenue
HBRC042A	Gregg Place over Randall Avenue
HBRC043A	Arthur Kill Road over Muldoon Avenue
HBRC045A	Arthur Kill Road over Ridgewood Avenue
BRC156F	Manhattan Bridge #15 (Structural and Component Rehabilitation)
BRC231F	Queensboro Bridge #10 (Replacement of Upper Roadways)
BRC270FR (#6A)	Brooklyn Bridge #6A (Rehabilitation of Stone Walls at Approach Spans and Ramps)
BRC270FR (#6A)	Brooklyn Bridge Approach over Storage (Sands Street)

BRIDGE CONSTRUCTION

PROJECTS COMPLETED IN CALENDAR YEAR 2018

CONTRACT #	BRIDGE
HBX1164	City Island Road Bridge over Eastchester Bay
HBK643	Belt Parkway Bridge over Gerritsen Inlet
HBQ1112	Metropolitan Avenue (Fresh Pond) over LIRR Montauk Division (Emergency Contract)
HBRC036A	Galloway Avenue over Marianne Street
HBRC037A	Forest Avenue over Crystal Avenue
HBRC039A	Midland Avenue over Hylan Boulevard
HBRC040A	Rockland Avenue over Brielle Avenue
HBRC041A	Forest Avenue over Randall Avenue
HBRC042A	Gregg Place over Randall Avenue
HBRC043A	Arthur Kill Road over Muldoon Avenue
HBRC045A	Arthur Kill Road over Ridgewood Avenue

Component Rehabilitation

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

	*FY 11	#FY 12	*FY 13	**FY 14	***FY 15	FY 16	##FY 17	###FY 18
Number of Bridges	0	10	0	11	10	6	8	10
Construction Cost	$0	$6.35	0	$15.55	$15.41	$9.76	$21.01	27.18

* No contracts were bid during the 2011, and 2013 calendar years.
# One contract was bid during the 2012 calendar year and was registered in June 2012.
** Two contracts were bid during the 2014 calendar year: one was registered in October 2014, and one in June 2015.
***One contract was bid during the 2015 calendar year, and was registered in October 2015.
One contract was bid during the 2016 calendar year and was registered in June 2017.
One contract was bid during the 2017 calendar year and was registered in June 2018.

In 2018, work was completed at the following bridges, in the indicated boroughs, at the final cost shown, in millions:

Bronx Boulevard SB over Bronx River (B)		$0.43
Bronx Boulevard NB over Bronx River (B)		$0.42
Southern Boulevard over CSX Trans-Pt. Morris (B)		$0.93
Sackett Street over Brooklyn-Queens Expressway (K)		$2.17
80th Road over LIRR Main Line (Q)		$0.50
Forest Avenue over Clove Lakes Park Stream (R)		$0.45
East 97th Street over Metro North Main Line (M)	$0.35	
East 165th Street over Metro North RR HAR (B)	$1.57	
TOTAL		**$6.42M**

During calendar year 2018, work commenced at the following bridges:

Forest Avenue over Clove Lakes Park Stream (R)
East 97th Street over Metro North Main Line (M)
West 57th Street over Amtrak 30th Street Branch (M

Bronx Boulevard SB over Bronx River (B)
Bronx Boulevard NB over Bronx River (B)
East 149th Street over Amtrak-CSX (B)
Southern Boulevard over CSX Trans-Pt. Morris (B)
Unionport Road over Amtrak-CSX (B)
Sackett Street over Brooklyn-Queens Expressway (K)

Component Rehabilitation

There are three projects “still under construction” since the 2017 *Annual Report* was issued.

49th Street over Grand Central Parkway (Q)
West 57th Street over Amtrak 30th Street Branch (M
Leggett Avenue over Amtrak (B)

16 component rehabilitation projects are slated to continue, commence or be completed in the 2019 calendar year. They are:

Leggett Avenue over Amtrak (B)

West 57th Street over Amtrak 30th Street Branch (M)

49th Street over Grand Central Parkway (Q)
East 149th Street over Amtrak-CSX (B)
Unionport Road over Amtrak-CSX (B)
Arthur Kill Road over SIRT South Shore (R)

Northern Boulevard WB over Flushing River (Q)
Northern Boulevard EB over Flushing River (Q)
150th Street over Cross Island Parkway (Q)
Knapp Street over Belt Parkway (K)
Fremont Avenue Pedestrian over SIRT South Shore {R}
Henry Hudson Parkway (SB) over Ramp to 96th Street (M)
Henry Hudson Parkway (NB) over Ramp to 96th Street (M)
147th Street over Cross Island Parkway (Q)
Fleet Walk Pedestrian Bridge over Navy Street (K)
Grand Concourse over East 174th Street (B)

BRIDGES UNDER DESIGN BY NEW YORK CITY

BIN NO.	CAPIS NO.	FEATURE CARRIED	FEATURE CROSSED	FY CNST	PHASE	BORO
2241380	HBBA24180	PELHAM BAY EQUESTRIAN BRIDGE	AMTRAK - CSX	2023	PD	B
2241810	HBBA24181	EAST 188TH STREET	METRO NORTH RR	2024	PD	B
2242380	HBCR03B	GRAND CONCOURSE	EAST 204TH STREET	2020	FD	B
2076109	HBCR21B	BRUCKNER EXPRESSWAY NORTHBOUND SERVICE ROAD	HUTCHINSON RIVER PARKWAY	2022	FD	B
2229460	HBCR21B	WEST 236TH STREET PEDESTRIAN	HENRY HUDSON PARKWAY	2022	FD	B
2229530	HBCR21B	HENRY HUDSON PARKWAY	BROADWAY	2022	FD	B
2242260	HBCR21B	EAGLE AVENUE	EAST 161ST STREET	2022	FD	B
2270030	HBX156	EAST 156TH STREET	ACCESS TO HOUSING	2024	PD	B
2241790	HBX180	EAST 180TH STREET	METRO NORTH RR	2020	PD	B
2241590	HBX1103	CONCOURSE VILLAGE AVENUE	METRO NORTH	2024	PD	B
2075849	HBX1127	BRONX PELHAM PARKWAY	HUTCHINSON RIVER PARKWAY	2022	PD	B
2240200	HBX1148B	SHORE ROAD	HUTCHINSON RIVER	2024	PD	B
2241409	HBX1190	GRAND CONCOURSE	METRO NORTH RR HUD	2020	FD	B
2241740	HBX1215	EAST 175TH ST	METRO NORTH RR	2020	FD	B
2241460	HBX1460	WEST TREMONT AVENUE	METRO NORTH RR HUD	2021	PD	B
2241670	HBX1670	EAST 169TH STREET	METRO NORTH RR	2020	PD	B
2240019	BRC270D	BROOKLYN BRIDGE	2781 (B.Q.E.)	2020	FD	KM
2231329	HBCR03B	BELT PARKWAY	26TH AVENUE	2020	FD	K
2243140	HBCR16	NEWKIRK AVENUE	BMT SUBWAY (BRIGHTON)	2021	FD	K
2243370	HBCR16	17TH AVENUE	LIRR BAY RIDGE	2021	FD	K
2243380	HBCR16	18TH AVENUE	LIRR BAY RIDGE	2021	FD	K
2243400	HBCR16	50TH STREET	LIRR BAY RIDGE	2021	FD	K
2243450	HBCR16	EAST 14TH STREET	LIRR BAY RIDGE	2021	FD	K
2243500	HBCR16	NOSTRAND AVENUE	LIRR BAY RIDGE	2021	FD	K
2243600	HBCR16	7TH AVENUE	LIRR AND SEA BEACH	2021	FD	K
2243940	HBCR16	9TH AVENUE	NYCTA IND SUBWAY	2021	FD	K
2230500	HBCR21B	BROOKLYN-QUEENS EXPRESSWAY	RAMP TO BROOKLYN_QUEENS EXPRESSWAY EASTBOUND	2022	FD	K
2230380	HBKA23038	KANE STREET	BROOKLYN-QUEENS EXPRESSWAY	2022	PD	K
2233080	HBKA23308	EAST 14TH STREET PEDESTRIAN	BELT PARKWAY	2021	PD	K
2243020	HBK530	PARKSIDE AVENUE – OCEAN AVENUE	BMT SUBWAY	2022	PD	K
2240270	HBK1213	UNION STREET BRIDGE	GOWANUS CANAL	2022	PD	K
2243580	HBK1205	5TH AVENUE	LIRR & SEA BEACH	2021	PD	K
2268350	HBKBQE	BROOKLYN PROMENADE	BQE EB (CANTILEVER)	2025	PD	K
2268497	HBKBQE	BQE WB	FURMAN STREET (CANTILEVER)	2025	PD	K
2268498	HBKBQE	BQE EB	BQE WB (CANTILEVER)	2025	PD	K

PD=Preliminary Design; FD=Final Design

BRIDGES UNDER DESIGN BY NEW YORK CITY

BIN NO.	CAPIS NO.	FEATURE CARRIED	FEATURE CROSSED	FY CNST	PHASE	BORO
2268507	HBKBQE	BQE WB	YORK STREET (CANTILEVER)	2025	PD	K
2268508	HBKBQE	BQE EB	BQE WB (CANTILEVER)	2025	PD	K
2268517	HBKBQE	BQE WB	FURMAN STREET (CANTILEVER)	2025	PD	K
2268518	HBKBQE	BQE EB	BQE WB (CANTILEVER)	2025	PD	K
2230410	HBKBQE	BQE EB	WASHINGTON STREET	2025	PD	K
2230420	HBKBQE	BQE WB	WASHINGTON STREET	2025	PD	K
2230430	HBKBQE	BQE RAMP TO BROOKLYN BRIDGE	PROSPECT STREET	2025	PD	K
2230440	HBKBQE	BQE WB	ADAMS STREET	2025	PD	K
2230450	HBKBQE	BQE EB	ADAMS STREET	2025	PD	K
2230460	HBKBQE	BQE	PEARL STREET	2025	PD	K
2230470	HBKBQE	BQE	JAY STREET	2025	PD	K
2230480	HBKBQE	BQE	PROSPECT STREET	2025	PD	K
2230490	HBKBQE	BQE	SANDS STREET	2025	PD	K
2230857	HBKBQE	BQE WB	JORALEMON STREET	2025	PD	K
2230858	HBKBQE	BQE EB	JORALEMON STREET/BQE WB	2025	PD	K
2230870	HBKBQE	COLUMBIA HEIGHTS	BQE	2025	PD	K
2230887	HBKBQE	BQE WB	CADMAN PLAZA	2025	PD	K
2230888	HBKBQE	BQE EB	CADMAN PLAZA/BQE WB	2025	PD	K
2231300	HBPK17K	17TH AVENUE PEDESTRIAN	BELT PARKWAY	2020	FD	K
2231330	HBPK27K	27TH AVENUE PEDESTRIAN	BELT PARKWAY	2020	FD	K
2245010	HBM1120	11TH AVE VIADUCT [NORTH]	LIRR WEST SIDE YARD/AMTRAK	2021	FD	M
2229290	HBM1189	WEST 79TH STREET	AMTRAK	2020	FD	M
2267717	HBM1189	79TH STREET PEDESTRIAN PLAZA	79TH STREET BOAT BASIN GARAGE	2020	FD	M
2267718	HBM1189	79TH STREET TRAFFIC CIRCLE	79TH STREET PEDESTRIAN PLAZA	2020	FD	M
226771A	HBM1189	79TH STREET RAMP TO HENRY HUDSN PARKWAY	79TH STREET BOAT BASIN GARAGE	2020	FD	M
226771B	HBM1189	79TH STREET RAMP TO GARAGE	79TH STREET BOAT BASIN GARAGE	2020	FD	M
226771C	HBM1189	GARAGE RAMP TO 79TH STREET	79TH STREET BOAT BASIN GARAGE	2020	FD	M
226771D	HBM1189	SOUTHBOUND HENRY HUDSON PARKWAY RAMP TO 79TH STREET	79TH STREET BOAT BASIN GARAGE	2020	FD	M
2268650	HBM8650	FDR DRIVE NORTHBOUND EAST 42ND TO EAST 49TH STREET	EAST RIVER SHORELINE	2022	PD	M
2232167	HBMA23216	PROMENADE OVER FDR DRIVE	FDR DRIVE – EAST 81ST TO EAST 90TH STREET	2023	PD	M
224501E	HBMA24501	WEST 35TH STREET	AMTRAK 30TH STREET BRANCH	2025	PD	M
2445440	HBMA24544	WEST 40TH STREET	AMTRAK 30TH STREET BRANCH	2023	PD	M
2232060	SANDHBFDR	FDR DRIVE	18TH TO 25TH STREETS	2020	FD	M

PD=Preliminary Design; FD=Final Design

BRIDGES UNDER DESIGN BY NEW YORK CITY

BIN NO.	CAPIS NO.	FEATURE CARRIED	FEATURE CROSSED	FY CNST	PHASE	BORO
2231630	HBCR03B	SPRINGFIELD BOULEVARD	BELT PARKWAY	2020	FD	Q
2231840	HBCR03B	HILLSIDE AVENUE	CROSS ISLAND PARKWAY	2020	FD	Q
2231690	HBCR03B	FRANCIS LEWIS BOULEVARD	BLP EASTBOUND	2020	FD	Q
2231700	HBCR03B	FRANCIS LEWIS BOULEVARD	BLP WESTBOUND	2020	FD	Q
2231730	HBCR03B	130TH AVENUE	BLP NORTHBOUND	2020	FD	Q
2231740	HBCR03B	130TH AVENUE	BLP SOUTHBOUND	2020	FD	Q
2247090	HBCR03B	149TH PLACE	LIRR PORT WASH BR	2020	FD	Q
1065210	HBCR21B	WHITESTONE EXPRESSWAY NORTHBOUND	CROSS ISLAND PARKWAY	2022	FD	Q
2231590	HBCR21B	130TH STREET	BELT SOUTHERN PARKWAY	2022	FD	Q
2231770	HBCR21B	BELMONT PARK SOUTH RAMP	BELT CROSS ISLAND PARKWAY	2022	FD	Q
2248060	HBCR21B	MOTOR PARKWAY PEDESTRIAN	BELL BOULEVARD	2022	FD	Q
2247290	HBQ49AV	49TH AVENUE	LIRR AMTRAK	2022	PD	Q
2231780	HBQ1114	HEMPSTEAD AVE	BCIP	2024	PD	Q
2231850	HBQ1115	UNION TPKE	BCIP	2024	PD	Q
2231760	HBQA23176	CROSS ISLAND PARKWAY	DUTCH BROADWAY – 115TH AVENUE	2023	PD	Q
2247500	HBQA24750	METROPOLITAN AVENUE	CSX TRANSPORT	2022	PD	Q
2248159	HBQA24815	WOODHAVEN BOULEVARD	QUEENS BOULEVARD	2023	PD	Q
2266160	HBQC064	WHITESTONE EXPRY/VAN WYCK EXPRY SB TO BCIP EB	ACCESS ROAD FROM WHITESTONE EXPRY/VAN WYCK EXPRY	2020	FD	Q
2249390	HBRA24939	CEDARVIEW PEDESTRIAN	SIRT	2021	PD	R
2249820	HBRA24982	ARTHUR KILL ROAD	ARTHUR KILL STREAM	2023	PD	R
2240039	BRC253D	WILLIAMSBURG BRIDGE	EAST RIVER	2022	PD	KM

Revised 2/11/19

PD=Preliminary Design; FD=Final Design

FLAG CONDITIONS

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.

Red Flags on the Ed Koch Queensboro Bridge. A truck caught fire on the bridge and damaged three stringers that support the eastbound upper roadway. All work to replace the two damaged stringers repair a third was performed by in-house forces. Repairing the Bridge Included Custom Designing the Steel Beams, as Well as Fabrication and Installation. Division Ironworkers Fabricated Two 26-Foot-Long, 1.5-Ton Beams in Their Brooklyn Shop. Three New Beams. Removing and Replacing a Severely Corroded Stringer Under Span 1 on the Grand Street Bridge over the Newtown Creek.

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.

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

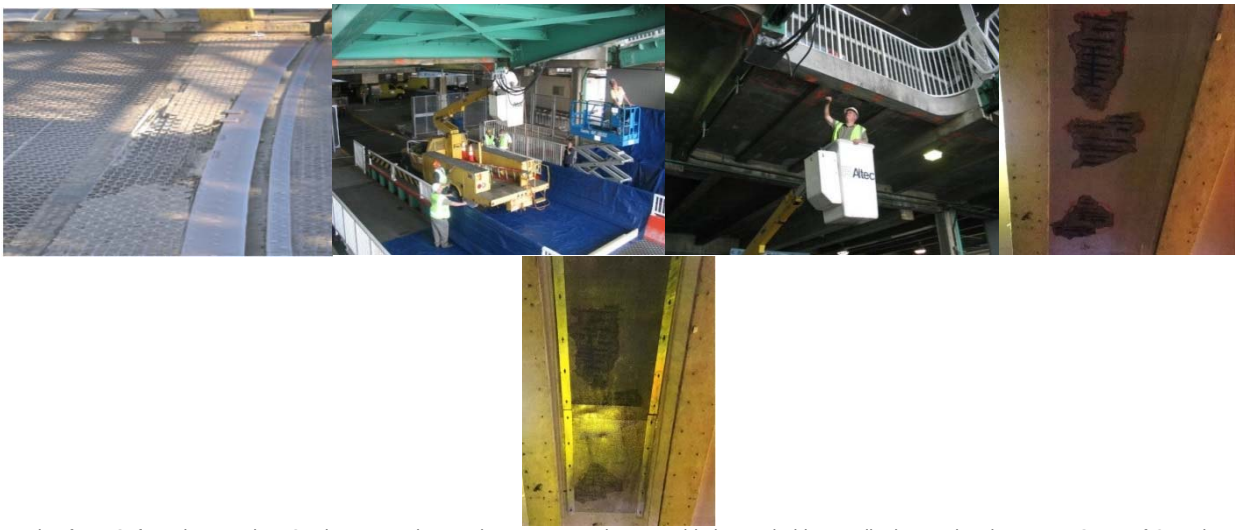
*A significant change in the inspection flagging procedure in early 2016 was the elimination of non-PIA Safety Flags. These were replaced with non-structural condition observations included in the inspection report. These may become a danger to vehicular or pedestrian traffic before the next anticipated inspection date, but pose no danger of structural failure or collapse, or require remediation to maintain bridge durability.

East 14th Street Bridge Over LIRR Bay Ridge –Ironworkers Fabricated and Installed the Bottom Cover of the Ventilation Post on the Right Sidewalk. Safety Flag: Borden Avenue Bridge over Dutch Kills – Broken Wooden Planks of the Right Sidewalk at Span #1.

FLAG DEFINITIONS AND PROCEDURES

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

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, or as recommended by the issuing authority.



Example of PIA Safety Flag: Broken Grating. Associate Project Manager Thomas Whitehouse (White Hardhat) Ensuring the Proper Setup of Containment Procedures at the St. George Ferry Terminal Landing Slips Before the Masons Address A PIA Flag (Falling Concrete). Inspecting the Flagged Condition. Chipping and Shielding at the Park Avenue Viaduct. Crew Removed Loose Concrete and Installed Expanded Sheet Metal Protective Shielding on the Underside of the Deck at Span #6.

Safety Flag on the Miller Highway in 2018: Debris and Soil Accumulated Between the Jersey Barriers at Pier 55. This Caused Vegetation Growth and Water Ponding and Leaking Onto the Girders. This Leads to Pavement Deterioration and Girder Rust. The Debris and Soil Were Removed.

August 2014 PIA Safety Flag: Broken Joint Concrete Header and Steel Armor on the Long Island Expressway over Dutch Kills Creek. The Condition Was Made Safe By Installing Two Steel Plates. PIA Flag (Truck Wedged Under the FDR Drive at Span 41): Removing the Debris. (Credit: Victor Sandoval) PIA Flag Repair (Through Hole) on Harlem River Drive Ramp.
(Credit: Bojidar Yanev)

FLAG CONDITIONS BY CALENDAR YEAR

	2014	2015	2016	2017	2018	% increase (2014 – 2018)
Citywide						
FLAGS ROUTED	1,465	1,344	1,166	1,607	1,480	1%
RED	128	60	68	54	52	-59%
YELLOW	245	187	74	174	119	-51%
SAFETY[!]	1,092	1,097	1,024	1,379	1,309	20%
TOTAL FLAGS ELIMINATED	1,167	1,410	979	1,362	1,078	-8%
RED	116	94	45	64	46	-60%
YELLOW	173	322	139	212	107	-38%
SAFETY[!]	878	994	795	1,086	925	5%
TOTAL FLAGS OUTSTANDING	4,251	4,184	4,370	4,617	5,019	18%
RED	74	40	63	53	59	-20%
YELLOW	835	700	635	597	609	-27%
SAFETY[!]	3,342	3,444	3,672	3,967	4,351	30%
Division of Bridges Workload						
FLAGS ROUTED*	1,200	1,220	1,017	1,398	1,253	4%
RED	124	57	66	51	50	-60%
YELLOW	242	187	73	174	118	-51%
SAFETY[!]	834	976	878	1,173	1,085	30%
FLAGS ELIMINATED**	1,081	1,315	858	1,276	944	-13%
RED	111	90	44	58	44	-60%
YELLOW	171	322	138	211	106	-38%
SAFETY[!]	799	903	676	1,007	794	-1%
FLAGS OUTSTANDING***	2,300	2,220	2,418	2,418	2,896	26%
RED	73	40	62	62	58	-21%
YELLOW	798	663	598	598	577	-28%
SAFETY[!]	1,429	1,517	1,758	1,758	2,261	58%

[!]The NYS DOT Bridge Inspection Manual- Appendix B was revised - as of January 2016, there were no longer any safety flags routed in. Only safety PIA flags are now reported.
*Does not include re-routed flags. **96.02% of 24-hour PIA flags were remediated within 24 hours in 2018. ***Includes re-routed flags.

Revised 2/8/19

FLAG REPORTING AND TRACKING PROCESS

There are four primary sources from which flags originate:

- NYSDOT inspectors
- NYCDOT inspectors
- NYCDOT Communications Center, 311, or other Public Channels
- NYCDOT Bridge Repair Section

State DOT Inspectors

1. State inspectors identify flag conditions.
2. Written notification of flag conditions are sent to the Bridge's Flags unit. (Immediate verbal notification is given for Red Flags and PIA flags.)
3. Flag condition reports are entered into the Division's “City Flag” and "State Flag" database.
4. Flag conditions are reviewed by City engineers who have four routing options:
   - assign flags to outside agencies for repair, or
   - have City inspectors monitor flags until further action is desired, or
   - assign flags to in-house or contractor forces for repair, or
   - assign flags to the Construction Section for Capital contractor repair.
5. Each flag condition is assigned a City Flag number, and routed to the appropriate group.
6. When flag conditions are eliminated, the respective databases are updated.

City DOT Division of Bridges Inspectors

1. City inspectors identify flag conditions and prepare a scope of work. (Immediate verbal notification is given for Red Flags and PIA flags.)
2. Flag condition reports are received and reviewed by the Flags unit.
3. Flag condition reports are entered into the "City Flag" database.
4. Flag conditions are reviewed by City engineers who have four routing options:
   - assign flags to outside agencies for repair, or
   - have City inspectors monitor flags until further action is desired, or
   - assign flags to in-house or contractor forces for repair, or
   - assign flags to the Construction Section for Capital contractor repair.
5. When flag conditions are eliminated, the database is updated.

City DOT Communications Center, 311, or other Public Channels

1. DOT is alerted to a possible flag condition.
2. City engineers visit the site to review the reported condition.
3. If the deficiency warrants, a verbal flag is communicated and a 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 indicated, or
   - assign flags to in-house or contractor forces for repair, or
   - assign flags to the Construction Section for Capital contractor repair.
6. When flag conditions are eliminated, the database is updated.

City DOT Bridge Repair Section

1. Bridge Repair personnel complete a Post Flag Request Form for a condition which they have identified and already corrected.
2. Report is entered into the “City Flag” database as an eliminated flag.

Revised 12/1/14

2018 INVENTORY

Inventory Summary

In Calendar Year 2018, the total number of bridge and tunnel structures under the jurisdiction of the New York City Department of Transportation (NYCDOT) increased to 794. In 2017, the four vehicular tunnels were assigned Tunnel Identification Numbers and removed from the inventory of bridges. NYCDOT owns, operates, and/or maintains 767 non-movable bridges, 23 movable bridges, and four vehicular tunnels. In 1999, a Memorandum of Understanding between NYCDOT and the New York City Department of Environmental Protection (NYCDEP) added 67 culverts (since reduced to 53) in Staten Island to the Division's Inventory. While the Division is responsible for the capital rehabilitation of these structures, maintenance and inspection responsibilities remain with NYCDEP.

The condition of New York City's 790 elevated bridge structures, as measured by the City's general condition rating, are as follows: Three structures were rated *Poor*, 361 structures were rated *Fair*, 241 structures were rated *Good*, 181 structures were classified *Very Good,* and four structures are closed.

Over the past 10 years, there has been an increase in the number of bridges rated "Good" and "Very Good," as shown below.

	2009	2010	2011	2012	2013	2014	2015	#2016	#2017	2018
Poor	**4**	**4**	**3**	**1**	**1**	**0**	**0**	**0**	**2**	**3**
Fair	**456**	**462**	**459**	**460**	**456**	**456**	**458**	**461**	**454**	**!361**
Good	**209**	**207**	**215**	**212**	**217**	**221**	**228**	**224**	**223**	**241**
Vgood	**116**	**113**	**109**	**114**	**114**	**111**	**102**	**107**	**106**	**181**
Closed	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**4**
Unrated									**2**	
	786	**787**	**787**	**788**	**789**	**789**	**789**	**794**	**789**	**790**
!!**Tunnels**	!!	!!	!!	!!	!!	!!	!!	!!	**4**	**4**
TOTAL STRUCTURES	**786**	**787**	**787**	**788**	**789**	**789**	**789**	**794**	**793**	**794**

! In 2018, 87 of the Parks bridges accounted for 24.1% of the "Fair" rated structures.

The bridge ratings reflected in the 2016 and 2017 reports were the traditional NYS bridge condition ratings from 2014 and 2015 with the exception of the bridges inspected by in-house NYCDOT forces (pedestrian bridges). The NYS bridge condition rating system was being converted to a federal system developed by AASHTO and there was no current acceptable formula to translate the results of inspections performed in 2016 and 2017 into the traditional NYS ratings. The AASHTO inspection method does not generate numerical overall bridge condition ratings. The ratings were updated in the current annual report.

The bridges in the Division's inventory connect a vast and diverse highway and street network throughout the City. The impressive East River crossings – the Brooklyn, Manhattan, Williamsburg, and Ed Koch Queensboro Bridges – are the most visible and famous structures, but are by no means representative of all the bridges in the City's inventory. Three hundred twenty-two (40.76%) of the Division's structures consist of one span (the portion of a bridge between two supports). One hundred ten (13.92%) bridges carry pedestrian traffic. Of the 790 structures in the City's inventory, 108 (13.67%) cross waterways; of these, 21 connect the boroughs of the Bronx, Brooklyn, Manhattan and Queens. Three hundred twenty (40.51%) structures cross the City's labyrinthine system of railroad and subway tracks. Two hundred forty five (31.01%) structures cross or connect arterial highways, such as the Henry Hudson Parkway, the Brooklyn-Queens Expressway, and the Belt Parkway, which facilitate traffic flow through and around the five boroughs of the City of New York.

Rating System

The Division of Bridges bases its general condition ratings directly on the numerical ratings assigned during bridge inspections. Federal law mandates that bridge structures be inspected at least once every two years. The New York State Department of Transportation hires engineering consultants to perform biennial inspections for all bridge structures except pedestrian bridge structures, and bridge structures less than 20 feet in length. Bridge

structures not inspected by the State are inspected by the NYC Department of Transportation's Division of Bridges, with the exception of three NYC Parks Department structures and the East 63rd Street Pedestrian Bridge over the FDR Drive, which was inspected by Rockefeller University.

The State inspected 670 (84.81%) bridge structures. The City inspected 116 (14.68%) bridge structures. The remaining bridges in the 2018 inventory are the High Bridge over the Harlem River, which was inspected in 2002 by the Department of Parks and Recreation, two newly inventoried Riverside Park structures (inspected by consultants), and the East 63rd Street Bridge (mentioned above).

Since 2016, the federally mandated biennial inspections no longer generate an overall numerical condition rating under the old rating scale of 1 (structural failure) to 7 (new condition) for all vehicular bridges inspected by NYSDOT consultants. The new inspection scale uses condition states CS1 (good) to CS4 (severe) as described below. Pedestrian bridges, inspected by City forces, still use the old 1 to 7 scale. In certain cases, where a bridge structure is closed to traffic, only a city condition rating is given.

Since 1972 NYSDOT has maintained a bridge condition rating database for all bridges in New York State. For the purposes of the National Bridge Inventory (NBI), the NYS bridge condition ratings were translated annually to a federal Sufficiency Rating, based on 100%, and federal condition ratings, on a 0 (failed) to 9 (new) scale. In 2015, the Federal Highway Administration converted to a new bridge inspection protocol developed by AASHTO. The purpose was to replace qualitative ratings with quantitative assessments. The new protocol assigns bridge elements to 4 condition states and assesses the quantities in each of them. There is no overall bridge condition rating. The NYSDOT adopted the new federal/AASHTO protocol in March 2016. The biennial bridge inspections since that time could not be used to produce overall condition ratings until very recently. The State Source ratings that are shown in the following pages reflect a first attempt at developing a consistent translation. This translation may be refined in the future to improve the overall accuracy of the translation.

City condition ratings correspond to the following ranges of State ratings:

State Numerical Rating		City Condition Rating
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 2018 Bridge Structure Conditions

Rating	Number of Structures	Percent	Number of Spans	Percent	Deck Area Sq Ft	Percent
Poor	3	0.38%	409	8.38%	534,031	3.45%
Fair	361	45.93%	3,186	65.31%	9,448,000	61.02%
Good	241	30.66%	771	15.81%	3,099,910	20.02%
Very Good	181	23.03%	512	10.50%	2,400,714	15.51%
Closed	4	__	__	__	__	__
Total	790	100%	4,878	100%	15,482,655	100.00%

As of December 31, 2018, the condition of the City's bridges indicated that 0.38% were rated as *Poor*; 45.70% were classified as *Fair*; 30.51% were awarded ratings of *Good*; and 22.91% as *Very Good*. Those structures given ratings of Fair encompassed 65.31% of bridge spans.

Rating	2015		*2016		*2017		2018	
Poor	0	0.00%	0	0.00%	2	0.25%	3	0.38%
Fair	458	58.05%	461	58.21%	454	57.83%	361	45.93%
Good	228	28.90%	224	28.28%	223	28.41%	241	30.66%
Very Good	102	12.93%	107	13.51%	106	13.50%	181	23.03%
Closed	1		2		2		4	
Not Rated					2			
Total	789	100	794	100	789	100	790	100

The bridge ratings reflected in the 2016 and 2017 reports were the traditional NYS bridge condition ratings from 2014 and 2015 with the exception of the bridges inspected by in-house NYCDOT forces (pedestrian bridges). The NYS bridge condition rating system was being converted to a federal system developed by AASHTO and there was no current acceptable formula to translate the results of inspections performed in 2016 and 2017 into the traditional NYS ratings. The AASHTO inspection method does not generate numerical overall bridge condition ratings. The ratings were updated in the current annual report.

During 2018, Manhattan had the highest percentage of bridge structures rated *fair* – 58.19% - as well as the lowest percentage of bridge structures rated *good* – 24.29%. Staten Island had the third highest percentage of bridge structures classified as *good* – 28.79%, and the second highest percentage of bridge structures rated *very good* – 28.79%, for a total of 57.58%. In 2018, Brooklyn had the highest percentage of bridge structures rated as *very good* – 34.66%. The Bronx had the second highest percentage of bridge structures classified as *good* – 34.64%. Queens had the highest percentage of bridge structures classified as *good* – 36.79%, and the second highest percentage of bridge structures rated as *fair* – 46.63%.

Borough*	Poor	% of Boro	Fair	% of Boro	Good	% of Boro	Very Good	% of Boro	Total
Bronx	0	0.00%	62	40.52%	53	34.64%	38	24.84%	153
Brooklyn	0	0.00%	66	37.50%	49	27.84%	61	34.66%	176
Manhattan	2	1.13%	103	58.19%	43	24.29%	29	16.38%	177
Queens	1	0.52%	90	46.63%	71	36.79%	31	16.06%	193
Staten Island	0	0.00%	28	42.42%	19	28.79%	19	28.79%	66
Total	3	0.39%	349	45.62%	235	30.72%	178	23.27%	765

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

Fifty-seven percent of the 21 borough-crossing bridge structures were rated in *fair* condition in 2018, and almost 43% 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%	4	36.36%	4	36.36%	3	27.27%	11
Brooklyn-Manhattan	0	0.00%	4	100.00%	0	0.00%	0	0.00%	4
Queens-Manhattan	0	0.00%	2	66.67%	1	33.33%	0	0.00%	3
Brooklyn-Queens	0	0.00%	2	66.67%	1	33.33%	0	0.00%	3
Total	0	0.00%	12	57.14%	6	28.57%	3	14.29%	21

These figures evidence that the Division is continuing to make progress in improving the conditions of the City's bridges. 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 2018 the total number of closed or partially closed bridge structures was eight, with four closed and four partially-closed structures (see Appendix C-2).

NYCDOT Bridges with Posted Weight Restrictions

BIN	BOROUGH	LOCATION FEATURE-1	LOCATION FEATURE-2	LOCATION FEATURE-3	FISCAL YEAR*	POSTED TONS	REMARKS
2240019	BROOKLYN & MANHATTAN	BROOKLYN BRIDGE	EAST RIVER	INCLUDING RAMPS	2016	3	NO COMMERCIAL TRAFFIC NO TRUCKS, NO BUSSES; 11'0" CLEARANCE
224001A	MANHATTAN	PARK ROW TO BROOKLYN	WILLIAM STREET NORTHBOUND			3	
224001C	MANHATTAN	PEARL STREET TO BROOKLYN	LAND ADJACENT TO BRIDGE			3	
224001F	MANHATTAN	PEARL STREET TO FDR DRIVE	LAND ADJACENT TO BRIDGE			4	
2240039	BROOKLYN & MANHATTAN	WILLIAMSBURG BRIDGE	EAST RIVER		2022		INNER ROADWAYS, NO TRUCKS; OUTER ROADWAYS DESIGN FOR HS20 [36 TONS] AND TRUCKS ARE PERMITTED ON OUTER ROADWAY
2240047	MANHATTAN & QUEENS	ED KOCH QUEENSBORO BRIDGE	EAST RIVER		2018	7.5	LOWER OUTER ROADWAYS POSTED AS H-7.5 [7.5 TONS] (PASSENGER CARS ONLY FOR SOUTHBOUND; PEDESTRIANS AND BICYCLES ONLY FOR NORTHBOUND); LOWER INNER ROADWAYS ARE DESIGNED FOR HS20 TRUCK LOAD [36 TONS]; UPPER ROADWAYS DESIGNED FOR H-15 [15 TONS], NO TRUCKS, ONLY BUSES
2240260	BROOKLYN	CARROLL STREET BRIDGE	GOWANUS CANAL	CARROLL STREET		10	
2240507**	QUEENS	ROOSEVELT AVENUE BRIDGE	VAN WYCK EXPRESSWAY		2016	25	
2240640	MANHATTAN & QUEENS	ROOSEVELT ISLAND	EAST CHANNEL OF THE EAST RIVER			36	
2240660	QUEENS	RIKERS ISLAND BRIDGE	RIKERS ISLAND CHANNEL			36	
2244120	BROOKLYN	HILL DRIVE	PROSPECT PARK LAKE				NO VEHICLES
2245460	MANHATTAN	PARK AVENUE SB	EAST 45TH STREET			15	NO COMMERCIAL TRAFFIC
2245470	MANHATTAN	PARK AVENUE NB	EAST 45TH STREET			15	NO COMMERCIAL TRAFFIC
2246550	MANHATTAN	PARK AVENUE VIADUCT	42ND STREET			15	NO COMMERCIAL TRAFFIC
2247120**	QUEENS	WOODSIDE AVENUE BRIDGE	LIRR MAIN LINE			8	
2247590	QUEENS	FOREST PARK DRIVE	LIRR			8	
2247660	QUEENS	FOREST PARK DRIVE	ABANDONED LIRR			8	
2257569	MANHATTAN	MILLER HIGHWAY – ROUTE 9A	RIVERSIDE PARK SOUTH			22	
226771A**	MANHATTAN	79Th STREET RAMP to HHP	79TH STREET BOAT BASIN GARAGE			15	
226771B**	MANHATTAN	79TH STREET RAMP TO GARAGE	79TH STREET BOAT BASIN GARAGE			15	
226771C**	MANHATTAN	GARAGE RAMP TO 79TH STREET	79TH STREET BOAT BASIN GARAGE			15	
226771D**	MANHATTAN	SB HHP RAMP TO 79TH STREET	79TH STREET BOAT BASIN GARAGE			15	

22 COUNT *** - CONSTRUCTION CONTRACT LETTING**

Truck on the Wrong Ed Koch-Queensboro Bridge Roadway.

4/2019

Partially Closed Bridges

NEW YORK CITY DEPARTMENT OF TRANSPORTATION

BIN	BOROUGH	LOCATION FEATURE-1	LOCATION FEATURE-2	LOCATION FEATURE-3	FISCAL YEAR*	REMARKS
2076640	BRONX	DEPOT PLACE	CONRAIL HUDSON DIVISION			ONE LANE CLOSED TO TRAFFIC (BUT OPEN TO PEDESTRIANS AND BICYCLES), AND ONE LANE OPEN
2244120	BROOKLYN	HILL DRIVE (TERRACE BRIDGE)	PROSPECT PARK LAKE		CONSTRUCTION MOVED DUE TO LACK OF FUNDING	CLOSED TO VEHICULAR TRAFFIC, OPEN TO PEDESTRIAN TRAFFIC, ALONG THE CENTER OF THE ROADWAY.
2248379	QUEENS	BOATHOUSE BRIDGE	AQUACADE LAKE			LEFT SIDE CLOSED TO VEHICULAR TRAFFIC, AND OPEN TO PEDESTRIAN TRAFFIC.
2233040	MANHATTAN	EAST 60TH STREET	FDR DRIVE			CLOSED TO PUBLIC VEHICLES, OPEN TO PEDESTRIAN TRAFFIC

4 COUNT *** - CONSTRUCTION CONTRACT LETTING**

2/13/19

Closed Bridges

NEW YORK CITY DEPARTMENT OF TRANSPORTATION

There are four closed bridges.

BIN	BOROUGH	LOCATION FEATURE-1	LOCATION FEATURE-2	LOCATION FEATURE-3	REMARKS
2248130	QUEENS	FLUSHING MEADOW PARK PEDESTRIAN	WILLOW LAKE	76th ROAD	BRIDGE IS IN FLUSHING CORONA PARK, WHICH IS IN A REMOTE LOCATION AND WAS DAMAGED BY FIRE.
7703720	QUEENS	216TH STREET PEDESTRIAN	LIRR PORT WASHINGTON		WILL BE DEMOLISHED BY DDC in 2019.
2249230	STATEN ISLAND	TRACY AVENUE PEDESTRIAN BRIDGE	SIRT SOUTH SHORE		WILL BE DEMOLISHED IN 2020.
2249250	STATEN ISLAND	BETHEL AVENUE PEDESTRIAN BRIDGE	SIRT SOUTH SHORE		WILL BE DEMOLISHED IN 2020.

12/27/18

Boathouse Bridge over Aquacade Lake in 2017. (Credit: NYSDOT) Hill Drive Bridge in 2018. Flushing Meadow Park Pedestrian Bridge – (Date Unknown). 216th Street Pedestrian Bridge in June 2018 - Bridge Closed Sign. Tracy Avenue and Bethel Avenue Pedestrian Bridges in July 2017.

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., 2-24001, 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 Rating System

In 2016, the State changed the rating system used during Biennial Inspections to the federally mandated AASHTO Element Rating System. The new rating system is described in detail in the 2017 NYSDOT Bridge Inspection Manual. Inspectors are also required to follow the guidelines established in the AASHTO Manual for Bridge Element Inspection (AMBEI) and the Federal Highway Administration Bridge Inspection Reference Manual (BIRM). A brief description of the ratings or Condition States is given below. All bridge components now have a quantity associated with it and the ratings dictate what percentage of that quantity falls into the various condition states.

The inspector is responsible for evaluating each element and assigning to it a descriptive Condition State (CS) assessment of "good", "fair", "poor", "severe", or "unknown". The following are general condition state guidelines and shall not be used in place of the AMBEl defects' condition state definitions:

Condition State	Condition Type	General Condition Guideline
CS-1	Good	That portion of the element that has either no deterioration or the deterioration is insignificant to the management of the element, meaning that portion of the element has no condition based preventive maintenance needs or repairs. Areas of an element that have received long lasting structural repairs that restore the full capacity of the element with an expected life equal to the original element may be coded as good condition.
CS-2	Fair	That portion of the element that has minor deficiencies that signify a progression of the deterioration process. This portion of the element may need condition based preventive maintenance. Areas of the element that have received repairs that improve the element, but the repair is not considered equal to the original member may be coded as fair.
CS-3	Poor	That portion of the element that has advanced deterioration but does not warrant structural review. This portion of the element may need condition based preventative maintenance or other remedial action.
CS-4	Severe	That portion of the element that warrants a structural review to determine the effect on strength or serviceability of the element or bridge; OR a structural review has been completed and the defects impact strength or serviceability of the element or bridge; OR a condition where that portion of the element is no longer effective for its intended
CS-5	Unknown	That portion of the element not assessable due to lack of access.

City Inspection crews are tentatively set to convert to the AASHTO Element Inspection System in early 2020. In 2018, City Inspectors used the older rating scale during Biennial bridge inspections. In this system, each bridge element is investigated and its structural condition is numerically rated according to the system indicated below:

Numerical Rating	Description
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 in our Bridge Data System application (BDS), and reports are produced in PDF format. 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.

The bridge ratings reflected here are the traditional NYS bridge condition ratings from 2014 and 2015 and are used on bridges inspected by in-house NYCDOT forces (pedestrian bridges).

Standard Abbreviations

General Abbreviations :

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

Footbridge South of Forest Avenue over Stream in Park. Hylan Boulevard Bridge over Lemon Creek. Isham Park Pedestrian Bridge over Harlem River Inlet. Nelson Avenue Pedestrian Bridge over Staten Island Railway.

Routes :

No.	Borough	Name
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 (to East 127th Street)
GCP:	Grand Central Parkway
GW:	George Washington Bridge
HHP:	Henry Hudson Parkway
HRD:	Harlem River Drive (from East 127th Street)
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 (also known as East River Drive from 1935 to 1947)

Information Available On Division Of Bridges Inventory Of Bridge Structures

- **Bridge Identification Number (B.I.N.)**

- **Borough :**

B - The Bronx	Q - Queens	R - Staten Island
K - Brooklyn	M - Manhattan	

- **Feature Carried** : Name of passageway carrying vehicle or pedestrian traffic.

- **Feature Crossed** : Description of area crossed.

- **Railroad Crossed** (if applicable):

A - Amtrak	N - New York & Atlantic
C - Conrail	O - B & O Railroad
L - Long Island Railroad	S - Staten Island Railway
M - Metro-North (MTA)	T - NYC Transit Authority
X - CSX	

- **Other Owner** :

ED	Department of Education
F	Ferries (Department of Transportation)
P	Department of Parks and Recreation

- **Bridge Type :**

A	Arterial	PED	Pedestrian
E	East River	R	Ramp
M	Movable	T	Tunnel
O	Off-System	W	Waterway

- **Rating Source:**

(City)	City Inspection	(Parks)	Parks Inspection
(State)	State Inspection	(University)	Rockefeller University Inspection

- **Rating** : Numerical and/or verbal rating

1.000 - 3.000:	POOR	
3.001 - 4.999:	FAIR	
5.000 - 6.000:	GOOD	
6.001 - 7.000:	VGOOD	VERY GOOD

- **Deck Area:** Square feet

- **CD:**

Community Board District

2018 Bridge Inventory Adjustments

There were 7 bridges deleted from and 8 bridges added to the City's inventory since the *2017 Annual Report* was issued.

B.I.N.	BORO	FEATURE CARRIED	FEATURE CROSSED	EXPLANATION
- Bridges deleted from the City's Inventory:				
2231479	K	BELT SYSTEM – SHORE PARKWAY	MILL BASIN	DEMOLISHED – REPLACED WITH 2 PARALLEL BRIDGES
2230680	Q	BROOKLYN-QUEENS EXPRESSWAY	NORTHERN BOULEVARD	TRANSFERRED TO NYSDOT
2230690	Q	BROOKLYN-QUEENS EXPRESSWAY NORTHBOUND (BQE WEST LEG)	32ND AVENUE	TRANSFERRED TO NYSDOT
2230700	Q	BROOKLYN-QUEENS EXPRESSWAY NORTHBOUND (BQE EAST LEG)	32ND AVENUE (TO BQE WEST LEG)	TRANSFERRED TO NYSDOT
2230760	Q	BROOKLYN-QUEENS EXPRESSWAY NORTHBOUND (BQE EAST LEG)	31ST AVENUE	TRANSFERRED TO NYSDOT
2233059	M	HARLEM RIVER DRIVE	EAST 127TH STREET RAMP TO/FROM HARLEM RIVER DRIVE NORTHBOUND	DEMOLISHED – TO BE REPLACED WITH 2 PARALLEL BRIDGES (1 IS UNDER CONSTRUCTION)
Q00002	Q	BELT SYSTEM – CROSS ISLAND	PATH OPPOSITE 88TH ROAD	NYSDOT
- Bridges added to the City's Inventory:				
2231471	K	BELT SYSTEM – SHORE PARKWAY WESTBOUND	MILL BASIN	NEW
2231472	K	BELT SYSTEM – SHORE PARKWAY EASTBOUND	MILL BASIN	NEW
2233051	M	HARLEM RIVER DRIVE VIADUCT	127TH STREET (SOUTHBOUND)	NEW (NORTHBOUND IS UNDER CONSTRUCTION)
227128A	M	WEST 151ST STREET PEDESTRIAN BRIDGE – WEST RAMP	RIVERSIDE PARK	PARKS – NEW BRIDGE
2271310	Q	MOTOR PARKWAY PEDESTRIAN BRIDGE	ALLEY POND PARK PEDESTRIAN	PARKS – NEWLY INVENTORIED
2271180	M	RIVERSIDE PARK OVERBUILD BRIDGE (FREEDOM TUNNEL)	WEST 82ND TO WEST 94TH STREET) – AMTRAK EMPIRE LINE	PARKS – NEWLY INVENTORIED
2271190	M	RIVERSIDE PARK OVERBUILD BRIDGE (FREEDOM TUNNEL)	WEST 98TH TO WEST 123RD STREET) – AMTRAK EMPIRE LINE	PARKS – NEWLY INVENTORIED
M00005	M	EAST 72ND STREET	FDR DRIVE SOUTHBOUND EXIT RAMP	NEWLY INVENTORIED

REV. DATE 6/28/19

2018 Rating Note

Beginning in April 2016, New York State began inspecting and rating the City's roadway bridges using a new national system, the AASHTO Element rating system. All bridges in the following table that have been inspected since then and that show a rating source of either "STATE" or "PARKS" were inspected according to this new scale. New York City DOT continues to rate pedestrian bridges on the older rating scale, so all bridges with a rating source of "CITY" or with an inspection date of March 2016 or earlier were rated with that older scale.

Ratings under the new AASHTO system do not include a single numerical score for the entire bridge. Instead, inspectors report the percentage of each element that is in Condition State CS1 (Very Good), CS2 (Good), CS3 (Fair), or CS4 (Poor). For example, the Curb element for a bridge could be rated 40% CS1, 30% CS2, 20% CS3, and 10% CS4.

The previous rating system calculated an overall score for each bridge, on a scale of 7 (New) to 1 (Failed). To allow comparison of the new ratings with those ratings, this report translates the new detailed scores into a single 7-to-1 rating for each bridge, using a refined version of a methodology developed by New York State. Because the new inspections report more detail but with somewhat less granularity (a four-level scale instead of the former seven-point scale), an exact translation is not possible. Therefore, the ratings in this report could differ significantly from ratings reported with previous inspections even without a significant improvement or decline in the condition of the bridge. DOT will be continuing to refine this translation to make comparisons as useful as possible.

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
2243310	K	2ND AVENUE	LIRR BAY RIDGE	N	O		2	STATE	9/11/2018	6	4.806	FAIR	17,830	$80,235,000	310		
224004J	M	(ROUTE 25X) TO/FROM 2ND AVENUE	NYC GARAGE		OE		14	STATE	3/14/2018	5	5.317	GOOD	42,301	$190,354,500	108		
2243320	K	3RD AVENUE	LIRR BAY RIDGE	N	O		4	STATE	8/23/2017	5	5.375	GOOD	17,246	$77,607,000	310		
2244160	K	3RD AVENUE	SHORE ROAD DRIVE		O		1	STATE	5/17/2017	6	6.222	VGOOD	4,360	$19,620,000	310		
2243330	K	4TH AVENUE	LIRR BAY RIDGE	NT	O		4	STATE	7/27/2017	5	4.851	FAIR	13,845	$62,302,500	310		
2243839	K	4TH AVENUE	NYCTA BMT TRACKS	T	O		1	STATE	7/10/2017	6	6.683	VGOOD	4,440	$19,980,000	307		
2231270	K	4TH AVENUE	BELT SYSTEM - SHORE PARKWAY		A		2	STATE	3/20/2018	5	5.353	GOOD	6,100	$27,450,000	310		
2244480	K	5TH AVENUE	GREENWOOD CEMETERY ROAD		O		1	STATE	9/18/2017	5	4.692	FAIR	3,600	$16,200,000	307		
2243580	K	5TH AVENUE	LIRR & SEA BEACH	NT	O		4	STATE	7/30/2018	4	3.853	FAIR	12,462	$56,079,000	310		
2066100	K	5TH AVENUE	27X PROSPECT EXPRESSWAY		A		1	STATE	4/11/2018	5	5.837	GOOD	8,800	$39,600,000	307		
2243590	K	6TH AVENUE	LIRR & SEA BEACH	NT	O		2	STATE	7/10/2017	6	6.167	VGOOD	14,382	$64,719,000	310		
2243280	K	6TH AVENUE	LIRR ATLANTIC AVENUE	L	O		9	STATE	9/12/2018	5	4.569	FAIR	12,276	$55,242,000	302		
2243600	K	7TH AVENUE	LIRR & SEA BEACH	NT	O		7	STATE	7/13/2018	5	4.875	FAIR	18,699	$84,145,500	310		
2243920	K	7TH AVENUE	NYCTA BMT YARD	T	O		2	STATE	6/27/2018	6	6.127	VGOOD	3,080	$13,860,000	307		
2243610	K	8TH AVENUE	LIRR & SEA BEACH	NT	O		2	STATE	7/10/2017	6	6.403	VGOOD	10,834	$48,753,000	310		
2243840	K	9TH AVENUE	NYCTA BMT YARD	T	O		5	STATE	7/3/2017	6	6.264	VGOOD	12,400	$55,800,000	312		
2243940	K	9TH AVENUE	NYCTA IND SBWY	T	O		5	STATE	8/3/2017	5	5.824	GOOD	6,496	$29,232,000	312		
2245209	M	11TH AVENUE	AMTRAK 30TH STREET BRANCH	A	O		2	STATE	9/6/2018	5	3.839	FAIR	15,400	$69,300,000	104		
2243630	K	11TH AVENUE	LIRR & SEA BEACH	NT	O		5	STATE	7/6/2018	6	6.735	VGOOD	9,600	$43,200,000	310		
2245010	M	11TH AVENUE VIADUCT	LIRR WEST SIDE YARD	AL	O		34	STATE	12/13/2018	5	3.764	FAIR	142,005	$639,022,500	104		
2243640	K	13TH AVENUE	LIRR & SEA BEACH	NT	O		5	STATE	7/24/2017	5	5.569	GOOD	16,000	$72,000,000	310		
2231970	Q	14TH AVENUE	BELT SYSTEM - CROSS ISLAND		A		2	STATE	1/24/2018	5	4.658	FAIR	8,100	$36,450,000	407		
2243650	K	14TH AVENUE	LIRR BAY RIDGE	N	O		1	STATE	9/18/2018	6	5.783	GOOD	4,800	$21,600,000	311		
2243670	K	15TH AVENUE	BMT SEA BEACH	T	O		4	STATE	6/20/2017	6	6.426	VGOOD	10,858	$48,861,000	311		
2243340	K	15TH AVENUE	LIRR BAY RIDGE	N	O		1	STATE	9/18/2018	5	4.491	FAIR	3,614	$16,263,000	311		
2243680	K	16TH AVENUE	BMT SEA BEACH	T	O		3	STATE	5/18/2018	5	4.742	FAIR	6,816	$30,672,000	311		
2243360	K	16TH AVENUE	LIRR BAY RIDGE	N	O		1	STATE	9/28/2018	6	4.500	FAIR	5,403	$24,313,500	311		
2243690	K	17TH AVENUE	BMT SEA BEACH	T	O		4	STATE	5/21/2018	6	6.077	VGOOD	8,946	$40,257,000	311		
2243370	K	17TH AVENUE	LIRR BAY RIDGE	N	O		1	STATE	9/28/2018	5	3.780	FAIR	3,406	$15,327,000	312		
2231300	K	17TH AVENUE PEDESTRIAN BRIDGE	BELT SYSTEM - SHORE PARKWAY		PEDESTRIAN-A	P	1	CITY	8/3/2018	3	3.702	FAIR	2,100	$9,450,000	311		
2243700	K	18TH AVENUE	BMT SEA BEACH	T	O		1	STATE	6/19/2017	6	6.632	VGOOD	5,200	$23,400,000	311		
2243380	K	18TH AVENUE	LIRR BAY RIDGE	N	O		1	STATE	8/29/2018	5	4.672	FAIR	6,006	$27,027,000	312		
2243710	K	19TH AVENUE	BMT SEA BEACH	T	O		4	STATE	5/22/2018	4	4.471	FAIR	4,800	$21,600,000	311		
2243720	K	20TH AVENUE	BMT SEA BEACH	T	O		1	STATE	5/23/2018	7	6.632	VGOOD	7,000	$31,500,000	311		
2243820	K	21ST AVENUE	BMT SEA BEACH	T	O		4	STATE	5/25/2018	4	3.176	FAIR	21,360	$96,120,000	311		
2247270	Q	21ST STREET	LIRR NORTH SHORE YARD	L	O		6	STATE	10/12/2017	6	5.611	GOOD	17,590	$79,155,000	402		
224004H	Q	TO 21ST STREET FROM NEW YORK	22ND STREET		OE		43	STATE	10/5/2018	5	4.638	FAIR	48,100	$216,450,000	402		
2231330	K	27TH AVENUE PEDESTRIAN BRIDGE	BELT SYSTEM - SHORE PARKWAY		PEDESTRIAN-A	P	1	CITY	2/1/2018	4	4.156	FAIR	2,100	$9,450,000	313		
2231890	Q	28TH AVENUE PEDESTRIAN BRIDGE	BELT SYSTEM - CROSS ISLAND		PEDESTRIAN-A	P	24	CITY	6/15/2018	4	4.431	FAIR	7,600	$34,200,000	411		
2230730	Q	31ST AVENUE	278I NORTHBOUND (BROOKLYN-QUEENS EXPRESSWAY WEST LEG)		A		1	STATE	6/16/2017	6	5.633	GOOD	5,875	$26,437,500	401		
2230657	Q	31ST STREET	278I (BROOKLYN-QUEENS EXPRESSWAY) - NYCTA		A		2	STATE	10/2/2018	5	5.431	GOOD	9,957	$44,806,500	401		
2230640	Q	32ND STREET	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		2	STATE	8/15/2017	5	4.611	FAIR	8,100	$36,450,000	401		

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
2230630	Q	35TH STREET	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		4	STATE	5/14/2018	5	4.986	FAIR	8,534	$38,403,000	401		
2247370	Q	37TH AVENUE	CSX - HELLGATE	X	O		1	STATE	10/2/2017	6	5.351	GOOD	6,868	$30,906,000	402		
2230620	Q	37TH STREET	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		2	STATE	5/14/2018	5	5.083	GOOD	5,110	$22,995,000	401		
2247330	Q	39TH STREET (NORTH)	SUNNYSIDE YARD	A	O		14	STATE	12/19/2017	6	6.306	VGOOD	48,200	$216,900,000	402	401	
2247640	Q	39TH STREET (SOUTH)	AMTRAK & LIRR YARD	AL	O		9	STATE	12/19/2017	6	6.306	VGOOD	34,100	$153,450,000	402		
2230570	Q	41ST AVENUE	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		2	STATE	8/15/2018	6	6.132	VGOOD	8,450	$38,025,000	402		
2247390	Q	41ST AVENUE	CSX - HELLGATE	X	O		2	STATE	10/2/2017	5	5.674	GOOD	4,400	$19,800,000	402	404	
2247410	Q	43RD AVENUE	CSX TRANSPORT	X	O		1	STATE	10/3/2017	5	6.038	VGOOD	3,905	$17,572,500	402	404	
2247420	Q	44TH AVENUE	CSX TRANSPORT	X	O		1	STATE	10/4/2017	5	5.731	GOOD	3,888	$17,496,000	402	404	
2230840	Q	44TH STREET	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		2	STATE	5/2/2018	5	4.306	FAIR	5,586	$25,137,000	401		
2247430	Q	45TH AVENUE	CSX TRANSPORT	X	O		1	STATE	10/4/2017	5	6.061	VGOOD	2,400	$10,800,000	402	404	
2230820	Q	47TH STREET	GRAND CENTRAL PARKWAY		A		2	STATE	5/1/2018	5	4.236	FAIR	5,824	$26,208,000	401		
2247290	Q	49TH AVENUE	LIRR - AMTRAK	AL	O		5	STATE	12/5/2018	4	4.375	FAIR	20,400	$91,800,000	402		
2230800	Q	49TH STREET	278I (BROOKLYN-QUEENS EXPRESSWAY WEST LEG)		A		2	STATE	4/26/2018	5	5.083	GOOD	5,304	$23,868,000	401		
2230890	Q	49TH STREET	GRAND CENTRAL PARKWAY		A		2	STATE	7/2/2018	5	5.259	GOOD	6,350	$28,575,000	401		
2243400	K	50TH STREET	LIRR BAY RIDGE	N	O		2	STATE	8/8/2017	5	4.571	FAIR	6,780	$30,510,000	312		
1247280	Q	51ST AVENUE PEDESTRIAN BRIDGE (2247280)	LIRR MAIN LINE	L	PEDESTRIAN-O		5	CITY	6/15/2018	3	2.883	POOR	700	$3,150,000	402		
2243390	K	52ND STREET	LIRR BAY RIDGE	N	O		1	STATE	8/29/2018	6	5.250	GOOD	3,293	$14,818,500	312		
2247190	Q	55TH AVENUE PEDESTRIAN BRIDGE	LIRR MAIN LINE	L	PEDESTRIAN-O		3	CITY	6/14/2018	4	4.000	FAIR	1,296	$5,832,000	404		
2247450	Q	57TH AVENUE	CSX TRANSPORT	X	O		1	STATE	10/5/2017	6	6.000	GOOD	2,283	$10,273,500	405		
2247650	Q	60TH ROAD PEDESTRIAN BRIDGE	LIRR MAIN LINE	L	PEDESTRIAN-O		3	CITY	6/13/2018	5	4.679	FAIR	1,200	$5,400,000	405	406	
2243350	K	60TH STREET	LIRR BAY RIDGE	N	O		1	STATE	8/15/2017	6	6.150	VGOOD	3,983	$17,923,500	311		
2247540	Q	60TH STREET	LIRR MONTAUK DIV	L	O		2	STATE	11/2/2017	5	5.403	GOOD	5,340	$24,030,000	405		
2230520	Q	65TH PLACE	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		2	STATE	2/8/2018	6	5.764	GOOD	11,668	$52,506,000	402		
2247160	Q	65TH PLACE	LIRR MAIN LINE	L	O		3	STATE	11/5/2017	6	6.333	VGOOD	8,381	$37,714,500	402		
2243730	K	65TH STREET	BMT SEA BEACH	T	O		4	STATE	5/17/2018	5	4.324	FAIR	12,000	$54,000,000	311		
2247150	Q	65TH STREET	LIRR MAIN LINE	L	O		3	STATE	11/5/2017	6	6.134	VGOOD	6,600	$29,700,000	402		
1247200	Q	67TH AVENUE PEDESTRIAN BRIDGE (2247200)	LIRR MAIN LINE	L	PEDESTRIAN-O		3	CITY	6/12/2018	4	4.138	FAIR	1,300	$5,850,000	406		
2230550	Q	69TH STREET	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		2	STATE	3/1/2018	5	5.982	GOOD	12,600	$56,700,000	402		
2065950	Q	69TH STREET	495I (LONG ISLAND EXPRESSWAY)		A		2	STATE	6/23/2017	5	5.458	GOOD	10,336	$46,512,000	405		
2247490	Q	69TH STREET	CSX TRANSPORT	X	O		1	STATE	11/30/2016	5	5.745	GOOD	6,175	$27,787,500	405		
2230560	Q	70TH STREET	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		2	STATE	8/15/2018	6	5.940	GOOD	8,580	$38,610,000	402		
2248300	Q	71ST AVENUE	COOPER AVENUE		O		1	STATE	7/26/2017	4	5.356	GOOD	2,800	$12,600,000	405		
2246150	M	72ND STREET CROSS DRIVE (TERRACE BRIDGE)	PEDESTRIAN PATH TO FOUNTAIN		O	P	3	STATE	2/12/2018	6	5.792	GOOD	5,070	$22,815,000	164		
2246160	M	73RD STREET PEDESTRIAN BRIDGE (BOW BRIDGE)	THE LAKE		PEDESTRIAN-WO	P	1	CITY	5/8/2018	5	4.629	FAIR	1,700	$7,650,000	164		
2246440	M	79TH STREET PEDESTRIAN BRIDGE	TRANSVERSE ROAD #2		PEDESTRIAN-O	P	1	CITY	5/12/2018	4	3.889	FAIR	5,900	$26,550,000	164		
2267717	M	79TH STREET PEDESTRIAN PLAZA	79TH STREET BOAT BASIN GARAGE		A	P	10	STATE	7/5/2017	5	4.156	FAIR	29,250	$131,625,000	107		
226771B	M	79TH STREET RAMP TO GARAGE	79TH STREET BOAT BASIN GARAGE		AR	P	21	STATE	5/7/2018	5	4.735	FAIR	11,828	$53,226,000	107		
226771A	M	79TH STREET RAMP TO HENRY HUDSON PARKWAY	79TH STREET BOAT BASIN GARAGE		AR	P	4	STATE	3/12/2018	5	3.515	FAIR	2,918	$13,131,000	107		
2267718	M	79TH STREET TRAFFIC CIRCLE	79TH STREET PEDESTRIAN PLAZA		A	P	34	STATE	6/14/2017	4	3.537	FAIR	24,130	$108,585,000	107		
2247220	Q	80TH ROAD	LIRR MAIN LINE	L	O		3	STATE	11/14/2017	5	5.414	GOOD	4,100	$18,450,000	409		
2247570	Q	80TH STREET	77TH AVENUE - LIRR MT	L	O		5	STATE	8/24/2018	6	5.478	GOOD	11,542	$51,939,000	405		

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
2231250	K	81ST STREET PEDESTRIAN BRIDGE	BELT SYSTEM - SHORE PARKWAY		PEDESTRIAN-A	P	5	CITY	3/9/2018	4	4.431	FAIR	3,100	$13,950,000	310		
2247230	Q	82ND AVENUE	LIRR MAIN LINE	L	O		3	STATE	11/13/2017	5	5.911	GOOD	4,100	$18,450,000	409		
2243570	K	86TH STREET	BMT SEA BEACH	T	O		1	STATE	6/12/2018	6	5.812	GOOD	12,167	$54,751,500	313		
1247010	Q	91ST PLACE (2247010)	LIRR PORT WASHINGTON BRANCH	L	O		1	STATE	10/12/2017	6	6.167	VGOOD	2,760	$12,420,000	404		
2231260	K	92ND STREET PEDESTRIAN BRIDGE	BELT SYSTEM - SHORE PARKWAY		PEDESTRIAN-A	P	6	CITY	8/1/2018	4	4.000	FAIR	3,000	$13,500,000	310		
2247020	Q	94TH STREET PEDESTRIAN BRIDGE	LIRR PORT WASHINGTON BRANCH	L	PEDESTRIAN-O		5	CITY	6/8/2018	4	3.564	FAIR	905	$4,072,500	404		
2248250	Q	102ND STREET	HAWTREE BASIN		WO		3	STATE	7/21/2017	6	6.700	VGOOD	4,900	$22,050,000	410		
2231730	Q	130TH AVENUE	BELT SYSTEM - LAURELTON PARKWAY NORTHBOUND		A		1	STATE	1/26/2018	5	5.231	GOOD	4,400	$19,800,000	413		
2231740	Q	130TH AVENUE	BELT SYSTEM - LAURELTON PARKWAY SOUTHBOUND		A		1	STATE	1/29/2018	5	4.231	FAIR	4,400	$19,800,000	413		
2231590	Q	130TH STREET	BELT SYSTEM - SOUTHERN PARKWAY		A		2	STATE	1/11/2018	5	5.053	GOOD	6,800	$30,600,000	410		
2240089	BM	145TH STREET BRIDGE	HARLEM RIVER		WMO		8	STATE	9/18/2017	7	6.236	VGOOD	56,700	$255,150,000	110	204	201
2231980	Q	147TH STREET	BELT SYSTEM - CROSS ISLAND		A		2	STATE	2/5/2018	5	4.765	FAIR	6,300	$28,350,000	407		
2247070	Q	147TH STREET	LIRR PORT WASHINGTON BRANCH	L	O		1	STATE	10/17/2017	5	6.136	VGOOD	1,994	$8,973,000	407		
2247090	Q	149TH PLACE	LIRR PORT WASHINGTON BRANCH	L	O		2	STATE	10/18/2017	5	5.645	GOOD	4,300	$19,350,000	407		
2231960	Q	149TH STREET	BELT SYSTEM - CROSS ISLAND		A		2	STATE	1/24/2018	5	4.632	FAIR	6,210	$27,945,000	407		
2247080	Q	149TH STREET	LIRR PORT WASHINGTON BRANCH	L	O		1	STATE	8/2/2018	7	6.438	VGOOD	4,720	$21,240,000	407		
2231950	Q	150TH STREET	BELT SYSTEM - CROSS ISLAND		A		2	STATE	1/24/2018	5	4.176	FAIR	5,900	$26,550,000	407		
2247100	Q	150TH STREET	LIRR PORT WASHINGTON BRANCH	L	O		2	STATE	10/19/2017	6	5.681	GOOD	7,344	$33,048,000	407		
2231920	Q	160TH STREET	BELT SYSTEM - CROSS ISLAND		A		2	STATE	8/10/2017	6	5.611	GOOD	5,580	$25,110,000	407		
2240650	Q	163RD AVENUE PEDESTRIAN BRIDGE	HAWTREE BASIN		PEDESTRIAN-WO		13	CITY	5/30/2018	4	4.522	FAIR	5,000	$22,500,000	410		
7705510	Q	167TH STREET PEDESTRIAN BRIDGE	LIRR PORT WASHINGTON BRANCH	L	PEDESTRIAN-O		3	CITY	6/7/2018	4	4.000	FAIR	840	$3,780,000	407		
206672A	B	174TH STREET - NORTH PEDESTRIAN BRIDGE	895I - SHERIDAN EXPRESSWAY		PEDESTRIAN-A		4	CITY	4/11/2018	5	4.833	FAIR	1,800	$8,100,000	209		
206672B	B	174TH STREET - SOUTH PEDESTRIAN BRIDGE	895I - SHERIDAN EXPRESSWAY		PEDESTRIAN-A		4	CITY	4/11/2018	5	4.750	FAIR	1,900	$8,550,000	209		
2241259	B	204TH STREET PEDESTRIAN BRIDGE	METRO NORTH RR HAR	M	PEDESTRIAN-O	P	1	CITY	3/14/2018	4	3.845	FAIR	4,700	$21,150,000	227	207	
7703720	Q	216TH STREET PEDESTRIAN BRIDGE	LIRR PORT WASHINGTON BRANCH	L	PEDESTRIAN-O		6	CITY	6/6/2018	1	1.000	CLOSED	960	$4,320,000	411		
2247680	Q	221ST STREET	LIRR PORT WASHINGTON BRANCH	L	O		3	STATE	11/8/2017	6	6.059	VGOOD	6,050	$27,225,000	411		
2231640	Q	225TH STREET	BELT SYSTEM - SOUTHERN PARKWAY		A		2	STATE	5/30/2018	5	5.553	GOOD	6,968	$31,356,000	413		
2246490	M	A.C. POWELL BOULEVARD NORTHBOUND	A.C. POWELL BOULEVARD		O		1	STATE	2/12/2018	4	4.625	FAIR	3,000	$13,500,000	110		
2243530	K	ALBANY AVENUE - AVENUE H	LIRR BAY RIDGE	N	O		2	STATE	8/15/2017	6	6.265	VGOOD	35,100	$157,950,000	318		
2249320	R	ALBEE AVENUE	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		3	STATE	9/14/2017	5	5.705	GOOD	6,500	$29,250,000	503		
2268920	R	AMBOY ROAD	LEMON CREEK		WO		1	STATE	2/26/2018	6	5.808	GOOD	1,376	$6,192,000	503		
2247530	Q	ANDREWS AVENUE	LIRR MONTAUK DIV	L	O		1	STATE	11/3/2017	7	6.609	VGOOD	1,783	$8,023,500	405		
2249330	R	ANNADALE ROAD	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		1	STATE	8/25/2017	6	6.800	VGOOD	3,540	$15,930,000	503		
2249820	R	ARTHUR KILL ROAD	ARTHUR KILL STREAM		WO		1	STATE	4/27/2017	4	4.970	FAIR	1,562	$7,029,000	503		
2249240	R	ARTHUR KILL ROAD	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		1	STATE	10/9/2018	5	4.426	FAIR	3,700	$16,650,000	503		
2230810	Q	ASTORIA BOULEVARD EASTBOUND	278I (BROOKLYN-QUEENS EXPRESSWAY WEST LEG)		A		4	STATE	6/1/2017	4	4.779	FAIR	8,200	$36,900,000	401		
2243569	K	ATLANTIC AVENUE	LIRR ATLANTIC AVENUE	L	O		75	STATE	6/29/2018	4	3.262	FAIR	135,100	$607,950,000	316	305	
2244170	K	ATLANTIC AVENUE SERVICE ROAD EASTBOUND	EAST NEW YORK AVENUE		O		2	STATE	7/19/2017	5	6.275	VGOOD	3,192	$14,364,000	305		
2244180	K	ATLANTIC AVENUE SERVICE ROAD WESTBOUND	EAST NEW YORK AVENUE		O		2	STATE	7/19/2017	5	6.228	VGOOD	5,600	$25,200,000	305		
2243750	K	AVENUE O	BMT SEA BEACH	T	O		1	STATE	6/21/2017	6	6.093	VGOOD	4,658	$20,961,000	311		
2243760	K	AVENUE P	BMT SEA BEACH	T	O		1	STATE	6/13/2017	6	6.721	VGOOD	5,544	$24,948,000	311		
2243790	K	AVENUE S	BMT SEA BEACH	T	O		1	STATE	6/22/2017	6	6.211	VGOOD	5,360	$24,120,000	315		

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
2243800	K	AVENUE T	BMT SEA BEACH	T	O		1	STATE	6/23/2017	6	6.368	VGOOD	5,360	$24,120,000	311		
2243810	K	AVENUE U	BMT SEA BEACH	T	O		1	STATE	6/11/2018	5	5.167	GOOD	5,846	$26,307,000	315		
2249440	R	BANCROFT AVENUE	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		3	STATE	9/5/2017	5	5.902	GOOD	5,974	$26,883,000	502		
2241180	B	BARRETTO STREET	AMTRAK - CSX	AX	O		1	STATE	12/7/2018	5	5.781	GOOD	5,313	$23,908,500	202		
2231290	K	BAY 8TH STREET	BELT SYSTEM - SHORE PARKWAY		A		1	STATE	5/24/2017	6	6.460	VGOOD	4,950	$22,275,000	311		
2243740	K	BAY PARKWAY	BMT SEA BEACH	T	O		4	STATE	5/17/2018	5	4.412	FAIR	16,800	$75,600,000	311		
2249400	R	BEACH AVENUE	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		2	STATE	8/15/2017	5	4.818	FAIR	3,800	$17,100,000	502		
2248230	Q	BEACH CHANNEL DRIVE WESTBOUND	BEACH CHANNEL DRIVE EASTBOUND		O		1	STATE	6/12/2017	6	3.846	FAIR	3,600	$16,200,000	484		
2243490	K	BEDFORD AVENUE	LIRR BAY RIDGE	N	O		6	STATE	8/10/2018	5	4.418	FAIR	15,447	$69,511,500	314		
2241840	B	BEDFORD PARK BOULEVARD	METRO NORTH RR HAR	M	O		1	STATE	4/23/2018	4	4.964	FAIR	6,500	$29,250,000	227	207	
2241930	B	BEDFORD PARK BOULEVARD	NYCTA IND YARDS	T	O		4	STATE	10/4/2018	6	4.667	FAIR	39,525	$177,862,500	207		
2249580	R	BELFIELD AVENUE PEDESTRIAN BRIDGE	STATEN ISLAND RAILWAY SOUTH SHORE	S	PEDESTRIAN-O		5	CITY	9/28/2018	4	3.980	FAIR	400	$1,800,000	503		
2247140	Q	BELL BOULEVARD	LIRR PORT WASHINGTON BRANCH	L	O		1	STATE	11/7/2017	6	5.424	GOOD	4,320	$19,440,000	411		
2231790	Q	BELMONT PARK NORTH RAMP	BELT SYSTEM - CROSS ISLAND		AR	P	1	STATE	2/2/2018	5	4.672	FAIR	3,400	$15,300,000	413		
2231770	Q	BELMONT PARK SOUTH RAMP	BELT SYSTEM - CROSS ISLAND		AR	P	1	STATE	2/26/2018	5	5.250	GOOD	3,161	$14,224,500	413		
2249250	R	BETHEL AVENUE PEDESTRIAN BRIDGE	STATEN ISLAND RAILWAY SOUTH SHORE	S	PEDESTRIAN-O		12	CITY	9/20/2018	3	3.510	CLOSED	1,165	$5,242,500	503		
2243100	K	BEVERLY ROAD	BMT SUBWAY, BRIGHTON	T	O		3	STATE	6/1/2018	4	3.780	FAIR	4,352	$19,584,000	314		
2243900	K	BLAKE AVENUE	LIRR BAY RIDGE	N	O		3	STATE	9/18/2018	5	4.635	FAIR	4,912	$22,104,000	316		
2248379	Q	BOATHOUSE BRIDGE	AQUACADE LAKE		WO	P	5	STATE	7/18/2017	5	4.161	FAIR	6,300	$28,350,000	481		
2240410	Q	BORDEN AVENUE	DUTCH KILLS		WMO		2	STATE	7/14/2017	5	4.426	FAIR	8,400	$37,800,000	402		
2270180	R	BOROUGH PLACE - RAMP A	STATEN ISLAND RAILWAY	S	O	F	1	STATE	6/1/2018	7	6.224	VGOOD	1,870	$8,415,000	501		
2242110	B	BOSTON ROAD	BRONX RIVER		WO		1	STATE	1/30/2018	5	5.619	GOOD	5,276	$23,740,200	227		
2229579	B	BOSTON ROAD	HUTCHINSON RIVER		WO		14	STATE	5/10/2018	4	4.167	FAIR	95,683	$430,573,500	212		
2242100	B	BOTANICAL GARDEN ROAD	TWIN LAKES		WO	P	1	STATE	1/30/2018	5	6.048	VGOOD	2,074	$9,333,000	227		
2247050	Q	BOWNE STREET	LIRR PORT WASHINGTON BRANCH	L	O		1	STATE	8/1/2018	6	4.574	FAIR	4,974	$22,383,000	407		
2231829	Q	BRADDOCK AVENUE	BELT SYSTEM - CROSS ISLAND		A		2	STATE	8/7/2018	5	4.872	FAIR	10,600	$47,700,000	413		
2249730	R	BRIDGE OVER DAM	NORTH END CLOVE LAKE		PEDESTRIAN-WO	P	1	CITY	5/21/2018	3	3.297	FAIR	1,000	$4,500,000	501		
2230590	Q	BROADWAY / 37TH AVENUE	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		2	STATE	10/9/2018	6	5.621	GOOD	16,000	$72,000,000	402		
2240137	BM	BROADWAY BRIDGE	HARLEM RIVER	TM	WMO		3	STATE	12/12/2017	4	4.889	FAIR	46,944	$211,248,000	112	207	208
2242072	B	BRONX BOULEVARD NORTHBOUND	BRONX RIVER		WO		1	STATE	2/22/2018	5	4.524	FAIR	1,808	$8,136,000	212		
2242082	B	BRONX BOULEVARD NORTHBOUND	BRONX RIVER		WO		1	STATE	2/9/2018	4	4.905	FAIR	2,800	$12,600,000	212		
2242071	B	BRONX BOULEVARD SOUTHBOUND	BRONX RIVER		WO		1	STATE	2/22/2018	5	4.333	FAIR	1,785	$8,032,500	212		
2242081	B	BRONX BOULEVARD SOUTHBOUND	BRONX RIVER		WO		1	STATE	2/9/2018	4	4.333	FAIR	2,797	$12,586,500	212		
2229560	B	BRONX PELHAM PARKWAY	AMTRAK - CSX	AX	A		3	STATE	11/28/2016	5	5.194	GOOD	24,591	$110,659,500	211		
2075849	B	BRONX PELHAM PARKWAY	HUTCHINSON RIVER PARKWAY		A		2	STATE	3/29/2018	4	3.882	FAIR	18,056	$81,252,000	210	211	
2065629	B	BRONX RIVER PARKWAY	BOSTON ROAD - BRONX ZOO		A		1	STATE	8/10/2017	5	3.565	FAIR	6,669	$30,010,500	227		
2270250	B	BROOKE AVENUE	CSX TRANS - PORT MORRIS (ABANDONED)		O		1	STATE	6/26/2018	4	4.388	FAIR	21,035	$94,657,500	201		
2243520	K	BROOKLYN AVENUE	LIRR BAY RIDGE	N	O		3	STATE	8/7/2017	6	5.873	GOOD	4,582	$20,619,000	318		
2240019	KM	BROOKLYN BRIDGE	EAST RIVER		WEO		75	STATE	11/12/2018	3	4.153	FAIR	503,788	$2,267,046,000	103	302	101
2267860	K	BROOKLYN BRIDGE APPROACH	STORAGE (SANDS STREET)		O		1	STATE	5/8/2018	5	6.203	VGOOD	6,490	$29,205,000	302		
2268350	K	BROOKLYN PROMENADE	278I EASTBOUND (BROOKLYN-QUEENS EXPRESSWAY)		PEDESTRIAN-A	P	35	CITY	8/24/2018	4	3.828	FAIR	46,184	$207,828,000	302		
2230470	K	278I (BROOKLYN-QUEENS EXPRESSWAY)	JAY STREET		A		1	STATE	1/12/2018	5	6.200	VGOOD	5,092	$22,914,000	302		

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
2230510	K	278I (BROOKLYN-QUEENS EXPRESSWAY)	NASSAU STREET		A		6	STATE	5/4/2018	5	5.551	GOOD	51,696	$232,632,000	302		
2230460	K	278I (BROOKLYN-QUEENS EXPRESSWAY)	PEARL STREET		A		1	STATE	1/12/2018	5	5.800	GOOD	4,484	$20,178,000	302		
2230480	K	278I (BROOKLYN-QUEENS EXPRESSWAY)	PROSPECT STREET		A		1	STATE	2/1/2018	5	4.814	FAIR	8,690	$39,105,000	302		
2230500	K	278I (BROOKLYN-QUEENS EXPRESSWAY)	RAMP TO BROOKLYN-QUEENS EXPRESSWAY EASTBOUND		A		1	STATE	2/8/2018	5	5.267	GOOD	1,306	$5,875,200	302		
2230490	K	278I (BROOKLYN-QUEENS EXPRESSWAY)	SANDS STREET		A		1	STATE	2/23/2018	5	5.279	GOOD	11,025	$49,612,500	302		
2230679	Q	278I (BROOKLYN-QUEENS EXPRESSWAY)	34TH AVENUE		A		1	STATE	7/6/2017	6	5.789	GOOD	7,793	$35,068,500	402		
2230669	Q	278I (BROOKLYN-QUEENS EXPRESSWAY)	35TH AVENUE		A		1	STATE	7/18/2017	6	6.614	VGOOD	13,530	$60,885,000	402		
2230430	K	278I (BROOKLYN-QUEENS EXPRESSWAY) RAMP TO BROOKLYN BRIDGE	PROSPECT STREET		A		1	STATE	1/3/2018	5	6.615	VGOOD	1,100	$4,950,000	302		
2230780	Q	278I (BROOKLYN-QUEENS EXPRESSWAY EAST LEG)	30TH AVENUE		A		1	STATE	5/25/2017	6	6.033	VGOOD	7,071	$31,819,500	403	401	
2230770	Q	278I (BROOKLYN-QUEENS EXPRESSWAY WEST LEG)	30TH AVENUE		A		1	STATE	5/25/2017	6	6.246	VGOOD	6,199	$27,895,500	401		
2268498	K	278I EASTBOUND (BROOKLYN-QUEENS EXPRESSWAY)	278I WESTBOUND (BROOKLYN-QUEENS EXPRESSWAY) - PROMENADE		A		69	STATE	10/19/2018	4	3.895	FAIR	133,708	$601,686,000	302		
2268518	K	278I EASTBOUND (BROOKLYN-QUEENS EXPRESSWAY)	278I WESTBOUND (BROOKLYN-QUEENS EXPRESSWAY)		A		5	STATE	7/14/2017	4	5.786	GOOD	9,349	$42,070,500	302		
2268508	K	278I EASTBOUND (BROOKLYN-QUEENS EXPRESSWAY)	278I WESTBOUND (BROOKLYN-QUEENS EXPRESSWAY) - BROOKLYN BRIDGE		A		11	STATE	7/12/2017	4	5.160	GOOD	20,529	$92,380,500	302		
2230450	K	278I EASTBOUND (BROOKLYN-QUEENS EXPRESSWAY)	ADAMS STREET		A		1	STATE	1/12/2018	5	6.267	VGOOD	2,618	$11,781,000	302		
2230888	K	278I EASTBOUND (BROOKLYN-QUEENS EXPRESSWAY)	CADMAN PLAZA / 278I WESTBOUND		A		2	STATE	8/14/2018	5	5.373	GOOD	4,500	$20,250,000	302		
2230858	K	278I EASTBOUND (BROOKLYN-QUEENS EXPRESSWAY)	JORALEMON STREET / BROOKLYN-QUEENS EXPRESSWAY WESTBOUND		A		1	STATE	11/2/2017	4	5.763	GOOD	2,564	$11,538,000	302		
2230410	K	278I EASTBOUND (BROOKLYN-QUEENS EXPRESSWAY)	WASHINGTON STREET		A		1	STATE	5/3/2018	4	6.094	VGOOD	2,500	$11,250,000	302		
2230830	Q	278I NORTHBOUND (BROOKLYN-QUEENS EXPRESSWAY WEST LEG)	GRAND CENTRAL PARKWAY		A		2	STATE	5/1/2018	5	4.139	FAIR	7,176	$32,292,000	401		
2230720	Q	278I SOUTHBOUND (BROOKLYN-QUEENS EXPRESSWAY EAST LEG)	278I NORTHBOUND (BROOKLYN-QUEENS EXPRESSWAY WEST LEG)		A		3	STATE	6/19/2017	6	5.696	GOOD	20,896	$94,032,000	401		
2230750	Q	278I SOUTHBOUND (BROOKLYN-QUEENS EXPRESSWAY EAST LEG)	31ST AVENUE		A		1	STATE	6/19/2017	6	6.474	VGOOD	4,221	$18,994,500	401	403	
2230740	Q	278I SOUTHBOUND (BROOKLYN-QUEENS EXPRESSWAY WEST LEG)	31ST AVENUE		A		1	STATE	6/16/2017	6	6.191	VGOOD	5,246	$23,607,000	401		
2230710	Q	278I SOUTHBOUND (BROOKLYN-QUEENS EXPRESSWAY WEST LEG)	32ND AVENUE		A		1	STATE	7/31/2017	6	6.246	VGOOD	5,240	$23,580,000	401		
2230440	K	278I WESTBOUND (BROOKLYN-QUEENS EXPRESSWAY)	ADAMS STREET		A		1	STATE	1/11/2018	5	6.067	VGOOD	2,550	$11,475,000	302		
2230887	K	278I WESTBOUND (BROOKLYN-QUEENS EXPRESSWAY)	CADMAN PLAZA		A		2	STATE	8/14/2018	4	4.861	FAIR	4,500	$20,250,000	302		
2268517	K	278I WESTBOUND (BROOKLYN-QUEENS EXPRESSWAY)	FURMAN STREET		A		7	STATE	7/14/2017	4	5.227	GOOD	12,243	$55,093,500	302		
2268497	K	278I WESTBOUND (BROOKLYN-QUEENS EXPRESSWAY)	FURMAN STREET - 278I EASTBOUND		A		45	STATE	9/28/2017	4	5.000	GOOD	86,406	$388,827,000	302		
2230857	K	278I WESTBOUND (BROOKLYN-QUEENS EXPRESSWAY)	JORALEMON STREET		A		1	STATE	3/28/2018	5	6.152	VGOOD	2,100	$9,450,000	302		
2230420	K	278I WESTBOUND (BROOKLYN-QUEENS EXPRESSWAY)	WASHINGTON STREET		A		1	STATE	5/3/2018	5	6.359	VGOOD	2,500	$11,250,000	302		
2268507	K	278I WESTBOUND (BROOKLYN-QUEENS EXPRESSWAY)	YORK STREET		A		6	STATE	7/12/2017	4	4.256	FAIR	10,500	$47,250,000	302		
2241099	B	BRUCKNER BOULEVARD	CSX TRANS - PORT MORRIS	X	O		1	STATE	7/2/2018	6	6.203	VGOOD	6,688	$30,096,000	201		
224006A	B	FROM BRUCKNER BOULEVARD	PARKING AREA		OR		5	STATE	9/1/2017	6	6.406	VGOOD	14,037	$63,166,500	201		
2266540	B	BRUCKNER EXPRESSWAY	BRUCKNER BOULEVARD		A		2	STATE	6/27/2017	4	4.460	FAIR	36,465	$164,092,500	201		
2076929	B	BRUCKNER EXPRESSWAY	CSX - HUNTS POINT	X	A		1	STATE	8/21/2017	5	6.071	VGOOD	3,800	$17,100,000	202		
2075352	B	BRUCKNER EXPRESSWAY NORTHBOUND	AMTRAK - CSX	AX	A		1	STATE	11/30/2018	6	5.810	GOOD	10,900	$49,050,000	202		
2066672	B	BRUCKNER EXPRESSWAY NORTHBOUND	BRONX RIVER		WA		8	STATE	10/16/2017	4	5.373	GOOD	22,300	$100,350,000	202	209	
2076109	B	BRUCKNER EXPRESSWAY NORTHBOUND SERVICE ROAD	HUTCHINSON RIVER PARKWAY		A		2	STATE	8/9/2017	5	5.765	GOOD	7,800	$35,100,000	210		
1066510	B	BRUCKNER EXPRESSWAY SERVICE ROAD	WESTCHESTER CREEK		WMA		17	STATE	9/21/2018	3	3.104	FAIR	35,000	$157,500,000	209		
2075351	B	BRUCKNER EXPRESSWAY SOUTHBOUND	AMTRAK - CSX	AX	A		1	STATE	11/30/2018	6	5.365	GOOD	11,600	$52,200,000	202		
2066671	B	BRUCKNER EXPRESSWAY SOUTHBOUND	BRONX RIVER		WA		3	STATE	10/6/2017	5	5.611	GOOD	12,400	$55,800,000	202	209	
2076129	B	BRUCKNER EXPRESSWAY SOUTHBOUND SERVICE ROAD	HUTCHINSON RIVER PARKWAY		A		2	STATE	1/11/2018	5	6.559	VGOOD	7,100	$31,950,000	210		
2241210	B	BRYANT AVENUE	AMTRAK - CSX	AX	O		1	STATE	6/6/2018	7	6.288	VGOOD	4,065	$18,292,500	202		
2230790	Q	BULOVA AVENUE	278I (BROOKLYN-QUEENS EXPRESSWAY WEST LEG)		A		2	STATE	4/26/2018	5	5.750	GOOD	3,300	$14,850,000	401		

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
2269770	R	BUS STATION ENTRANCE RAMP	STATEN ISLAND RAILWAY	S	O	F	19	STATE	11/3/2017	5	5.694	GOOD	39,333	$176,998,500	501		
2269790	R	BUS STATION EXIT RAMP	STATEN ISLAND RAILWAY	S	O	F	7	STATE	10/31/2018	6	5.917	GOOD	28,182	$126,819,000	501		
2269740	R	BUS STATION NORTH	STATEN ISLAND RAILWAY - FERRY TERMINAL	S	O	F	12	STATE	10/31/2018	6	6.607	VGOOD	64,959	$292,315,500	501		
2269750	R	BUS STATION SOUTH	STATEN ISLAND RAILWAY - PARKING LOT	S	O	F	12	STATE	10/31/2018	6	5.946	GOOD	155,022	$697,599,000	501		
2247460	Q	CALDWELL AVENUE	CSX TRANSPORT	X	O		1	STATE	11/12/2018	6	5.846	GOOD	2,220	$9,990,000	405		
2243290	K	CARLTON AVENUE	LIRR ATLANTIC AVENUE	L	O		4	STATE	8/21/2017	7	6.500	VGOOD	15,400	$69,300,000	302		
2240260	K	CARROLL STREET	GOWANUS CANAL		WMO		2	STATE	11/7/2017	5	4.941	FAIR	3,024	$13,608,000	306		
2243220	K	CARROLL STREET PEDESTRIAN BRIDGE	FRANKLIN SHUTTLE	T	PEDESTRIAN-O		3	CITY	10/31/2018	5	5.042	GOOD	600	$2,700,000	309		
2243050	K	CATON AVENUE	BMT SUBWAY, BRIGHTON	T	O		4	STATE	7/24/2017	5	4.029	FAIR	20,800	$93,600,000	314		
2249390	R	CEDARVIEW AVENUE PEDESTRIAN BRIDGE	STATEN ISLAND RAILWAY SOUTH SHORE	S	PEDESTRIAN-O		5	CITY	9/25/2018	4	3.912	FAIR	625	$2,812,500	503		
2246100	M	CENTER DRIVE	TRANSVERSE ROAD #1		O	P	1	STATE	2/1/2018	4	4.130	FAIR	6,110	$27,495,000	164		
2246050	M	CENTER DRIVE (DRIPROCK ARCH)	PEDESTRIAN OPPOSITE 63RD STREET		O	P	1	STATE	1/15/2018	5	5.435	GOOD	1,793	$8,068,500	164		
2244050	K	CENTER DRIVE (NETHERMEAD ARCHES)	PEDESTRIAN PATH AND STREAM		WO	P	3	STATE	4/24/2017	5	5.971	GOOD	7,020	$31,590,000	355		
2246070	M	CENTER DRIVE (PLAYMATES ARCH)	PEDESTRIAN PATH OPPOSITE 65TH STREET		O	P	1	CITY	7/3/2018	4	4.633	FAIR	1,129	$5,080,500	164		
2268480	M	CHAMBERS STREET PEDESTRIAN BRIDGE	ROUTE 9A - WEST STREET		PEDESTRIAN-O		10	CITY	6/13/2018	5	5.391	GOOD	7,481	$33,664,500	101		
2249880	R	CHELSEA ROAD	SAWMILL CREEK		WO		1	STATE	4/26/2017	6	6.791	VGOOD	2,205	$9,922,500	502		
2240210	B	CITY ISLAND ROAD	EASTCHESTER BAY		WO		3	STATE	11/28/2017	7	6.806	VGOOD	40,281	$181,262,250	228		
2241710	B	CLAREMONT PARKWAY	METRO NORTH RR HAR	M	O		1	STATE	3/30/2018	6	6.356	VGOOD	6,000	$27,000,000	203		
2231940	Q	CLINTONVILLE STREET	BELT SYSTEM - CROSS ISLAND		A		2	STATE	1/24/2018	5	4.529	FAIR	7,400	$33,300,000	407		
2249490	R	CLOVE ROAD	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		3	STATE	10/11/2018	6	5.208	GOOD	5,236	$23,562,000	502		
2231570	Q	COHANCY STREET	BELT SYSTEM - SOUTHERN PARKWAY		A		2	STATE	4/11/2018	5	5.368	GOOD	6,441	$28,984,500	410		
2230870	K	COLUMBIA HEIGHTS	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		1	STATE	8/17/2018	4	5.483	GOOD	12,095	$54,427,500	302		
2241590	B	CONCOURSE VILLAGE EAST	METRO NORTH RR HAR	M	O		1	STATE	4/9/2018	4	4.016	FAIR	12,077	$54,346,500	204		
2244460	K	CONDUIT BOULEVARD NORTHBOUND	ATLANTIC AVENUE EASTBOUND		O		1	STATE	10/12/2018	5	5.462	GOOD	3,864	$17,388,000	305		
2243440	K	CONEY ISLAND AVENUE	LIRR BAY RIDGE	N	O		1	STATE	8/13/2018	5	4.455	FAIR	3,231	$14,539,500	312		
2231380	K	CONEY ISLAND AVENUE	BELT SYSTEM - SHORE PARKWAY		A		4	STATE	10/27/2017	6	5.389	GOOD	19,866	$89,397,000	313		
2230390	K	CONGRESS STREET	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		2	STATE	4/9/2018	6	6.691	VGOOD	5,000	$22,500,000	306		
2246510	M	CORBIN PLACE OVERPASS	CORBIN PLACE		O	P	1	STATE	1/17/2018	5	4.913	FAIR	2,257	$10,156,500	112		
2232029	M	CORLEARS PARK ROAD	FDR DRIVE		A	P	4	STATE	10/31/2018	4	4.169	FAIR	4,115	$18,517,500	103		
2247130	Q	CORPORAL KENNEDY STREET	LIRR PORT WASHINGTON BRANCH	L	O		1	STATE	11/6/2017	6	5.678	GOOD	2,645	$11,902,500	411		
2243110	K	CORTELYOU ROAD	BMT SUBWAY, BRIGHTON	T	O		3	STATE	7/25/2017	6	6.194	VGOOD	4,810	$21,645,000	314		
2231880	Q	CROCHERON PARK PEDESTRIAN	BELT SYSTEM - CROSS ISLAND		PEDESTRIAN-A	P	9	CITY	6/27/2018	4	3.984	FAIR	2,300	$10,350,000	411		
2243040	K	CROOKE AVENUE	BMT SUBWAY, BRIGHTON	T	O		4	STATE	6/6/2018	4	4.618	FAIR	6,000	$27,000,000	314		
2231340	K	CROPSEY AVENUE	BELT SYSTEM - SHORE PARKWAY		A		2	STATE	4/27/2018	5	5.819	GOOD	13,100	$58,950,000	313		
2240302	K	CROPSEY AVENUE NORTHBOUND	CONEY ISLAND CREEK		WO		3	STATE	7/26/2017	5	4.369	FAIR	9,400	$42,300,000	313		
2240301	K	CROPSEY AVENUE SOUTHBOUND	CONEY ISLAND CREEK		WO		3	STATE	7/26/2017	5	4.389	FAIR	9,400	$42,300,000	313		
2248039	Q	CROSS BAY BOULEVARD	NASSAU EXPRESSWAY - ROUTE 27		O		2	STATE	7/31/2017	6	5.611	GOOD	15,840	$71,280,000	410		
2231559	Q	CROSS BAY BOULEVARD	BELT SYSTEM - SHORE PARKWAY		A		4	STATE	5/23/2018	5	4.778	FAIR	24,690	$111,105,000	410		
2231760	Q	BELT SYSTEM - CROSS ISLAND PARKWAY	DUTCH BROADWAY-115TH AVENUE		A		1	STATE	2/14/2018	4	4.474	FAIR	7,300	$32,850,000	413		
2266770	Q	BELT SYSTEM - CROSS ISLAND PARKWAY	LAURELTON PARKWAY		A		1	STATE	3/16/2018	5	6.346	VGOOD	6,408	$28,836,000	413		
2231900	Q	BELT SYSTEM - CROSS ISLAND PARKWAY	TOTTEN AVENUE		A		1	STATE	6/20/2018	5	4.891	FAIR	4,900	$22,050,000	407		
2242030	B	CROTONA AVENUE	EAST FORDHAM ROAD		O		2	STATE	1/22/2018	5	5.447	GOOD	7,968	$35,856,000	206		

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
2243230	K	CROWN STREET	FRANKLIN SHUTTLE	T	O		3	STATE	7/20/2017	5	6.361	VGOOD	4,060	$18,270,000	309		
2230040	Q	CYPRESS HILLS STREET	JACKIE ROBINSON PARKWAY		A		1	STATE	4/26/2018	5	5.633	GOOD	5,098	$22,941,000	405		
2249160	R	DE HART AVENUE	B&O RR (ABANDONED)	O	O		4	STATE	4/21/2017	6	5.581	GOOD	6,700	$30,150,000	501		
2232030	M	DELANCEY STREET PEDESTRIAN BRIDGE	FDR DRIVE		PEDESTRIAN-A	P	12	CITY	4/18/2018	4	4.357	FAIR	3,390	$15,255,000	103		
2076640	B	DEPOT PLACE	METRO NORTH RR HUDSON	XM	O		11	STATE	5/15/2018	5	4.492	FAIR	26,566	$119,547,000	204		
2243130	K	DITMAS AVENUE	BMT SUBWAY, BRIGHTON	T	O		1	STATE	7/25/2017	6	6.364	VGOOD	5,150	$23,175,000	314		
2243120	K	DORCHESTER ROAD	BMT SUBWAY, BRIGHTON	T	O		1	STATE	6/4/2018	5	6.017	VGOOD	5,020	$22,590,000	314		
2266139	Q	DOUGLASTON PARKWAY	BELT SYSTEM - CROSS ISLAND NORTHBOUND		A		1	STATE	3/9/2018	5	5.421	GOOD	6,597	$29,686,500	411		
2266129	Q	DOUGLASTON PARKWAY	BELT SYSTEM - CROSS ISLAND SOUTHBOUND		A		1	STATE	3/1/2018	5	6.211	VGOOD	4,400	$19,800,000	411		
2247170	Q	DOUGLASTON PARKWAY	LIRR PORT WASHINGTON BRANCH	L	O		3	STATE	8/6/2018	5	3.839	FAIR	6,360	$28,620,000	411		
2242260	B	EAGLE AVENUE	EAST 161ST STREET		O		1	STATE	1/23/2018	5	4.650	FAIR	2,800	$12,600,000	201	203	
2243420	K	EAST 3RD STREET	LIRR BAY RIDGE	N	O		1	STATE	8/8/2017	6	6.733	VGOOD	1,840	$8,280,000	312		
2232050	M	EAST 6TH STREET PEDESTRIAN BRIDGE	FDR DRIVE		PEDESTRIAN-A	P	19	CITY	4/14/2018	4	4.093	FAIR	2,200	$9,900,000	103		
2233020	M	EAST 10TH STREET PEDESTRIAN BRIDGE	FDR DRIVE		PEDESTRIAN-A	P	21	CITY	4/15/2018	4	4.365	FAIR	2,754	$12,393,000	103		
2231390	K	EAST 12TH STREET	BELT SYSTEM - SHORE PARKWAY		A		4	STATE	4/23/2018	5	5.333	GOOD	15,908	$71,586,000	315		
2243450	K	EAST 14TH STREET BRIDGE	LIRR BAY RIDGE	N	O		1	STATE	8/14/2018	5	4.527	FAIR	1,775	$7,987,500	314		
2233080	K	EAST 14TH STREET PEDESTRIAN BRIDGE	BELT SYSTEM - SHORE PARKWAY		PEDESTRIAN-A		14	CITY	7/2/2018	4	4.113	FAIR	4,700	$21,150,000	315		
2243460	K	EAST 15TH STREET PEDESTRIAN BRIDGE	LIRR BAY RIDGE	N	PEDESTRIAN-O		3	CITY	8/16/2018	5	5.507	GOOD	900	$4,050,000	314		
2243080	K	EAST 18TH STREET - CHURCH AVENUE	BMT SUBWAY, BRIGHTON	T	O		4	STATE	7/24/2017	4	4.310	FAIR	18,200	$81,900,000	314		
2232070	M	EAST 25TH STREET PEDESTRIAN BRIDGE	FDR DRIVE		PEDESTRIAN-A		3	CITY	4/15/2018	4	4.600	FAIR	1,700	$7,650,000	106		
2232100	M	EAST 51ST STRET PEDESTRIAN BRIDGE	FDR DRIVE		PEDESTRIAN-A	P	6	CITY	6/29/2018	4	4.067	FAIR	2,800	$12,600,000	106		
2233040	M	EAST 60TH STREET	FDR DRIVE		A	P	17	STATE	8/4/2017	4	4.836	FAIR	23,000	$103,500,000	108		
224004A	M	TO EAST 60TH STREET FROM QUEENS	FIRST AVENUE		OE		13	STATE	3/1/2018	5	6.042	VGOOD	14,820	$66,690,000	108		
224004C	M	TO EAST 62ND STREET FROM QUEENS	EAST 60TH STREET- EAST 61ST STREET		OE		10	STATE	6/6/2018	5	5.188	GOOD	18,303	$82,363,500	108		
2246030	M	EAST 62ND STREET PEDESTRIAN BRIDGE (GAPSTOW BRIDGE)	THE POND		PEDESTRIAN-O	P	1	CITY	5/11/2018	4	4.241	FAIR	1,400	$6,300,000	164		
2232110	M	EAST 63RD STREET PEDESTRIAN BRIDGE	FDR DRIVE		PEDESTRIAN-A	P	11	UNIVERSITY	11/29/2017	6	5.410	GOOD	2,100	$9,450,000	108		
2232120	M	EAST 71ST STREET PEDESTRIAN BRIDGE	FDR DRIVE		PEDESTRIAN-A	P	19	CITY	6/30/2018	5	4.761	FAIR	3,700	$16,650,000	108		
M00005	M	EAST 72ND STREET	FDR DRIVE SOUTHBOUND EXIT RAMP		PEDESTRIAN-A		1	CITY	6/2/2018	5	4.750	FAIR	1,430	$6,435,000	108		
2246450	M	EAST 77TH STREET PEDESTRIAN (GLADE ARCH)	PEDESTRIAN PATH OPPOSITE EAST 77TH STREET		PEDESTRIAN-O	P	1	CITY	3/29/2018	4	4.138	FAIR	5,000	$22,500,000	164		
2232140	M	EAST 78TH STREET PEDESTRIAN BRIDGE	FDR DRIVE		PEDESTRIAN-A	P	13	CITY	7/11/2018	7	6.653	VGOOD	5,226	$23,517,000	108		
2269820	M	EAST 81ST STREET PEDESTRIAN BRIDGE	FDR DRIVE NORTHBOUND		PEDESTRIAN-A	P	3	CITY	6/8/2014	3	3.439	FAIR	600	$2,700,000	108		
2246380	M	EAST 86TH STREET PEDESTRIAN (SOUTHEAST RESERVOIR BRIDGE)	BRIDLE PATH		PEDESTRIAN-O	P	1	CITY	11/20/2018	5	5.000	GOOD	700	$3,150,000	164		
2245319	M	EAST 97TH STREET	METRO NORTH MAIN LN	M	O		1	STATE	12/23/2018	5	6.017	VGOOD	3,200	$14,400,000	111		
2232180	M	EAST 103RD STREET PEDESTRIAN BRIDGE	FDR DRIVE		PEDESTRIAN-A		18	CITY	7/11/2018	4	4.683	FAIR	6,807	$30,631,500	111		
2232190	M	EAST 111TH STREET PEDESTRIAN BRIDGE	FDR DRIVE		PEDESTRIAN-A	P	9	CITY	8/23/2018	4	4.128	FAIR	4,254	$19,143,000	111		
2232200	M	EAST 120TH STREET PEDESTRIAN BRIDGE	FDR DRIVE		PEDESTRIAN-A	P	18	CITY	9/7/2018	4	4.143	FAIR	3,978	$17,901,000	111		
2246620	M	EAST 128TH STREET PEDESTRIAN BRIDGE	3RD AVENUE BRIDGE APPROACH		PEDESTRIAN-O		18	CITY	7/18/2018	4	3.872	FAIR	2,300	$10,350,000	111		
2246990	M	EAST 129TH STREET PEDESTRIAN BRIDGE	3RD AVENUE BRIDGE RAMP		PEDESTRIAN-O	P	5	CITY	10/22/2018	4	4.429	FAIR	1,046	$4,707,000	111		
2241550	B	EAST 144TH STREET	METRO NORTH RR HAR	M	O		2	STATE	9/25/2017	6	5.417	GOOD	8,415	$37,867,500	201		
2241129	B	EAST 149TH STREET	AMTRAK - CSX	AX	O		2	STATE	12/13/2018	5	5.141	GOOD	18,258	$82,161,000	201	202	
2241560	B	EAST 149TH STREET	METRO NORTH RR HAR	M	O		8	STATE	5/3/2018	5	5.339	GOOD	29,800	$134,100,000	201	204	
2241050	B	EAST 149TH STREET/JACKSON AVENUE	CSX PORT MORRIS - (ABANDONED)		O		1	STATE	4/18/2018	5	4.400	FAIR	6,750	$30,375,000	201		

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
2270030	B	EAST 156TH STREET	ACCESS TO HOUSING		O	ED	16	STATE	11/11/2018	4	3.940	FAIR	50,830	$228,735,000	204		
2241010	B	EAST 156TH STREET	CSX PORT MORRIS - (ABANDONED)		O		1	STATE	3/20/2018	5	4.983	FAIR	2,380	$10,710,000	201		
2241600	B	EAST 158TH STREET	METRO NORTH RR HAR	M	O		1	STATE	9/26/2017	5	5.055	GOOD	3,400	$15,300,000	204		
2241020	B	EAST 161ST STREET	CSX PORT MORRIS - (ABANDONED)		O		1	STATE	2/8/2018	6	6.492	VGOOD	12,800	$57,600,000	203		
2241610	B	EAST 161ST STREET	METRO NORTH RR HAR	M	O		1	STATE	9/25/2017	5	4.818	FAIR	6,643	$29,893,500	204	203	
2241620	B	EAST 162ND STREET	METRO NORTH RR HAR	M	O		1	STATE	4/24/2018	5	4.927	FAIR	4,665	$20,992,500	203		
2241030	B	EAST 163RD STREET	CSX PORT MORRIS - (ABANDONED)		O		1	STATE	1/31/2018	5	6.289	VGOOD	3,200	$14,400,000	203		
2241630	B	EAST 165TH STREET	METRO NORTH RR HAR	M	O		1	STATE	4/24/2018	4	4.436	FAIR	16,442	$73,989,000	203		
2241650	B	EAST 167TH STREET	METRO NORTH RR HAR	M	O		1	STATE	4/9/2018	5	6.041	VGOOD	3,560	$16,020,000	203		
2241660	B	EAST 168TH STREET	METRO NORTH RR HAR	M	O		1	STATE	4/9/2018	5	5.796	GOOD	5,896	$26,532,000	203		
2241670	B	EAST 169TH STREET	METRO NORTH RR HAR	M	O		1	STATE	4/9/2018	4	3.594	FAIR	3,100	$13,950,000	203		
2241680	B	EAST 170TH STREET	METRO NORTH RR HAR	M	O		1	STATE	4/9/2018	6	6.367	VGOOD	3,239	$14,575,500	203		
2241720	B	EAST 173RD STREET	METRO NORTH RR HAR	M	O		1	STATE	4/3/2018	5	4.314	FAIR	3,000	$13,500,000	203		
2066720	B	EAST 174TH STREET	SHERIDAN EXPRESSWAY/AMTRAK	A	A		13	STATE	11/7/2018	4	4.014	FAIR	45,942	$206,739,000	209	203	
2241740	B	EAST 175TH STREET	METRO NORTH RR HAR	M	O		1	STATE	4/3/2018	4	4.203	FAIR	3,584	$16,128,000	206		
2241269	B	EAST 177TH STREET	AMTRAK - CSX	AX	O		3	STATE	11/10/2018	5	5.486	GOOD	16,606	$74,727,000	206		
2241770	B	EAST 178TH STREET PEDESTRIAN BRIDGE	METRO NORTH RR HAR	M	PEDESTRIAN-O		1	CITY	3/11/2018	5	4.921	FAIR	731	$3,289,500	206		
2241780	B	EAST 179TH STREET PEDESTRIAN BRIDGE	METRO NORTH RR HAR	M	PEDESTRIAN-O		6	CITY	3/12/2018	5	5.246	GOOD	1,011	$4,549,500	206		
2242400	B	EAST 180TH STREET	BRONX RIVER		WO		1	STATE	8/30/2018	5	4.059	FAIR	4,550	$20,475,000	206	227	
2241790	B	EAST 180TH STREET	METRO NORTH RR HAR	M	O		1	STATE	4/24/2018	4	3.800	FAIR	4,960	$22,320,000	206		
2241800	B	EAST 183RD STREET	METRO NORTH RR HAR	M	O		1	STATE	4/26/2018	4	4.163	FAIR	4,080	$18,360,000	206		
2241820	B	EAST 187TH STREET	METRO NORTH RR HAR	M	O		1	STATE	4/26/2018	4	5.255	GOOD	3,780	$17,010,000	206		
2241810	B	EAST 188TH STREET	METRO NORTH RR HAR	M	O		1	STATE	3/31/2018	4	4.328	FAIR	5,300	$23,850,000	206		
2242459	B	EAST 233RD STREET	BRONX RIVER		WO		1	STATE	1/29/2018	4	4.654	FAIR	7,113	$32,008,500	212		
2242460	B	EAST 233RD STREET	ENTRANCE ROAD BRONX RIVER PARKWAY		O		1	STATE	1/3/2018	5	5.714	GOOD	5,300	$23,850,000	212		
2241870	B	EAST 233RD STREET	METRO NORTH RR HAR	M	O		1	STATE	4/23/2018	5	5.441	GOOD	7,664	$34,488,000	212	207	
2241890	B	EAST 241ST STREET	BRP, METRO NORTH HAR	M	WO		24	STATE	11/9/2017	4	3.583	FAIR	49,500	$222,750,000	212		
2244030	K	EAST DRIVE	BRIDLE PATH NEAR ZOO		O	P	1	STATE	4/20/2017	5	6.632	VGOOD	2,000	$9,000,000	355		
2246110	M	EAST DRIVE	TRANSVERSE ROAD #1		O	P	1	STATE	2/22/2018	4	4.348	FAIR	5,338	$24,021,000	164		
2246230	M	EAST DRIVE	TRANSVERSE ROAD #2		O	P	1	STATE	2/20/2018	5	5.000	GOOD	5,207	$23,431,500	164		
2246250	M	EAST DRIVE	TRANSVERSE ROAD #3		O	P	1	STATE	1/19/2018	4	4.130	FAIR	4,612	$20,754,000	164		
2246270	M	EAST DRIVE	TRANSVERSE ROAD #4		O	P	1	STATE	2/22/2018	5	3.696	FAIR	5,535	$24,907,500	164		
2244040	K	EAST DRIVE (EAST WOOD ARCH)	PEDESTRIAN PATH NEAR CENTER DRIVE		O	P	1	CITY	7/6/2018	4	3.933	FAIR	1,066	$4,797,000	355		
2244010	K	EAST DRIVE (ENDALE ARCH)	PEDESTRIAN PATH NEAR GRAND ARMY PLAZA		O	P	1	CITY	5/25/2018	4	4.400	FAIR	1,533	$6,898,500	355		
2246069	M	EAST DRIVE (GREEN GAP ARCH)	PEDESTRIAN PATH BETWEEN 63RD AND & 64TH STREETS		O	P	1	STATE	1/18/2018	5	4.217	FAIR	2,158	$9,711,000	164		
2246350	M	EAST DRIVE (GREYWACKE ARCH)	PEDESTRIAN PATH OPPOSITE EAST 80TH STREET		O	P	1	CITY	5/11/2018	4	3.733	FAIR	1,266	$5,697,000	164		
2246470	M	EAST DRIVE (HUDDLESTONE ARCH)	THE LOCH		WO	P	1	STATE	1/19/2018	5	4.435	FAIR	1,228	$5,526,000	164		
2246040	M	EAST DRIVE (INSCOPE ARCH)	PEDESTRIAN PATH OPPOSITE EAST 62ND STREET		O	P	1	CITY	4/19/2018	4	4.400	FAIR	1,515	$6,817,500	164		
2246170	M	EAST DRIVE (TREFOIL ARCH)	PEDESTRIAN PATH OPPOSITE EAST 73RD STREET		O	P	1	STATE	1/23/2018	5	5.633	GOOD	1,900	$8,550,000	164		
2246130	M	EAST DRIVE (WILLOWDELL ARCH)	PEDESTRIAN PATH OPPOSITE EAST 67TH STREET		O	P	1	CITY	4/23/2018	3	3.500	FAIR	666	$2,998,800	164		
2249720	R	EAST FOOTBRIDGE	CLOVE LAKE		PEDESTRIAN-WO	P	2	CITY	5/14/2018	4	4.371	FAIR	900	$4,050,000	501		
2242010	B	EAST FORDHAM ROAD	BRONX RIVER		WO		1	STATE	2/12/2018	5	5.286	GOOD	9,557	$43,006,500	227		

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
2242350	B	EAST FORDHAM ROAD	GRAND CONCOURSE		O		1	STATE	1/31/2018	6	6.692	VGOOD	10,300	$46,350,000	205	207	
2241270	B	EAST TREMONT AVENUE	AMTRAK - CSX	AX	O		2	STATE	11/29/2018	5	4.944	FAIR	22,300	$100,350,000	209	211	
2242149	B	EAST TREMONT AVENUE	BRONX RIVER		WO		2	STATE	3/20/2018	4	4.847	FAIR	12,900	$58,050,000	206		
2075820	B	EAST TREMONT AVENUE	HUTCHINSON RIVER PARKWAY		A		2	STATE	10/3/2017	5	4.250	FAIR	10,200	$45,900,000	210		
2241760	B	EAST TREMONT AVENUE	METRO NORTH RR HAR	M	O		1	STATE	9/25/2017	6	5.483	GOOD	8,541	$38,434,500	206		
2241900	B	EASTCHESTER ROAD	NYCTA-DYRE AVE LN	T	O		3	STATE	10/1/2018	5	4.958	FAIR	13,500	$60,750,000	212		
2243279	K	EASTERN PARKWAY	FRANKLIN SHUTTLE	T	O		1	STATE	6/25/2018	5	5.846	GOOD	7,686	$34,587,000	309	308	
2240048	MQ	ED KOCH - QUEENSBORO BRIDGE (UPPER LEVEL)	EAST RIVER - LL		WEO		37	STATE	12/5/2018	5	3.510	FAIR	322,300	$1,450,350,000	108	402	401
2240047	MQ	ED KOCH - QUEENSBORO BRIDGE LOWER LEVEL)	EAST RIVER	AL	WEO		53	STATE	12/7/2018	5	4.214	FAIR	626,900	$2,821,050,000	108	402	401
2247470	Q	ELIOT AVENUE	CSX TRANSPORT	X	O		1	STATE	10/6/2017	5	6.068	VGOOD	2,960	$13,320,000	405		
2247550	Q	ELIOT AVENUE	LIRR MONTAUK DIV	L	O		2	STATE	11/1/2017	6	5.731	GOOD	9,550	$42,975,000	405		
2248160	Q	ELIOT AVENUE	QUEENS BOULEVARD		O		2	STATE	7/18/2018	5	4.824	FAIR	13,875	$62,437,500	406		
2269600	K	ERSKINE STREET	BELT SYSTEM - SHORE PARKWAY		A		1	STATE	7/6/2018	6	5.750	GOOD	8,325	$37,462,500	305		
2241200	B	FAILE STREET	AMTRAK - CSX	AX	O		1	STATE	12/5/2018	6	6.062	VGOOD	6,208	$27,936,000	202		
2231620	Q	FARMERS BOULEVARD	BELT SYSTEM - SOUTHERN PARKWAY		A		2	STATE	5/9/2018	4	5.421	GOOD	6,400	$28,800,000	413		
2268650	M	FDR DRIVE NORTHBOUND EAST 42ND STREET TO EAST 49TH STREET	EAST RIVER SHORELINE		A		119	STATE	10/31/2017	4	3.458	FAIR	24,753	$111,388,500	106		
223201A	M	FDR DRIVE NORTHBOUND OFF RAMP	FDR DRIVE & SOUTH STREET		AR		17	STATE	7/2/2018	6	4.785	FAIR	27,786	$125,037,000	101		
223204A	M	FDR DRIVE NORTHBOUND RAMP TO HOUSTON STREET	RELIEF		AR		4	STATE	1/18/2018	5	1/5/1900	GOOD	7,450	$33,525,000	103		
2233038	M	FDR DRIVE SOUTHBOUND	FDR DRIVE NORTHBOUND / EAST 62ND STREET		AT		34	STATE	10/2/2018	6	6.261	VGOOD	65,812	$296,154,000	106	108	
223201C	M	FDR DRIVE SOUTHBOUND OFF RAMP	SOUTH STREET		AR		8	STATE	2/21/2018	5	5.567	GOOD	11,924	$53,658,000	103		
2229520	B	FIELDSTON ROAD	HENRY HUDSON PARKWAY		A		1	STATE	6/26/2017	5	6.500	VGOOD	6,600	$29,700,000	208		
2231460	K	FLATBUSH AVENUE	BELT SYSTEM - SHORE PARKWAY		A		2	STATE	10/30/2017	6	6.206	VGOOD	14,058	$63,261,000	356		
2243260	K	FLATBUSH AVENUE	FRANKLIN SHUTTLE	T	O		2	STATE	7/20/2018	5	6.118	VGOOD	11,300	$50,850,000	309		
2243510	K	FLATBUSH AVENUE	LIRR BAY RIDGE	N	O		2	STATE	8/17/2018	5	3.885	FAIR	5,880	$26,460,000	318		
2244440	K	FLEET WALK PEDESTRIAN BRIDGE	NAVY STREET		PEDESTRIAN-O		1	CITY	7/30/2018	4	3.919	FAIR	620	$2,790,000	302		
2248240	Q	FLUSHING AVENUE SERVICE ROAD	FLUSHING AVENUE		O		1	STATE	7/7/2017	6	4.729	FAIR	2,940	$13,230,000	405		
2248090	Q	FLUSHING MEADOW PARK PEDESTRIAN	COLLEGE POINT BOULEVARD		PEDESTRIAN-O	P	3	CITY	2/2/2018	5	4.986	FAIR	8,400	$37,800,000	407		
2248130	Q	FLUSHING MEADOW PARK PEDESTRIAN	WILLOW LAKE AND 76TH ROAD		PEDESTRIAN-WO	P	4	CITY	4/20/2002	1	1.000	CLOSED	1,891	$8,509,500	481		
2248140	Q	FLUSHING MEADOW PARK ROAD	STREAM NORTH OF LONG ISLAND EXPRESSWAY		WO	P	5	STATE	7/20/2017	5	4.516	FAIR	4,200	$18,900,000	481		
2249780	R	FOOTBRIDGE	BROOKS LAKE DAM		PEDESTRIAN-WO	P	1	CITY	7/30/2018	4	4.417	FAIR	800	$3,600,000	501		
2242120	B	FOOTBRIDGE NORTH OF ROUTE 1 (HESTER BRIDGE)	BRONX RIVER		PEDESTRIAN-WO	P	1	CITY	11/30/2018	4	3.630	FAIR	1,900	$8,550,000	227		
2249790	R	FOOTBRIDGE SOUTH OF FOREST AVENUE	STREAM IN PARK		PEDESTRIAN-WO	P	3	CITY	9/20/2018	5	4.860	FAIR	700	$3,150,000	501		
2241839	B	FORDHAM ROAD - EAST 189TH STREET	METRO NORTH RR HAR	M	O		1	STATE	9/25/2017	6	5.719	GOOD	39,972	$179,874,000	206	207	
2249800	R	FOREST AVENUE	CLOVE LAKES PARK STREAM		WO	P	1	STATE	11/6/2017	4	5.077	GOOD	1,610	$7,245,000	501		
2247660	Q	FOREST PARK DRIVE	ABANDONED LIRR		O	P	6	STATE	6/29/2018	4	3.984	FAIR	10,011	$45,049,500	409		
2247590	Q	FOREST PARK DRIVE	LIRR MONTAUK DIV	L	O	P	5	STATE	9/12/2018	5	5.807	GOOD	5,974	$26,883,000	409		
2248340	Q	FOREST PARK DRIVE	MYRTLE AVENUE		O	P	3	STATE	7/26/2017	5	5.258	GOOD	5,100	$22,950,000	409		
2243620	K	FORT HAMILTON PARKWAY	LIRR & SEA BEACH	NT	O		3	STATE	7/5/2018	5	6.343	VGOOD	12,640	$56,880,000	310		
2246500	M	FORT TRYON PLACE	ENTRANCE FROM RIVERSIDE DRIVE		O	P	1	STATE	2/13/2018	4	3.435	FAIR	3,362	$15,129,000	112		
2243150	K	FOSTER AVENUE	BMT SUBWAY, BRIGHTON	T	O		1	STATE	6/8/2018	4	4.473	FAIR	3,000	$13,500,000	314		
2231930	Q	FRANCIS LEWIS BOULEVARD	BELT SYSTEM - CROSS ISLAND		A		3	STATE	1/24/2018	5	4.971	FAIR	9,100	$40,950,000	407		
2267199	Q	FRANCIS LEWIS BOULEVARD	CUNNINGHAM PARK ROAD		O		1	STATE	5/17/2017	6	4.231	FAIR	7,181	$32,314,500	408		

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
2231690	Q	FRANCIS LEWIS BOULEVARD	BELT SYSTEM - LAURELTON PARKWAY EASTBOUND		A		1	STATE	4/6/2018	5	4.692	FAIR	6,000	$27,000,000	413		
2231700	Q	FRANCIS LEWIS BOULEVARD	BELT SYSTEM - LAURELTON PARKWAY WESTBOUND		A		1	STATE	3/29/2018	5	5.692	GOOD	5,986	$26,937,000	413		
2249450	R	FREMONT AVENUE PEDESTRIAN BRIDGE	STATEN ISLAND RAILWAY SOUTH SHORE	S	PEDESTRIAN-O		3	CITY	9/26/2018	4	4.164	FAIR	800	$3,600,000	502		
226771C	M	GARAGE RAMP TO 79TH STREET	79TH STREET BOAT BASIN GARAGE		AR	P	21	STATE	5/7/2018	5	5.368	GOOD	9,095	$40,927,500	107		
2241420	B	GERARD AVENUE	METRO NORTH RR HUD	M	O		1	STATE	4/25/2018	6	6.117	VGOOD	5,122	$23,049,000	204		
2249360	R	GIFFORDS LANE	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		1	STATE	10/10/2018	6	5.344	GOOD	3,042	$13,689,000	503		
2243860	K	GLENMORE AVENUE	LIRR BAY RIDGE	N	O		2	STATE	9/25/2018	7	5.015	GOOD	5,668	$25,506,000	316		
2247440	Q	GRAND AVENUE	CSX TRANSPORT	X	O		1	STATE	10/5/2017	6	5.950	GOOD	3,280	$14,760,000	405		
2247180	Q	GRAND AVENUE	LIRR MAIN LINE	L	O		3	STATE	8/7/2018	5	4.000	FAIR	7,415	$33,367,500	404		
2065940	Q	GRAND AVENUE	495I (LONG ISLAND EXPRESSWAY)		A		2	STATE	10/5/2018	5	4.625	FAIR	12,852	$57,834,000	405		
2242370	B	GRAND CONCOURSE	BEDFORD PARK BOULEVARD		O		1	STATE	1/31/2018	4	4.763	FAIR	9,435	$42,457,500	207		
2242299	B	GRAND CONCOURSE	EAST 138TH STREET		O		1	STATE	6/8/2017	5	5.478	GOOD	9,500	$42,750,000	201		
2242259	B	GRAND CONCOURSE	EAST 161ST STREET		O		1	STATE	6/21/2018	6	6.422	VGOOD	27,285	$122,782,500	204		
2242280	B	GRAND CONCOURSE	EAST 167TH STREET		O		2	STATE	6/22/2018	5	5.737	GOOD	34,290	$154,305,000	204		
2242300	B	GRAND CONCOURSE	EAST 170TH STREET		O		2	STATE	2/22/2018	5	4.587	FAIR	35,917	$161,626,500	204		
2242319	B	GRAND CONCOURSE	EAST 174TH STREET	T	O		1	STATE	2/5/2018	4	3.808	FAIR	15,120	$68,040,000	204		
2242329	B	GRAND CONCOURSE	EAST 175TH STREET	T	O		1	STATE	6/4/2018	5	4.231	FAIR	12,060	$54,270,000	205		
2242380	B	GRAND CONCOURSE	EAST 204TH STREET		O		1	STATE	8/29/2017	5	6.156	VGOOD	9,272	$41,724,000	207		
2242360	B	GRAND CONCOURSE	EAST BURNSIDE AVENUE		O		2	STATE	6/29/2018	4	5.677	GOOD	8,736	$39,312,000	205		
2242340	B	GRAND CONCOURSE	EAST KINGSBRIDGE ROAD		O		2	STATE	6/6/2018	5	4.476	FAIR	18,630	$83,835,000	207		
2242330	B	GRAND CONCOURSE	EAST TREMONT AVENUE		O		1	STATE	8/30/2017	6	6.362	VGOOD	11,700	$52,650,000	205		
2241409	B	GRAND CONCOURSE	METRO NORTH RR HUD	MT	O		1	STATE	6/6/2018	4	4.812	FAIR	14,300	$64,350,000	204		
2240390	KQ	GRAND STREET BRIDGE	NEWTOWN CREEK		WMO		2	STATE	11/1/2017	4	4.000	FAIR	5,175	$23,287,500	301	405	
2249100	R	GRANITE AVENUE	B&O RR (ABANDONED)	O	O		4	STATE	1/31/2018	5	6.493	VGOOD	7,300	$32,850,000	501		
2249370	R	GREAVES AVENUE	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		1	STATE	8/24/2017	7	6.333	VGOOD	2,650	$11,925,000	503		
2240370	KQ	GREENPOINT AVENUE BRIDGE	NEWTOWN CREEK	L	WMO		12	STATE	8/8/2017	5	5.167	GOOD	75,320	$338,940,000	301	402	
2231370	K	GUIDER AVENUE RAMP TO BELT SYSTEM - SHORE PARKWAY	BELT SYSTEM - SHORE PARKWAY		A		4	STATE	8/30/2018	7	6.542	VGOOD	10,818	$48,681,000	313		
2242430	B	GUN HILL ROAD	BRONX BOULEVARD		O		4	STATE	1/25/2018	5	5.304	GOOD	9,400	$42,300,000	212		
2242440	B	GUN HILL ROAD	BRONX RIVER		WO		1	STATE	1/9/2018	5	6.731	VGOOD	8,700	$39,150,000	212		
2241860	B	GUN HILL ROAD	METRO NORTH RR HAR	M	O		1	STATE	4/13/2018	6	6.567	VGOOD	9,109	$40,990,500	212		
2241910	B	GUN HILL ROAD	NYCTA-DYRE AVE LN	T	O		1	STATE	10/2/2018	6	6.547	VGOOD	7,500	$33,750,000	211	212	
2231610	Q	GUY R. BREWER BOULEVARD	BELT SYSTEM - SOUTHERN PARKWAY		A		4	STATE	8/2/2017	6	5.347	GOOD	12,342	$55,539,000	413		
2249380	R	GUYON AVENUE	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		3	STATE	9/12/2017	5	4.152	FAIR	6,964	$31,338,000	503		
2240231	K	HAMILTON AVENUE BRIDGE	GOWANUS CANAL		WMO		3	STATE	7/27/2018	7	4.750	FAIR	7,300	$32,850,000	307	306	
2240232	K	HAMILTON AVENUE BRIDGE	GOWANUS CANAL		WMO		3	STATE	8/25/2017	5	5.278	GOOD	8,611	$38,749,500	306		
2065930	Q	HAMILTON PLACE	495I (LONG ISLAND EXPRESSWAY)		A		2	STATE	2/27/2018	5	4.972	FAIR	11,288	$50,796,000	405		
2249520	R	HANNAH STREET	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		10	STATE	10/17/2018	5	4.701	FAIR	13,360	$60,120,000	501		
2249180	R	HARBOR ROAD	CONRAIL - EX B&O RR	C	O		4	STATE	10/7/2017	6	5.955	GOOD	5,864	$26,388,000	501		
2267240	M	HARLEM RIVER DRIVE RAMP TO GEORGE WASHINGTON BRIDGE	HARLEM RIVER DRIVE SOUTHBOUND		A		55	STATE	10/26/2017	4	3.222	FAIR	113,936	$512,712,000	112		
2233051	M	HARLEM RIVER DRIVE SOUTHBOUND	NORTHBOUND HARLEM RIVER DRIVE RAMP TO EAST 127TH STREET		A		9	STATE	6/7/2018	7	1/6/1900	VGOOD	56,037	$252,166,500	111		
2231780	Q	HEMPSTEAD AVENUE	BELT SYSTEM - CROSS ISLAND		A		2	STATE	1/24/2018	4	3.588	FAIR	14,200	$63,900,000	413		
2266149	Q	HEMPSTEAD AVENUE	BELT SYSTEM - CROSS ISLAND RAMP NORTHBOUND		A		2	STATE	3/15/2018	4	4.982	FAIR	9,711	$43,699,500	413		

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
2267250	M	HENRY HUDSON PARKWAY	AMTRAK - WEST 96TH STREET	A	A		55	STATE	12/22/2017	4	3.339	FAIR	90,550	$407,475,000	107		
2229530	B	HENRY HUDSON PARKWAY	BROADWAY		A		1	STATE	8/1/2017	5	5.810	GOOD	7,500	$33,750,000	208		
2229440	B	HENRY HUDSON PARKWAY	KAPPOCK STREET		A		1	STATE	6/28/2017	5	5.000	GOOD	5,014	$22,563,900	208		
2266229	M	HENRY HUDSON PARKWAY	PEDESTRIAN PATH AT WEST 148TH STREET		A		1	STATE	1/30/2018	5	6.333	VGOOD	1,920	$8,640,000	109		
2229309	M	HENRY HUDSON PARKWAY	RIVERSIDE PARK		A		1	STATE	1/10/2018	5	6.565	VGOOD	2,263	$10,183,500	107		
2229349	M	HENRY HUDSON PARKWAY	WEST 158TH STREET	A	A		44	STATE	12/26/2018	5	3.300	FAIR	140,000	$630,000,000	109	112	
2266230	M	HENRY HUDSON PARKWAY NORTHBOUND	PEDESTRIAN PATH INWOOD PARK		A		1	STATE	1/19/2018	5	5.667	GOOD	917	$4,126,500	112		
2229322	M	HENRY HUDSON PARKWAY NORTHBOUND	RAMP FROM WEST 96TH STREET		A		1	STATE	1/29/2018	5	6.565	VGOOD	2,000	$9,000,000	107		
2229312	M	HENRY HUDSON PARKWAY NORTHBOUND	RAMP TO WEST 96TH STREET		A		1	STATE	1/25/2018	4	5.125	GOOD	2,000	$9,000,000	107		
M00004	M	HENRY HUDSON PARKWAY ON/OFF RAMP - 79TH STREET NORTH SIDE	PEDESTRIAN PATH NORTH OF 79TH STREET		A		1	CITY	6/6/2018	4	4.467	FAIR	846	$3,807,000	107		
M00003	M	HENRY HUDSON PARKWAY ON/OFF RAMP - 79TH STREET SOUTH SIDE	PEDESTRIAN PATH SOUTH OF 79TH STREET		A		1	CITY	6/6/2018	4	4.500	FAIR	846	$3,807,000	107		
2266240	M	HENRY HUDSON PARKWAY SOUTHBOUND	PEDESTRIAN PATH INWOOD PARK		A		1	STATE	1/19/2018	6	5.667	GOOD	1,155	$5,197,500	112		
2229321	M	HENRY HUDSON PARKWAY SOUTHBOUND	RAMP FROM WEST 96TH STREET		A		1	STATE	1/29/2018	5	6.565	VGOOD	2,081	$9,364,500	107		
2229311	M	HENRY HUDSON PARKWAY SOUTHBOUND	RAMP TO WEST 96TH STREET		A		1	STATE	1/25/2018	4	5.913	GOOD	2,000	$9,000,000	107		
2229289	M	HENRY HUDSON PARKWAY VIADUCT	AMTRAK - WEST 72ND STREET - WEST 79TH STREET	A	A		145	STATE	12/19/2018	4	3.643	FAIR	213,330	$959,985,000	107		
2246580	BM	HIGH BRIDGE PEDESTRIAN OVERPASS	MAJOR DEEGAN EXPRESSWAY - HARLEM RIVER	M	PEDESTRIAN-WA	P	11	PARKS	8/12/2002	5	3.759	FAIR	34,100	$153,450,000	112	204	
2230000	K	HIGHLAND BOULEVARD EASTBOUND	JACKIE ROBINSON PARKWAY		A		1	STATE	2/1/2018	5	5.417	GOOD	4,900	$22,050,000	305		
2230220	K	HIGHLAND BOULEVARD NORTHBOUND	VERMONT STREET		A		1	STATE	5/15/2017	6	5.889	GOOD	3,995	$17,977,500	305		
2230010	K	HIGHLAND BOULEVARD WESTBOUND	JACKIE ROBINSON PARKWAY		A		1	STATE	2/1/2018	5	4.600	FAIR	3,500	$15,750,000	305		
2230020	K	HIGHLAND BOULEVARD WESTBOUND	JACKIE ROBINSON PARKWAY EASTBOUND ENTRANCE RAMP		A		2	STATE	2/2/2018	5	4.879	FAIR	4,700	$21,150,000	305		
2248280	Q	HIGHLAND PARK PEDESTRIAN	PEDESTRIAN PATH		PEDESTRIAN-O	P	1	CITY	1/8/2018	6	6.190	VGOOD	1,900	$8,550,000	405		
2243780	K	HIGHLAWN AVENUE	BMT SEA BEACH	T	O		1	STATE	6/16/2017	6	6.840	VGOOD	6,960	$31,320,000	311		
2244060	K	HILL DRIVE (CLEFT RIDGE SPAN)	PEDESTRIAN PATH SOUTH OF BOATHOUSE		O	P	1	CITY	6/6/2018	4	4.433	FAIR	750	$3,375,000	355		
2244120	K	HILL DRIVE (TERRACE BRIDGE)	PROSPECT PARK LAKE		WO	P	3	STATE	9/25/2018	3	3.218	FAIR	7,735	$34,807,500	355		
2231840	Q	HILLSIDE AVENUE	BELT SYSTEM - CROSS ISLAND		A		2	STATE	5/2/2018	4	4.269	FAIR	9,672	$43,524,000	413		
2247320	Q	HONEYWELL STREET	SUNNYSIDE YARD	AL	O		22	STATE	12/20/2017	6	6.333	VGOOD	99,036	$445,662,000	402	401	
2232040	M	HOUSTON STREET	FDR DRIVE		A		2	STATE	7/21/2017	7	1/6/1900	VGOOD	11,184	$50,328,000	103		
223204B	M	HOUSTON STREET RAMP TO FDR DRIVE NORTHBOUND	RELIEF		AR		4	STATE	1/18/2018	5	1/5/1900	GOOD	7,150	$32,175,000	103		
2249300	R	HUGUENOT AVENUE	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		2	STATE	9/13/2017	5	4.364	FAIR	6,514	$29,313,000	503		
2240450	Q	HUNTERS POINT AVENUE	DUTCH KILLS		WMO		4	STATE	6/1/2018	5	5.861	GOOD	12,158	$54,711,000	402		
2241190	B	HUNTS POINT AVENUE	AMTRAK - CSX	AX	O		1	STATE	12/6/2018	5	5.767	GOOD	10,049	$45,220,500	202		
2241959	B	HUTCHINSON RIVER PARKWAY	AMTRAK - CSX	AX	O		1	STATE	11/14/2018	6	5.683	GOOD	15,444	$69,498,000	210	211	
2075859	B	HUTCHINSON RIVER PARKWAY	HUTCHINSON RIVER		WMA		7	STATE	11/17/2017	5	4.433	FAIR	60,200	$270,900,000	210	228	
2249810	R	HYLAN BOULEVARD	LEMON CREEK		WO		1	STATE	2/9/2018	6	6.344	VGOOD	11,400	$51,300,000	503		
2245300	M	INWOOD HILL PARK FOOTBRIDGE	AMTRAK 30TH STREET BRANCH	A	PEDESTRIAN-O	P	6	CITY	2/24/2018	4	4.171	FAIR	700	$3,150,000	112		
2246700	M	ISHAM PARK PEDESTRIAN BRIDGE	HARLEM RIVER INLET		PEDESTRIAN-WO	P	1	CITY	4/23/2018	4	4.286	FAIR	300	$1,350,000	112		
2246690	M	ISHAM PARK VEHICULAR	HARLEM RIVER INLET		WO	P	1	STATE	2/20/2018	6	6.296	VGOOD	911	$4,099,500	112		
2230099	Q	JACKIE ROBINSON PARKWAY	CYPRESS HILLS CEMETRY		A		1	STATE	1/19/2018	5	4.444	FAIR	3,842	$17,289,000	405		
2230179	Q	JACKIE ROBINSON PARKWAY	METROPOLITAN AVENUE		A		2	STATE	4/9/2018	5	6.167	VGOOD	8,673	$39,028,500	482		
2248299	Q	JACKIE ROBINSON PARKWAY-UNION TURNPIKE	AUSTIN STREET		O		1	STATE	5/15/2018	5	5.600	GOOD	6,930	$31,185,000	409	406	
2247260	Q	JACKSON AVENUE	LIRR MONTAUK DIV	L	O		1	STATE	8/21/2018	6	5.031	GOOD	4,517	$20,326,500	402		
2231819	Q	JAMAICA AVENUE	BELT SYSTEM - CROSS ISLAND		A		2	STATE	5/14/2018	5	4.921	FAIR	12,240	$55,080,000	413		

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2230287	B	JEROME AVENUE	MOSHOLU PARKWAY	T	A		3	STATE	5/30/2017	5	5.706	GOOD	11,800	$53,100,000	207		
2249070	R	JOHN STREET PEDESTRIAN BRIDGE	B&O RR (ABANDONED)	O	PEDESTRIAN-O		2	CITY	10/23/2018	5	5.336	GOOD	1,050	$4,725,000	501		
2247480	Q	JUNIPER BOULEVARD SOUTH	CSX TRANSPORT	X	O		1	STATE	10/6/2017	5	5.667	GOOD	9,000	$40,500,000	405		
2230380	K	KANE STREET	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		2	STATE	4/9/2018	4	5.299	GOOD	5,000	$22,500,000	306		
2243770	K	KINGS HIGHWAY	BMT SEA BEACH	T	O		1	STATE	6/20/2017	6	6.895	VGOOD	5,032	$22,644,000	311		
2231449	K	KNAPP STREET	BELT SYSTEM - SHORE PARKWAY		A		1	STATE	4/4/2018	5	3.844	FAIR	9,398	$42,288,750	315		
2241169	B	LAFAYETTE AVENUE	AMTRAK - CSX	AX	O		1	STATE	12/8/2018	5	5.814	GOOD	12,100	$54,450,000	202		
2249110	R	LAKE AVENUE	B&O RR (ABANDONED)	O	O		3	STATE	4/10/2018	5	5.000	GOOD	5,900	$26,550,000	501		
2247240	Q	LEFFERTS BOULEVARD	LIRR MAIN LINE	L	O		3	STATE	11/10/2017	6	5.806	GOOD	5,460	$24,570,000	409		
2241139	B	LEGGETT AVENUE	AMTRAK - CSX	AX	O		3	STATE	12/14/2018	5	5.563	GOOD	41,551	$186,979,500	202		
2243850	K	LIBERTY AVENUE	LIRR BAY RIDGE	N	O		3	STATE	9/25/2018	6	5.221	GOOD	6,716	$30,222,000	316		
2249460	R	LINCOLN AVENUE	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		1	STATE	9/6/2017	5	6.638	VGOOD	4,500	$20,250,000	502		
2243190	K	LINCOLN PLACE	FRANKLIN SHUTTLE	T	O		1	STATE	6/13/2018	7	6.406	VGOOD	2,460	$11,070,000	308		
2243010	K	LINCOLN ROAD	BMT SUBWAY, BRIGHTON	T	O		1	STATE	5/15/2018	7	4.789	FAIR	6,243	$28,093,500	355		
2231750	Q	LINDEN BOULEVARD	BELT SYSTEM - CROSS ISLAND		A		2	STATE	2/26/2018	4	4.605	FAIR	6,716	$30,222,000	413		
2243910	K	LIVONIA AVENUE PEDESTRIAN BRIDGE	LIRR BAY RIDGE	N	PEDESTRIAN-O		6	CITY	10/10/2018	5	4.750	FAIR	2,500	$11,250,000	316		
2066002	Q	LONG ISLAND EXPRESSWAY (2066000)	WOODHAVEN BOULEVARD		A		2	STATE	6/7/2017	6	4.453	FAIR	25,200	$113,400,000	406	404	
2241159	B	LONGWOOD AVENUE	AMTRAK - CSX	AX	O		2	STATE	12/12/2018	5	5.931	GOOD	10,625	$47,812,500	202		
1240090	BM	MACOMBS DAM BRIDGE	HARLEM RIVER	M	WMO		52	STATE	12/11/2017	5	4.197	FAIR	220,000	$990,000,000	110	204	
2240079	BM	MADISON AVENUE BRIDGE	HARLEM RIVER		WMO		21	STATE	9/14/2018	5	4.352	FAIR	80,000	$360,000,000	111	201	
2242210	B	MAGNOLIA WAY	BRONX RIVER		WO	P	3	STATE	3/26/2018	5	4.618	FAIR	6,200	$27,900,000	227		
2249210	R	MAIN STREET PEDESTRIAN BRIDGE	STATEN ISLAND RAILWAY SOUTH SHORE	S	PEDESTRIAN-O		9	CITY	9/17/2018	4	4.579	FAIR	400	$1,800,000	503		
2240027	KM	MANHATTAN BRIDGE (LOWER LEVEL)	EAST RIVER	T	WEO		23	STATE	12/26/2018	5	4.347	FAIR	616,390	$2,773,755,000	103	302	
2240028	KM	MANHATTAN BRIDGE (UPPER LEVEL)	NYCTA TRACKS-BMT	T	WEO		43	STATE	12/14/2018	5	4.069	FAIR	587,424	$2,643,408,000	103	302	
2229480	B	MANHATTAN COLLEGE PARKWAY	HENRY HUDSON PARKWAY		A		3	STATE	6/2/2017	5	6.553	VGOOD	6,200	$27,900,000	208		
2245040	M	MARGARET CORBIN DRIVE	PEDESTRIAN PATH NEAR CAFÉ		O	P	1	CITY	4/23/2018	5	5.000	GOOD	598	$2,691,000	112		
2245050	M	MARGARET CORBIN DRIVE	PEDESTRIAN PATH NEAR NORTH ENTRANCE		O	P	1	CITY	4/23/2018	4	4.639	FAIR	889	$4,000,500	112		
2230190	Q	MARKWOOD ROAD	JACKIE ROBINSON PARKWAY		A		1	STATE	2/6/2018	5	4.733	FAIR	4,400	$19,800,000	482	406	
2249760	R	MARTLINGS AVENUE	RICHMOND LAKE DAM		WO		2	STATE	6/5/2017	4	4.538	FAIR	7,000	$31,500,000	501		
2269030	B	MATTHEWSON ROAD	MACCRACKEN AVENUE		O		15	STATE	9/20/2018	5	4.825	FAIR	14,880	$66,960,000	205		
2243410	K	MCDONALD AVENUE	LIRR BAY RIDGE	N	O		1	STATE	9/6/2018	5	4.891	FAIR	2,974	$13,383,000	312		
2248260	Q	MEADOW LAKE BRIDGE	MEADOW LAKE		WO	P	5	STATE	7/17/2018	5	4.210	FAIR	4,160	$18,720,000	481		
2241110	B	MELROSE AVENUE	CSX PORT MORRIS - (ABANDONED)		O		8	STATE	8/22/2017	6	5.681	GOOD	37,854	$170,343,000	203		
2231710	Q	MERRICK BOULEVARD	BELT SYSTEM - LAURELTON PARKWAY NORTHBOUND		A		1	STATE	1/16/2018	4	5.154	GOOD	5,976	$26,892,000	413		
2231720	Q	MERRICK BOULEVARD	BELT SYSTEM - LAURELTON PARKWAY SOUTHBOUND		A		1	STATE	1/18/2018	4	5.462	GOOD	6,000	$27,000,000	413		
2247500	Q	METROPOLITAN AVENUE	CSX TRANSPORT	X	O		1	STATE	10/10/2017	5	5.967	GOOD	18,650	$83,925,000	405		
2240290	K	METROPOLITAN AVENUE	ENGLISH KILLS		WMO		5	STATE	7/26/2017	6	5.944	GOOD	10,550	$47,475,000	301		
1247560	Q	METROPOLITAN AVENUE	LIRR - NY & ATL	LN	O		2	STATE	9/11/2018	4	4.690	FAIR	20,640	$92,880,000	405		
2249470	R	MIDLAND AVENUE	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		1	STATE	9/7/2017	5	6.569	VGOOD	2,952	$13,284,000	502		
2257569	M	MILLER HIGHWAY - ROUTE 9A	RIVERSIDE PARK SOUTH		A		64	STATE	10/13/2017	5	4.188	FAIR	272,475	$1,226,137,500	104	107	
2249530	R	MINTHORNE STREET PEDESTRIAN BRIDGE	STATEN ISLAND RAILWAY SOUTH SHORE	S	PEDESTRIAN-O		26	CITY	12/19/2018	4	4.242	FAIR	6,000	$27,000,000	501		
2243240	K	MONTGOMERY STREET	FRANKLIN SHUTTLE	T	O		1	STATE	6/26/2017	6	6.667	VGOOD	2,240	$10,080,000	309		

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
2249090	R	MORNINGSTAR ROAD	B&O RR (ABANDONED)	O	O		4	STATE	4/10/2018	5	3.985	FAIR	7,900	$35,550,000	501		
2230250	B	MOSHOLU PARKWAY	BRONX RIVER		WA		5	STATE	1/8/2018	5	5.207	GOOD	16,300	$73,350,000	227		
2230300	B	MOSHOLU PARKWAY	CONRAIL (ABANDONED)		A		1	STATE	7/9/2018	5	6.297	VGOOD	4,600	$20,700,000	226		
2230290	B	MOSHOLU PARKWAY	EQUESTRIAN PATH		A		1	STATE	1/9/2018	6	6.440	VGOOD	4,300	$19,350,000	226		
2230260	B	MOSHOLU PARKWAY	METRO NORTH	M	A		1	STATE	4/23/2018	6	6.250	VGOOD	8,880	$39,960,000	227	207	
2230310	B	MOSHOLU PARKWAY	SOUTHBOUND RAMP TO HENRY HUDSON PARKWAY		A		2	STATE	8/30/2017	5	4.161	FAIR	7,400	$33,300,000	226		
2230270	B	MOSHOLU PARKWAY	WEBSTER AVENUE		A		1	STATE	5/24/2017	5	5.847	GOOD	8,480	$38,160,000	207		
2248100	Q	MOTOR PARKWAY (PEDESTRIAN)	73RD AVENUE		PEDESTRIAN-O	P	3	CITY	11/29/2018	5	4.607	FAIR	2,600	$11,700,000	408		
2248110	Q	MOTOR PARKWAY (PEDESTRIAN)	ALLEY PARK PEDESTRIAN WALK		PEDESTRIAN-O	P	1	CITY	6/26/2018	4	3.938	FAIR	1,000	$4,500,000	413		
2271310	Q	MOTOR PARKWAY (PEDESTRIAN)	ALLEY POND PARK PEDESTRIAN		PEDESTRIAN-O	P	1	CITY	8/3/2018	4	4.389	FAIR	798	$3,591,000	411		
2248060	Q	MOTOR PARKWAY (PEDESTRIAN)	BELL BOULEVARD		PEDESTRIAN-O	P	2	CITY	5/24/2018	4	4.403	FAIR	2,650	$11,925,000	411		
2248059	Q	MOTOR PARKWAY (PEDESTRIAN)	FRANCIS LEWIS BOULEVARD		PEDESTRIAN-O	P	2	CITY	6/11/2018	4	4.472	FAIR	2,800	$12,600,000	408		
2248080	Q	MOTOR PARKWAY (PEDESTRIAN)	HOLLIS COURT BOULEVARD		PEDESTRIAN-O	P	3	CITY	11/29/2018	4	4.493	FAIR	2,700	$12,150,000	408		
2248070	Q	MOTOR PARKWAY (PEDESTRIAN)	SPRINGFIELD BOULEVARD		PEDESTRIAN-O	P	3	CITY	7/5/2018	4	3.967	FAIR	2,900	$13,050,000	411		
2247110	Q	MURRAY STREET	LIRR PORT WASHINGTON BRANCH	L	O		1	STATE	10/20/2017	5	6.148	VGOOD	4,000	$18,000,000	407		
2247620	Q	MYRTLE AVENUE	ABANDONED LIRR		O		3	STATE	1/8/2018	6	4.803	FAIR	6,725	$30,262,500	482	406	
2230120	Q	MYRTLE AVENUE	JACKIE ROBINSON PARKWAY		A		1	STATE	4/23/2018	5	6.256	VGOOD	6,363	$28,633,500	405	482	
2249350	R	NELSON AVENUE PEDESTRIAN BRIDGE	STATEN ISLAND RAILWAY SOUTH SHORE	S	PEDESTRIAN-O		3	CITY	9/24/2018	4	4.250	FAIR	300	$1,350,000	503		
1067150	B	NEREID AVENUE (EAST 240TH STREET)	BRONX RIVER PARKWAY	M	O		10	STATE	10/12/2017	5	4.379	FAIR	58,125	$261,562,500	212		
2249430	R	NEW DORP LANE	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		2	STATE	9/1/2017	5	4.470	FAIR	7,600	$34,200,000	502		
2243660	K	NEW UTRECHT AVENUE	LIRR BAY RIDGE	N	O		1	STATE	9/14/2018	6	5.250	GOOD	2,416	$10,872,000	311		
2243140	K	NEWKIRK AVENUE	BMT SUBWAY, BRIGHTON	T	O		3	STATE	6/18/2018	5	5.476	GOOD	4,100	$18,450,000	314		
2240240	K	NINTH STREET BRIDGE	GOWANUS CANAL		WMO		3	STATE	6/7/2017	6	5.704	GOOD	5,824	$26,208,000	306		
2231670	Q	NORTH CONDUIT AVENUE WESTBOUND	BELT SYSTEM - LAURELTON PARKWAY EASTBOUND		A		1	STATE	1/31/2018	5	4.733	FAIR	4,000	$18,000,000	413		
2231680	Q	NORTH CONDUIT AVENUE WESTBOUND	BELT SYSTEM - LAURELTON PARKWAY WESTBOUND		A		2	STATE	2/1/2018	5	5.000	GOOD	6,517	$29,326,500	413		
2269760	R	NORTH RAMP	STATEN ISLAND RAILWAY	S	O	F	2	STATE	10/22/2014	7	6.431	VGOOD	6,000	$27,000,000	501		
2240440	Q	NORTHERN BOULEVARD	ALLEY CREEK		WO		2	STATE	6/15/2018	5	4.269	FAIR	8,249	$37,120,500	411		
2231870	Q	NORTHERN BOULEVARD	BELT SYSTEM - CROSS ISLAND		A		2	STATE	6/15/2018	6	5.736	GOOD	9,400	$42,300,000	411		
2055802	Q	NORTHERN BOULEVARD EASTBOUND	FLUSHING RIVER		WO		40	STATE	9/29/2018	4	4.188	FAIR	78,894	$355,023,000	407		
2055801	Q	NORTHERN BOULEVARD WESTBOUND	FLUSHING RIVER		WO		40	STATE	9/29/2018	4	4.182	FAIR	71,900	$323,550,000	407		
205580A	Q	NORTHERN BOULEVARD WESTBOUND TO 678I SOUTHBOUND	VACANT LAND		AR		16	STATE	5/25/2018	6	4.333	FAIR	8,600	$38,700,000	407		
2243500	K	NOSTRAND AVENUE	LIRR BAY RIDGE	N	O		2	STATE	8/16/2018	5	4.149	FAIR	4,320	$19,440,000	314		
2240138	BM	NYCTA IRT	HARLEM RIVER/BROADWAY	TM	WMO		3	STATE	12/6/2017	5	5.380	GOOD	19,520	$87,840,000	112	207	208
2243480	K	OCEAN AVENUE	LIRR BAY RIDGE	N	O		2	STATE	8/9/2018	5	5.476	GOOD	5,192	$23,364,000	314		
2240320	K	OCEAN AVENUE PEDESTRIAN BRIDGE	SHEEPSHEAD BAY		PEDESTRIAN-WO		30	CITY	4/23/2018	5	4.935	FAIR	4,450	$20,025,000	315		
2243439	K	OCEAN PARKWAY	LIRR BAY RIDGE	N	O		1	STATE	9/5/2018	5	5.218	GOOD	7,000	$31,500,000	312		
2249269	R	PAGE AVENUE	STATEN ISLAND RAILWAY - TIDAL STREAM	S	WO		4	STATE	9/11/2017	6	5.833	GOOD	30,710	$138,195,000	503		
2245470	M	PARK AVENUE NORTHBOUND	EAST 45TH STREET		O		1	STATE	4/20/2018	6	5.244	GOOD	2,457	$11,056,500	105		
2245460	M	PARK AVENUE SOUTHBOUND	EAST 45TH STREET		O		1	STATE	4/19/2018	6	5.512	GOOD	2,375	$10,687,500	105		
2246550	M	PARK AVENUE VIADUCT	EAST 42ND STREET		O		7	STATE	12/13/2017	5	4.700	FAIR	28,294	$127,323,000	105		
2247600	Q	PARK LANE SOUTH	LIRR MONTAUK DIV	L	O		1	STATE	8/27/2018	6	6.633	VGOOD	3,024	$13,608,000	409	482	
2242099	B	PARK ROAD (204TH STREET)	BRONX RIVER		WO		1	STATE	3/19/2018	5	4.077	FAIR	4,700	$21,150,000	212		

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
224001A	M	PARK ROW TO BROOKLYN	WILLIAM STREET NORTHBOUND		OE		4	STATE	8/15/2018	5	5.215	GOOD	9,300	$41,850,000	101		
2269780	R	PARKING ENTRANCE RAMP	STATEN ISLAND RAILWAY	S	O	F	3	STATE	10/31/2018	6	6.472	VGOOD	8,589	$38,650,500	501		
2269730	R	PARKING EXIT RAMP	STATEN ISLAND RAILWAY	S	O	F	10	STATE	10/31/2018	6	6.028	VGOOD	20,769	$93,460,500	501		
2243020	K	PARKSIDE AVENUE - OCEAN AVENUE	BMT SUBWAY, BRIGHTON	T	O		6	STATE	6/22/2018	4	4.941	FAIR	48,700	$219,150,000	314		
2247060	Q	PARSONS BOULEVARD	LIRR PORT WASHINGTON BRANCH	L	O		1	STATE	8/1/2018	6	4.037	FAIR	4,032	$18,144,000	407		
224001F	M	PEARL STREET TO FDR DRIVE	LAND ADJACENT TO BRIDGE		OE		3	STATE	6/1/2018	6	5.290	GOOD	5,200	$23,400,000	103		
224001C	M	PEARL STREET TO BROOKLYN	LAND ADJACENT TO BRIDGE		OE		9	STATE	6/21/2018	4	3.644	FAIR	6,365	$28,642,500	101		
222928C	M	PEDESTRIAN BRIDGE AT WEST 73RD STREET	HENRY HUDSON PARKWAY - AMTRAK	A	PEDESTRIAN-A	P	5	CITY	3/20/2018	3	3.688	FAIR	3,700	$16,650,000	107		
2247630	Q	PEDESTRIAN BRIDGE NEAR UNION TURNPIKE	ABANDONED LIRR		PEDESTRIAN-O		8	CITY	7/17/2018	4	4.388	FAIR	1,500	$6,750,000	406		
2246090	M	PEDESTRIAN BRIDGE OPPOSITE 65TH STREET	TRANSVERSE ROAD #1		PEDESTRIAN-O	P	1	CITY	11/10/2018	4	4.583	FAIR	2,300	$10,350,000	164		
2244130	K	PEDESTRIAN BRIDGE NEAR BOATHOUSE (LULLWATER BRIDGE)	PROSPECT PARK LAKE		PEDESTRIAN-WO	P	1	CITY	4/24/2018	5	4.885	FAIR	1,000	$4,500,000	355		
2246400	M	PEDESTRIAN PATH OPPOSITE EAST 79TH STREET	TRANSVERSE ROAD #2		PEDESTRIAN-O	P	1	CITY	5/12/2018	4	4.280	FAIR	3,700	$16,650,000	164		
2241380	B	PELHAM BAY PARK EQUESTRIAN	AMTRAK - CSX	AX	PEDESTRIAN-O	P	1	CITY	3/27/2018	3	3.153	FAIR	7,300	$32,850,000	228		
2231519	K	PENNSYLVANIA AVENUE	BELT SYSTEM - SHORE PARKWAY		A		2	STATE	6/1/2017	6	5.569	GOOD	6,636	$29,862,000	356		
2243870	K	PITKIN AVENUE	LIRR BAY RIDGE	N	O		2	STATE	9/27/2018	7	5.691	GOOD	5,464	$24,588,000	316		
2243210	K	PRESIDENT STREET	FRANKLIN SHUTTLE	T	O		2	STATE	6/15/2018	5	4.596	FAIR	2,500	$11,250,000	309		
2232167	M	PROMENADE OVER FDR DRIVE	FDR DRIVE - EAST 81ST STREET - EAST 90TH STREET		PEDESTRIAN-A	P	53	STATE	8/9/2017	4	4.000	FAIR	93,000	$418,500,000	108		
2268760	M	PS-5 PEDESTRIAN BRIDGE	TENTH AVENUE		PEDESTRIAN-O		5	CITY	12/4/2018	4	4.362	FAIR	1,285	$5,782,500	112		
2240639	KQ	PULASKI BRIDGE	NEWTOWN CREEK		WMO		44	STATE	5/25/2018	5	4.030	FAIR	206,623	$929,803,500	301	402	
2230869	Q	QUEENS BOULEVARD	ACCESS ROAD BROOKLYN-QUEENS EXPRESSWAY SOUTHBOUND		A		1	STATE	8/20/2018	6	5.703	GOOD	11,385	$51,232,500	402		
2247310	Q	QUEENS BOULEVARD	AMTRAK & LIRR YARD	AL	O		19	STATE	12/5/2018	6	5.758	GOOD	92,400	$415,800,000	402	401	
2230530	Q	QUEENS BOULEVARD	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		2	STATE	8/16/2018	6	5.833	GOOD	262,208	$1,179,936,000	402		
2230209	Q	QUEENS BOULEVARD	JACKIE ROBINSON PARKWAY	T	A		5	STATE	5/30/2018	5	5.810	GOOD	30,858	$138,861,000	409		
224005A	M	RAMP FROM FDR DRIVE	HARLEM RIVER DRIVE NORTHBOUND		OR		11	STATE	9/27/2018	7	6.623	VGOOD	25,224	$113,508,000	111		
2248040	Q	RAMP TO LINDEN BOULEVARD	SOUTH CONDUIT AVENUE		O		1	STATE	5/22/2018	5	4.967	FAIR	3,355	$15,097,500	410		
224007A	M	RAMP TO MADISON AVENUE	EAST 138TH STREET		OR		7	STATE	2/1/2018	5	5.845	GOOD	20,000	$90,000,000	111		
223201D	M	RAMP TO NORTHBOUND FDR DRIVE	FDR DRIVE & SOUTH STREET		AR		22	STATE	2/26/2018	5	4.746	FAIR	15,825	$71,212,500	101	103	
222934A	M	RAMP TO NORTHBOUND HENRY HUDSON PARKWAY	AMTRAK WEST SIDE	A	AR		26	STATE	12/20/2017	4	3.855	FAIR	10,800	$48,600,000	112		
2270970	BM	RANDALL'S ISLAND CONNECTOR PEDESTRIAN	BRONX KILL		PEDESTRIAN-WO	P	6	CITY	4/3/2018	6	6.070	VGOOD	3,040	$13,680,000	111	201	
2240350	R	RICHMOND AVENUE	RICHMOND CREEK		WO		3	STATE	5/31/2017	5	5.292	GOOD	32,589	$146,650,500	502		
2249270	R	RICHMOND VALLEY ROAD	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		4	STATE	8/29/2017	5	4.284	FAIR	9,440	$42,480,000	503		
2249280	R	RICHMOND VALLEY STATION PEDESTRIAN BRIDGE	STATEN ISLAND RAILWAY SOUTH SHORE	S	PEDESTRIAN-O		7	CITY	9/21/2018	4	4.321	FAIR	595	$2,677,500	503		
2244150	K	RIDGE BOULEVARD	SHORE ROAD DRIVE		O		1	STATE	5/16/2017	6	6.615	VGOOD	4,430	$19,935,000	310		
2240660	Q	RIKERS ISLAND BRIDGE	RIKERS ISLAND CHANNEL		WO		56	STATE	10/3/2017	5	3.563	FAIR	183,419	$825,385,500	401	480	
2241430	B	RIVER AVENUE	METRO NORTH RR HUD	M	O		1	STATE	9/11/2017	6	5.234	GOOD	5,184	$23,328,000	204		
2229510	B	RIVERDALE AVENUE	HENRY HUDSON PARKWAY		A		2	STATE	6/27/2017	5	6.026	VGOOD	5,200	$23,400,000	208		
2246660	M	RIVERSIDE DRIVE	WEST 125TH STREET - WEST 134TH STREET		O		27	STATE	10/6/2017	5	4.847	FAIR	148,300	$667,350,000	109		
2246980	M	RIVERSIDE DRIVE	WEST 138TH STREET		O		1	STATE	1/18/2018	5	5.696	GOOD	6,783	$30,523,500	109		
2267130	M	RIVERSIDE DRIVE	WEST 145TH STREET		O		1	STATE	5/8/2017	5	6.565	VGOOD	5,943	$26,743,500	109		
2269240	M	RIVERSIDE DRIVE	WEST 155TH STREET		O		1	STATE	5/8/2017	4	5.261	GOOD	3,526	$15,867,000	109	112	
2246720	M	RIVERSIDE DRIVE	WEST 158TH STRET - AMTRAK	A	O		77	STATE	12/17/2017	4	3.917	FAIR	185,658	$835,461,000	109	112	
2246970	M	RIVERSIDE DRIVE	WEST 96TH STREET		O		3	STATE	5/3/2017	5	6.841	VGOOD	10,600	$47,700,000	107		

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
2269200	M	RIVERSIDE DRIVE SOUTH	AMTRAK	A	O		11	STATE	12/16/2017	6	6.134	VGOOD	69,040	$310,680,000	107		
2271190	M	RIVERSIDE PARK - NORTH	AMTRAK EMPIRE LINE	A	PEDESTRIAN-O	P	403	PARKS	2/23/2018	3	2.854	POOR	526,320	$2,368,440,000	107		
2271180	M	RIVERSIDE PARK - SOUTH	AMTRAK EMPIRE LINE	A	PEDESTRIAN-O	P	171	PARKS	1/25/2018	5	4.064	FAIR	252,728	$1,137,276,000	107		
2300130	Q	ROCKAWAY BOULEVARD	HOOK CREEK		WO		3	STATE	7/12/2017	6	4.963	FAIR	18,302	$82,359,000	413		
2248369	Q	ROCKAWAY BOULEVARD	THURSTON BASIN		WO		2	STATE	7/13/2017	6	4.889	FAIR	6,000	$27,000,000	483	413	
2230587	Q	ROOSEVELT AVENUE	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		2	STATE	9/22/2017	5	5.778	GOOD	11,022	$49,599,000	402		
2247380	Q	ROOSEVELT AVENUE	CSX - HELLGATE - NYCTA	X	O		2	STATE	10/2/2017	6	5.556	GOOD	7,380	$33,210,000	402	403	404
2267160	Q	ROOSEVELT AVENUE	SHEA ROAD		O		4	STATE	7/21/2017	5	4.937	FAIR	7,280	$32,760,000	408		
2240507	Q	ROOSEVELT AVENUE	678I (VAN WYCK EXPRESSWAY) - FLUSHING RIVER		WA		27	STATE	10/7/2017	4	3.310	FAIR	63,847	$287,311,500	407	481	
2240640	MQ	ROOSEVELT ISLAND BRIDGE	EAST RIVER EAST CHANNEL		WMO		8	STATE	9/27/2017	5	5.542	GOOD	39,757	$178,906,500	108	401	
2249420	R	ROSE AVENUE	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		2	STATE	8/17/2017	5	4.576	FAIR	3,800	$17,100,000	502		
2249410	R	ROSS AVENUE	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		2	STATE	8/16/2017	5	4.773	FAIR	3,800	$17,100,000	502		
2248200	Q	RUST STREET	FLUSHING AVENUE		O		1	STATE	7/7/2017	6	4.559	FAIR	2,940	$13,230,000	405		
2230370	K	SACKETT STREET	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		2	STATE	3/23/2018	5	5.931	GOOD	4,965	$22,343,850	306		
2244470	K	SEELEY STREET	PROSPECT AVENUE		O		1	STATE	5/4/2018	4	3.692	FAIR	8,496	$38,232,000	307		
2249290	R	SEGUINE AVENUE	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		1	STATE	8/22/2017	6	6.344	VGOOD	3,250	$14,625,000	503		
2248220	Q	SERVICE ROAD TURNAROUND	FLUSHING AVENUE		O		1	STATE	7/7/2017	6	4.881	FAIR	2,940	$13,230,000	405		
2231329	K	BELT SYSTEM - SHORE PARKWAY	26TH AVENUE		A		1	STATE	3/28/2018	5	6.231	VGOOD	6,700	$30,150,000	313		
2231319	K	BELT SYSTEM - SHORE PARKWAY	BAY PARKWAY		A		1	STATE	6/28/2017	4	4.833	FAIR	7,198	$32,391,000	311		
2231249	K	BELT SYSTEM - SHORE PARKWAY	BAY RIDGE AVENUE		A		1	STATE	4/9/2018	7	6.885	VGOOD	5,024	$22,608,000	310		
2231429	K	BELT SYSTEM - SHORE PARKWAY	BEDFORD AVENUE		A		3	STATE	4/13/2018	4	4.375	FAIR	11,941	$53,734,500	315		
2231509	K	BELT SYSTEM - SHORE PARKWAY	FRESH CREEK		WA		3	STATE	11/2/2017	7	6.167	VGOOD	40,095	$180,427,500	356		
2231450	K	BELT SYSTEM - SHORE PARKWAY	GERRITSEN INLET		WA		3	STATE	8/10/2018	7	1/6/1900	VGOOD	60,016	$270,072,000	356		
2231439	K	BELT SYSTEM - SHORE PARKWAY	NOSTRAND AVENUE		A		3	STATE	5/16/2018	4	3.486	FAIR	11,154	$50,193,000	315		
2231419	K	BELT SYSTEM - SHORE PARKWAY	OCEAN AVENUE		A		3	STATE	3/26/2018	4	4.917	FAIR	14,000	$63,000,000	315		
2231360	K	BELT SYSTEM - SHORE PARKWAY	OCEAN PARKWAY		A		3	STATE	5/1/2018	6	6.400	VGOOD	29,637	$133,366,500	313		
2231499	K	BELT SYSTEM - SHORE PARKWAY	ROCKAWAY PARKWAY		A		1	STATE	10/4/2018	7	6.667	VGOOD	10,368	$46,656,000	356		
2231409	K	BELT SYSTEM - SHORE PARKWAY	SHEEPSHEAD BAY ROAD		A		1	STATE	3/29/2018	5	4.754	FAIR	6,794	$30,573,000	315		
2231472	K	BELT SYSTEM - SHORE PARKWAY EASTBOUND	MILL BASIN		WA		17	STATE	2/27/2018	7	1/6/1900	VGOOD	191,281	$860,764,500	318		
2231482	K	BELT SYSTEM - SHORE PARKWAY EASTBOUND	PAERDEGAT BASIN		WA		5	STATE	10/3/2018	7	6.606	VGOOD	82,308	$370,386,000	318		
2231471	K	BELT SYSTEM - SHORE PARKWAY WESTBOUND	MILL BASIN		WA		17	STATE	2/27/2018	7	1/6/1900	VGOOD	143,262	$644,679,000	318		
2231481	K	BELT SYSTEM - SHORE PARKWAY WESTBOUND	PAERDEGAT BASIN		WA		3	STATE	10/19/2017	7	6.449	VGOOD	50,325	$226,462,500	318		
2240200	B	SHORE ROAD	HUTCHINSON RIVER		WMO		7	STATE	6/13/2018	4	4.368	FAIR	43,836	$197,262,000	228		
2241390	B	SHORE ROAD CIRCLE	AMTRAK - CSX	AX	O		1	STATE	11/6/2018	6	6.656	VGOOD	8,106	$36,477,000	228		
2249120	R	SIMONSON AVENUE	B&O RR (ABANDONED)	O	O		3	STATE	4/21/2017	6	6.032	VGOOD	5,819	$26,185,500	501		
2249860	R	SLATER BOULEVARD	NEW CREEK		WO		1	STATE	4/28/2017	5	6.053	VGOOD	2,037	$9,166,500	502		
2242220	B	SNUFF MILL ROAD	BRONX RIVER		WO	P	2	STATE	1/8/2018	4	5.088	GOOD	4,800	$21,600,000	227		
2249200	R	SOUTH AVENUE	ARLINGTON YARD	C	O		3	STATE	10/7/2017	7	6.429	VGOOD	8,493	$38,218,500	501		
2231560	Q	SOUTH CONDUIT BOULEVARD	BELT SYSTEM - SOUTHERN PARKWAY		A		2	STATE	6/6/2018	5	5.319	GOOD	15,776	$70,992,000	410		
2249770	R	SOUTH OF BROOKS LAKE	STREAM IN PARK		PEDESTRIAN-WO	P	3	CITY	11/26/2018	5	4.767	FAIR	700	$3,150,000	501		
223201B	M	SOUTH STREET RAMP TO FDR DRIVE SOUTHBOUND	SOUTH STREET		AR		10	STATE	9/26/2018	5	4.277	FAIR	10,657	$47,956,500	101		
226771D	M	SOUTHBOUND HENRY HUDSON PARKWAY RAMP TO 79 STREET	79TH STREET BOAT BASIN GARAGE		AR	P	4	STATE	3/16/2018	5	4.926	FAIR	2,943	$13,243,500	107		

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
2241080	B	SOUTHERN BOULEVARD	CSX PORT MORRIS - (ABANDONED)		O		1	STATE	6/19/2018	5	5.070	GOOD	3,900	$17,550,000	201		
2242029	B	SOUTHERN BOULEVARD	EAST FORDHAM ROAD		O		2	STATE	1/22/2018	5	5.947	GOOD	13,390	$60,255,000	227		
2268770	Q	SPRINGFIELD BOULEVARD	EQUESTRIAN PATH (ABANDONED)		O		1	STATE	5/9/2017	6	4.238	FAIR	1,619	$7,285,500	413		
2231630	Q	SPRINGFIELD BOULEVARD	BELT SYSTEM - SOUTHERN PARKWAY		A		2	STATE	5/14/2018	4	5.632	GOOD	8,500	$38,250,000	413		
2270890	R	SPRINGVILLE GREENWAY PEDESTRIAN	FRESHWATER WETLANDS		PEDESTRIAN-O	P	1	CITY	3/28/2018	7	6.869	VGOOD	273	$1,228,500	502		
2243180	K	ST JOHNS PLACE	FRANKLIN SHUTTLE	T	O		1	STATE	6/29/2017	7	6.906	VGOOD	2,300	$10,350,000	308		
2241700	B	ST PAULS PLACE PEDESTRIAN BRIDGE	METRO NORTH RR HAR	M	PEDESTRIAN-O		2	CITY	3/15/2018	5	4.746	FAIR	888	$3,996,000	203		
2241060	B	ST. MARYS AND CONCORD	CSX PORT MORRIS - (ABANDONED)		O		1	STATE	6/18/2018	5	6.023	VGOOD	2,600	$11,700,000	201		
2269480	B	STARLIGHT PARK PEDESTRIAN BRIDGE	BRONX RIVER		PEDESTRIAN-WO	P	1	CITY	5/23/2018	6	6.844	VGOOD	1,906	$8,577,000	209		
2270170	R	STATEN ISLAND FERRY PEDESTRIAN BRIDGE	PARKING LOT EXIT ROADWAY		PEDESTRIAN-O	F	5	CITY	5/31/2018	5	5.600	GOOD	2,917	$13,126,500	501		
2230610	Q	STEINWAY STREET	278I EASTBOUND (BROOKLYN-QUEENS EXPRESSWAY)		A		1	STATE	6/19/2018	6	6.465	VGOOD	5,146	$23,157,000	401		
2230600	Q	STEINWAY STREET	278I WESTBOUND (BROOKLYN-QUEENS EXPRESSWAY)		A		1	STATE	6/18/2018	6	6.186	VGOOD	5,229	$23,530,500	401		
2243170	K	STERLING PLACE	FRANKLIN SHUTTLE	T	O		1	STATE	6/28/2017	6	6.833	VGOOD	2,300	$10,350,000	308		
2240540	K	STILLWELL AVENUE	CONEY ISLAND CREEK		WO		2	STATE	5/15/2017	6	6.313	VGOOD	17,000	$76,500,000	313		
2230350	K	SUMMIT STREET PEDESTRIAN BRIDGE	278I (BROOKLYN-QUEENS EXPRESSWAY)		PEDESTRIAN-A		2	CITY	5/4/2018	4	4.543	FAIR	1,400	$6,300,000	306		
2231650	Q	SUNRISE HIGHWAY WESTBOUND	BELT SYSTEM - LAURELTON PARKWAY EASTBOUND		A		1	STATE	5/7/2018	4	4.554	FAIR	4,100	$18,450,000	413		
2231660	Q	SUNRISE HIGHWAY WESTBOUND	BELT SYSTEM - LAURELTON PARKWAY WESTBOUND		A		2	STATE	4/3/2018	5	4.915	FAIR	5,476	$24,642,000	413		
2231800	Q	SUPERIOR ROAD	BELT SYSTEM - CROSS ISLAND		A		2	STATE	4/19/2018	5	5.947	GOOD	6,837	$30,766,500	413		
2243890	K	SUTTER AVENUE	LIRR BAY RIDGE	N	O		3	STATE	9/27/2018	6	5.750	GOOD	5,607	$25,231,500	316		
2241040	B	THIRD AVENUE BRIDGE	CSX PORT MORRIS - (ABANDONED)		O		1	STATE	6/20/2018	4	5.641	GOOD	2,720	$12,240,000	201	203	
2240310	K	THIRD AVENUE BRIDGE	GOWANUS CANAL		WO		1	STATE	5/5/2017	6	6.550	VGOOD	3,765	$16,942,500	306		
2240069	BM	THIRD AVENUE BRIDGE	HARLEM RIVER		WMO		14	STATE	7/11/2018	6	5.944	GOOD	85,382	$384,219,000	111	201	
2240250	K	THIRD STREET	GOWANUS CANAL		WMO		5	STATE	5/5/2017	5	5.541	GOOD	5,088	$22,896,000	306		
2247300	Q	THOMPSON AVENUE	AMTRAK & LIRR YARD	AL	O		14	STATE	12/3/2018	6	5.569	GOOD	61,280	$275,760,000	402		
2241170	B	TIFFANY STREET	AMTRAK - CSX	AX	O		1	STATE	12/12/2017	6	6.091	VGOOD	7,267	$32,701,500	202		
224001B	M	TO BROOKLYN FROM FDR DRIVE	FRANKFORT AND PEARL STREETS		OE		31	STATE	8/15/2018	5	5.154	GOOD	63,241	$284,584,500	101	103	
224005B	B	TO BRUCKNER BOULEVARD	RELIEF		OR		4	STATE	9/1/2017	7	6.043	VGOOD	19,990	$89,955,000	201		
224001D	M	TO FDR DRIVE NORTHBOUND	PEARL STREET		OE		30	STATE	7/12/2018	5	4.763	FAIR	57,216	$257,472,000	101	103	
2245480	M	TO GEORGE WASHINGTON BRIDGE OPPOSITE WEST 171ST STREET	RIVERSIDE DRIVE		O		1	STATE	2/12/2018	5	5.571	GOOD	10,880	$48,960,000	112		
224004G	Q	TO NEW YORK FROM 11TH STREET	TERRAIN (CHAMBER)		OE		36	STATE	8/22/2018	6	4.143	FAIR	8,410	$37,845,000	401	402	
224004F	Q	TO NEW YORK FROM 21ST STREET	21ST STREET		OE		63	STATE	11/21/2018	6	4.469	FAIR	63,365	$285,142,500	402	401	
224004E	Q	TO NEW YORK FROM THOMSON AVENUE	JACKSON AVENUE	L	OE		94	STATE	12/17/2018	5	4.444	FAIR	104,600	$470,700,000	402		
224001G	M	TO PARK ROW	ROSE STREET		OE		8	STATE	8/15/2018	5	5.101	GOOD	16,578	$74,601,000	101		
224001E	M	TO PEARL STREET	LAND ADJACENT TO BRIDGE		OE		3	STATE	5/25/2018	5	5.217	GOOD	5,490	$24,705,000	101		
224004D	M	TO QUEENS FROM EAST 58TH STREET	EAST 59TH STREET		OE		12	STATE	4/17/2018	5	5.644	GOOD	15,042	$67,689,000	106	108	
224004B	M	TO QUEENS FROM EAST 59TH STREET	FIRST AVENUE		OE		13	STATE	3/1/2018	6	6.333	VGOOD	14,820	$66,690,000	108		
224004I	Q	TO THOMSON AVENUE FROM NEW YORK	JACKSON AVENUE	L	OE		39	STATE	9/21/2018	5	4.593	FAIR	59,100	$265,950,000	402		
2249040	R	TOMPKINS AVENUE	B&O RR (ABANDONED)		O		1	STATE	4/12/2018	5	6.250	VGOOD	5,096	$22,932,000	501		
2249840	R	TOMPKINS AVENUE	GREENFIELD AVENUE		O		1	STATE	2/28/2018	5	4.640	FAIR	2,690	$12,105,000	501		
2249510	R	TOMPKINS AVENUE	WILLOW AVENUE, STATEN ISLAND RAILWAY	S	O		2	STATE	10/12/2018	5	5.284	GOOD	5,351	$24,079,500	501		
2249230	R	TRACY AVENUE PEDESTRIAN BRIDGE	STATEN ISLAND RAILWAY SOUTH SHORE	S	PEDESTRIAN-O		9	CITY	9/18/2018	3	3.451	CLOSED	635	$2,857,500	503		
2246410	M	TRANSVERSE ROAD #1 EASTBOUND (DENESMOUTH ARCH)	PEDESTRIAN PATH OPPOSITE EAST 65TH STREET		O	P	1	STATE	2/6/2018	5	5.696	GOOD	1,786	$8,037,000	164		

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
2245380	M	TRANSVERSE ROAD #1 WESTBOUND	PEDESTRIAN PATH OPPOSITE EAST 66TH STREET		O	P	1	STATE	1/11/2018	5	6.130	VGOOD	1,505	$6,772,500	164		
2249870	R	TRAVIS AVENUE	MAIN CREEK		WO		1	STATE	10/30/2017	5	4.767	FAIR	1,700	$7,650,000	502		
2246560	M	TUDOR CITY PLACE	EAST 42ND STREET		O		1	STATE	1/24/2018	5	6.033	VGOOD	6,615	$29,767,500	106		
2249170	R	UNION AVENUE	B&O RR (ABANDONED)	O	O		4	STATE	4/21/2017	5	4.419	FAIR	6,630	$29,835,000	501		
2230360	K	UNION STREET	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		2	STATE	3/23/2018	4	5.931	GOOD	4,965	$22,343,850	306		
2243200	K	UNION STREET	FRANKLIN SHUTTLE	T	O		2	STATE	6/14/2018	5	4.442	FAIR	4,100	$18,450,000	309		
2240270	K	UNION STREET	GOWANUS CANAL		WMO		5	STATE	7/20/2018	4	3.514	FAIR	4,900	$22,050,000	306		
2247040	Q	UNION STREET	LIRR PORT WASHINGTON BRANCH	L	O		1	STATE	10/16/2017	6	5.953	GOOD	3,180	$14,310,000	407		
2248129	Q	UNION TURNPIKE	CREEDMOORE HOSPITAL ROAD		O		1	STATE	7/7/2017	5	5.808	GOOD	3,500	$15,750,000	413		
2231850	Q	UNION TURNPIKE	BELT SYSTEM - CROSS ISLAND		A		2	STATE	5/9/2018	4	4.158	FAIR	16,720	$75,240,000	413		
2230180	Q	UNION TURNPIKE	JACKIE ROBINSON PARKWAY		A		1	STATE	2/6/2018	6	5.344	GOOD	5,426	$24,417,000	482		
2241330	B	UNIONPORT ROAD	AMTRAK - CSX	AX	O		1	STATE	11/17/2018	5	5.016	GOOD	7,709	$34,690,500	211		
2231910	Q	UTOPIA PARKWAY	BELT SYSTEM - CROSS ISLAND		A		2	STATE	2/27/2018	5	4.529	FAIR	7,200	$32,400,000	407		
2229550	B	VAN CORTLANDT EQUESTRIAN	HENRY HUDSON PARKWAY		PEDESTRIAN-A	P	2	CITY	9/14/2018	4	4.632	FAIR	2,100	$9,450,000	226		
2229540	B	VAN CORTLANDT PARK	HENRY HUDSON PARKWAY		PEDESTRIAN-A	P	2	CITY	9/14/2018	4	4.548	FAIR	3,900	$17,550,000	226		
2249130	R	VAN NAME AVENUE	B&O RR (ABANDONED)	O	O		3	STATE	3/27/2018	5	5.871	GOOD	5,474	$24,633,000	501		
2249140	R	VAN PELT AVENUE	B&O RR (ABANDONED)	O	O		3	STATE	4/21/2017	6	5.161	GOOD	5,000	$22,500,000	501		
2241070	B	WALES AVENUE	CSX PORT MORRIS - (ABANDONED)		O		1	STATE	6/18/2018	6	6.817	VGOOD	2,535	$11,407,500	201		
2241410	B	WALTON AVENUE	METRO NORTH RR HUD	M	O		1	STATE	5/10/2018	4	4.855	FAIR	3,600	$16,200,000	204		
2240620	M	WARDS ISLAND PEDESTRIAN BRIDGE	HARLEM RIVER		PEDESTRIAN-WMO		10	CITY	6/7/2018	5	4.933	FAIR	19,500	$87,750,000	111		
2243250	K	WASHINGTON AVENUE	FRANKLIN SHUTTLE	T	O		1	STATE	6/26/2018	6	6.156	VGOOD	5,957	$26,806,500	309	355	
2066919	BM	WASHINGTON BRIDGE	HARLEM RIVER	M	WO		9	STATE	10/4/2017	5	5.606	GOOD	128,339	$577,525,500	112	205	204
226672A	M	WEST 31ST STREET	AMTRAK LAYUP TRACKS	A	O		9	STATE	12/27/2018	5	3.255	FAIR	8,800	$39,600,000	104		
224501B	M	WEST 33RD STREET	AMTRAK 30TH STREET BRANCH	A	OR		8	STATE	3/1/2018	4	4.569	FAIR	16,500	$74,250,000	104		
224501C	M	WEST 33RD STREET	LAND ADJACENT TO AMTRAK	A	OR		2	STATE	4/28/2015	5	4.500	FAIR	2,360	$10,620,000	104		
224501D	M	WEST 34TH STREET	AMTRAK 30TH STREET BRANCH	A	OR		4	STATE	5/9/2017	5	4.875	FAIR	11,800	$53,100,000	104		
224501E	M	WEST 35TH STREET	AMTRAK 30TH STREET BRANCH	A	OR		3	STATE	12/17/2018	4	4.338	FAIR	6,500	$29,250,000	104		
224501F	M	WEST 36TH STREET	AMTRAK 30TH STREET BRANCH	A	OR		3	STATE	12/21/2017	5	5.642	GOOD	5,475	$24,637,500	104		
2245060	M	WEST 37TH STREET	AMTRAK 30TH STREET BRANCH	A	O		3	STATE	12/21/2017	6	6.691	VGOOD	7,110	$31,995,000	104		
2245070	M	WEST 38TH STREET	AMTRAK 30TH STREET BRANCH	A	O		2	STATE	5/21/2018	5	4.155	FAIR	6,200	$27,900,000	104		
2245080	M	WEST 39TH STREET	AMTRAK 30TH STREET BRANCH	A	O		3	STATE	5/21/2018	5	4.269	FAIR	6,300	$28,350,000	104		
2245440	M	WEST 40TH STREET	AMTRAK 30TH STREET BRANCH	A	O		4	STATE	8/16/2018	5	4.083	FAIR	9,400	$42,300,000	104		
2245330	M	WEST 41ST STREET	AMTRAK 30TH STREET BRANCH	A	O		3	STATE	9/7/2018	5	4.062	FAIR	6,240	$28,080,000	104		
2245210	M	WEST 42ND STREET	AMTRAK 30TH STREET BRANCH	A	O		4	STATE	12/28/2018	5	4.250	FAIR	10,300	$46,350,000	104		
2245090	M	WEST 43RD STREET	AMTRAK 30TH STREET BRANCH	A	O		2	STATE	5/1/2018	5	5.029	GOOD	4,140	$18,630,000	104		
2245100	M	WEST 44TH STREET	AMTRAK 30TH STREET BRANCH	A	O		2	STATE	5/1/2018	5	4.471	FAIR	4,092	$18,414,000	104		
2245110	M	WEST 45TH STREET	AMTRAK 30TH STREET BRANCH	A	O		2	STATE	5/4/2018	5	5.000	GOOD	4,100	$18,450,000	104		
2245120	M	WEST 46TH STREET	AMTRAK 30TH STREET BRANCH	A	O		2	STATE	5/4/2018	5	4.676	FAIR	4,140	$18,630,000	104		
2245130	M	WEST 47TH STREET	AMTRAK 30TH STREET BRANCH	A	O		2	STATE	5/8/2018	5	4.333	FAIR	4,100	$18,450,000	104		
2245140	M	WEST 48TH STREET	AMTRAK 30TH STREET BRANCH	A	O		2	STATE	5/8/2018	5	4.270	FAIR	4,100	$18,450,000	104		
2245150	M	WEST 49TH STREET	AMTRAK 30TH STREET BRANCH	A	O		3	STATE	5/21/2018	5	4.279	FAIR	4,100	$18,450,000	104		
2245340	M	WEST 50TH STREET	AMTRAK 30TH STREET BRANCH	A	O		2	STATE	7/26/2018	5	4.295	FAIR	4,100	$18,450,000	104		

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2245160	M	WEST 51ST STREET	AMTRAK 30TH STREET BRANCH	A	O		2	STATE	5/21/2018	5	4.618	FAIR	4,300	$19,350,000	104		
2245170	M	WEST 52ND STREET	AMTRAK 30TH STREET BRANCH	A	O		2	STATE	7/26/2018	5	4.705	FAIR	4,300	$19,350,000	104		
2245180	M	WEST 53RD STREET	AMTRAK 30TH STREET BRANCH	A	O		2	STATE	7/31/2018	5	4.623	FAIR	5,100	$22,950,000	104		
2245350	M	WEST 54TH STREET	AMTRAK 30TH STREET BRANCH	A	O		2	STATE	7/31/2018	5	4.429	FAIR	4,700	$21,150,000	104		
2245360	M	WEST 55TH STREET	AMTRAK 30TH STREET BRANCH	A	O		2	STATE	7/26/2018	5	4.619	FAIR	4,320	$19,440,000	104		
2245370	M	WEST 56TH STREET	AMTRAK 30TH STREET BRANCH	A	O		2	STATE	7/26/2018	5	4.778	FAIR	4,400	$19,800,000	104		
2245220	M	WEST 57TH STREET	AMTRAK 30TH STREET BRANCH	A	O		3	STATE	7/27/2018	5	4.937	FAIR	9,100	$40,950,000	104		
2245190	M	WEST 58TH STREET	AMTRAK 30TH STREET BRANCH	A	O		2	STATE	7/27/2018	5	4.309	FAIR	3,841	$17,284,500	104		
2246010	M	WEST 62ND STREET PEDESTRIAN BRIDGE (PINEBANK ARCH)	BRIDLE PATH		PEDESTRIAN-O	P	1	CITY	7/13/2018	4	4.522	FAIR	1,000	$4,500,000	164		
2269980	M	WEST 64TH STREET	AMTRAK	A	O		2	STATE	10/1/2018	6	6.731	VGOOD	5,204	$23,418,000	107		
2245420	M	WEST 65TH STREET ENTANCE EASTBOUND	BRIDLE PATH WEST END		O	P	1	STATE	1/15/2018	5	5.348	GOOD	1,400	$6,300,000	164		
2269390	M	WEST 66TH STREET	AMTRAK	A	O		2	STATE	10/1/2018	6	6.701	VGOOD	4,493	$20,218,500	107		
2269210	M	WEST 68TH STREET	AMTRAK	A	O		3	STATE	12/19/2017	7	6.821	VGOOD	5,382	$24,219,000	107		
2269190	M	WEST 70TH STREET	AMTRAK	A	O		3	STATE	12/16/2017	6	6.361	VGOOD	17,258	$77,661,000	107		
2246140	M	WEST 72ND STREET ENTRANCE (RIFTSTONE ARCH)	BRIDLE PATH		O	P	1	STATE	1/16/2018	5	5.913	GOOD	3,700	$16,650,000	164		
222928D	M	WEST 72ND STREET RAMP TO HENRY HUDSON PARKWAY NORTHBOUND	RELIEF		AR		1	STATE	6/6/2018	7	6.185	VGOOD	1,750	$7,875,000	107		
2246460	M	WEST 77TH STREET ENTRANCE (EAGLEVALE ARCH)	PEDESTRIAN PATH OPPOSITE WEST 77TH STREET		O	P	2	STATE	1/24/2018	4	5.323	GOOD	3,066	$13,797,000	164		
2246340	M	WEST 77TH STREET PEDESTRIAN (LADIES POND BRIDGE)	STREAM TO THE LAKE		PEDESTRIAN-WO	P	3	CITY	11/19/2018	3	4.065	FAIR	500	$2,250,000	164		
2246320	M	WEST 77TH STREET PEDESTRIAN (OAK BRIDGE)	THE LAKE		PEDESTRIAN-WO	P	3	CITY	5/4/2018	5	5.474	GOOD	1,100	$4,950,000	164		
2229290	M	WEST 79TH STREET	AMTRAK	A	A		1	STATE	5/12/2018	5	4.492	FAIR	4,500	$20,250,000	107		
2246390	M	WEST 86TH STREET PEDESTRIAN (SOUTHWEST RESERVOIR BRIDGE)	BRIDLE PATH		PEDESTRIAN-O	P	3	CITY	11/28/2018	4	4.544	FAIR	1,100	$4,950,000	164		
2246430	M	WEST 110TH STREET ENTRANCE (MOUNTCLIFF ARCH)	PEDESTRIAN PATH OPPOSITE WEST 109TH STREET		O	P	1	STATE	2/6/2018	4	4.433	FAIR	1,364	$6,138,000	164		
2246670	M	WEST 134TH STREET	TERRAIN		O		4	STATE	5/31/2017	5	6.387	VGOOD	7,500	$33,750,000	109		
2245230	M	WEST 148TH STREET PEDESTRIAN BRIDGE	AMTRAK 30TH STREET BRANCH	A	PEDESTRIAN-O	P	5	CITY	3/16/2018	4	3.785	FAIR	1,100	$4,950,000	109		
227128A	M	WEST 151ST STREET PEDESTRIAN -WEST RAMP	RIVERSIDE PARK		PEDESTRIAN-A	P	8	CITY	8/23/2018	7	6.851	VGOOD	3,375	$15,187,500	109		
2246710	M	WEST 153RD STREET	A.C. POWELL BOULEVARD		O		1	STATE	2/12/2018	4	4.673	FAIR	3,082	$13,869,000	110		
2245290	M	WEST 155TH STREET PEDESTRIAN BRIDGE	AMTRAK 30TH STREET BRANCH	A	PEDESTRIAN-O		3	CITY	5/31/2018	4	3.815	FAIR	800	$3,600,000	109	112	
2245250	M	WEST 158TH STREET	AMTRAK 30TH STREET BRANCH	A	O		7	STATE	12/17/2017	6	6.111	VGOOD	20,219	$90,985,500	112		
2245260	M	WEST 173RD STREET PEDESTRIAN BRIDGE	AMTRAK 30TH STREET BRANCH	A	PEDESTRIAN-O	P	2	CITY	3/15/2018	4	4.631	FAIR	1,500	$6,750,000	112		
2246600	M	WEST 176TH STREET PEDESTRIAN BRIDGE	APPROACH TO GEORGE WASHINGTON BRIDGE		PEDESTRIAN-O	P	1	CITY	3/18/2018	4	4.400	FAIR	1,200	$5,400,000	112		
2246489	M	WEST 181ST STREET	RAMP TO WASHINGTON BRIDGE		O		1	STATE	1/24/2018	5	6.267	VGOOD	8,200	$36,900,000	112		
2229400	M	WEST 181ST STREET PEDESTRIAN BRIDGE	HENRY HUDSON PARKWAY NORTHBOUND		PEDESTRIAN-A	P	7	CITY	2/8/2018	4	4.031	FAIR	1,500	$6,750,000	112		
M00001	M	WEST 191ST STREET PEDESTRIAN	BROADWAY - IRT #1 SUBWAY		PEDESTRIAN-O		1	CITY	1/3/2018	4	4.000	FAIR	2,000	$9,000,000	112		
2241940	B	WEST 205TH STREET	NYCTA IND YARDS	T	O		4	STATE	10/4/2018	6	6.208	VGOOD	32,508	$146,286,000	207		
2240120	BM	WEST 207TH STREET/WEST FORDHAM RD	HARLEM RIVER		WMO		5	STATE	7/3/2018	5	5.347	GOOD	31,784	$143,028,000	112	207	
2241489	B	WEST 225TH STREET	MNRR YARD TRACKS	M	O		2	STATE	9/4/2018	5	6.075	VGOOD	10,900	$49,050,000	207	208	
2241490	B	WEST 230TH STREET	CSX PUTNAM (ABANDONED)		O		1	STATE	5/19/2017	5	6.424	VGOOD	5,902	$26,559,000	208		
2241509	B	WEST 231ST STREET	CSX PUTNAM (ABANDONED)		O		1	STATE	6/21/2018	5	5.847	GOOD	4,723	$21,253,500	208		
2229450	B	WEST 232ND STREET	HENRY HUDSON PARKWAY		A		2	STATE	6/27/2017	5	6.467	VGOOD	4,900	$22,050,000	208		
2241510	B	WEST 233RD STREET	CSX PUTNAM (ABANDONED)		O		1	STATE	5/15/2017	5	5.043	GOOD	3,760	$16,920,000	208		
2241520	B	WEST 234TH STREET	CSX PUTNAM (ABANDONED)		O		1	STATE	5/15/2017	5	5.255	GOOD	3,770	$16,965,000	208		
2229460	B	WEST 236TH STREET PEDESTRIAN BRIDGE	HENRY HUDSON PARKWAY		PEDESTRIAN-A		3	CITY	7/19/2018	4	4.559	FAIR	2,500	$11,250,000	208		

BRIDGE ID #	BORO	FEATURE CARRIED	FEATURE CROSSED	RAIL ROAD	BRIDGE TYPE	OTHER OWNER	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA (SQ FT)	REPLACEMENT COST	CD	CD2	CD3
2229470	B	WEST 239TH STREET	HENRY HUDSON PARKWAY		A		2	STATE	6/2/2017	5	5.421	GOOD	6,100	$27,450,000	208		
2229490	B	WEST 246TH STREET	HENRY HUDSON PARKWAY		A		2	STATE	6/2/2017	5	5.079	GOOD	5,600	$25,200,000	208		
2229500	B	WEST 252ND STREET	HENRY HUDSON PARKWAY		A		2	STATE	1/16/2018	5	5.123	GOOD	4,500	$20,250,000	208		
2231860	Q	WEST ALLEY ROAD	BELT SYSTEM - CROSS ISLAND		A		2	STATE	8/21/2017	5	5.789	GOOD	7,200	$32,400,000	411		
2246120	M	WEST DRIVE	TRANSVERSE ROAD #1		O	P	1	STATE	2/23/2018	4	3.000	POOR	7,011	$31,549,500	164		
2246240	M	WEST DRIVE	TRANSVERSE ROAD #2		O	P	1	STATE	2/21/2018	4	5.261	GOOD	6,396	$28,782,000	164		
2246260	M	WEST DRIVE	TRANSVERSE ROAD #3		O	P	1	STATE	2/22/2018	5	5.261	GOOD	4,592	$20,664,000	164		
2246280	M	WEST DRIVE	TRANSVERSE ROAD #4		O	P	1	STATE	2/22/2018	4	4.130	FAIR	3,920	$17,640,000	164		
2246330	M	WEST DRIVE (BALCONY BRIDGE)	STREAM TO THE LAKE		WO	P	1	STATE	1/15/2018	5	5.696	GOOD	1,884	$8,478,000	164		
2246080	M	WEST DRIVE (DALEHEAD ARCH)	BRIDLE OPPOSITE WEST 64TH STREET		O	P	1	STATE	1/15/2018	5	6.217	VGOOD	2,050	$9,225,000	164		
2246000	M	WEST DRIVE (GREYSHOT ARCH)	PEDESTRIAN PATH BETWEEN 61ST AND & 62ND STREETS		O	P	1	STATE	1/16/2018	5	5.913	GOOD	2,561	$11,524,500	164		
2244020	K	WEST DRIVE (MEADOWPORT ARCH)	PEDESTRIAN PATH NEAR GRAND ARMY PLAZA		O	P	1	STATE	4/19/2017	5	6.083	VGOOD	2,500	$11,250,000	355		
2246360	M	WEST DRIVE (WINTERDALE ARCH)	PEDESTRIAN PATH OPPOSITE WEST 82ND STREET		O	P	1	STATE	1/16/2018	5	5.913	GOOD	2,613	$11,758,500	164		
2249480	R	WEST FINGERBOARD ROAD	STATEN ISLAND RAILWAY SOUTH SHORE	S	O		2	STATE	9/8/2017	6	6.361	VGOOD	5,279	$23,755,500	502		
2249710	R	WEST FOOTBRIDGE	CLOVE LAKE		PEDESTRIAN-WO	P	2	CITY	5/22/2018	4	3.857	FAIR	900	$4,050,000	501		
2244100	K	WEST FOOTBRIDGE (MUSIC GROVE BRIDGE)	PROSPECT PARK STREAM		PEDESTRIAN-WO	P	1	CITY	5/9/2018	5	5.000	GOOD	308	$1,386,000	355		
2241470	B	WEST FORDHAM ROAD	METRO NORTH RR HUD	M	O		4	STATE	9/25/2017	6	5.208	GOOD	16,052	$72,234,000	207		
2241460	B	WEST TREMONT AVENUE	METRO NORTH RR HUD	M	O		8	STATE	6/8/2018	4	4.508	FAIR	12,900	$58,050,000	205		
2241230	B	WESTCHESTER AVENUE	AMTRAK - CSX	AX	O		3	STATE	12/1/2018	6	5.191	GOOD	15,600	$70,200,000	202	209	
2240180	B	WESTCHESTER AVENUE	BRONX RIVER		WO		1	STATE	8/22/2017	5	5.288	GOOD	5,490	$24,705,000	202	209	
2241000	B	WESTCHESTER AVENUE	CSX PORT MORRIS - (ABANDONED)		O		1	STATE	8/21/2018	5	6.182	VGOOD	3,000	$13,500,000	201		
2075837	B	WESTCHESTER AVENUE	HUTCHINSON RIVER PARKWAY		A		2	STATE	2/12/2018	4	3.847	FAIR	15,858	$71,361,000	210	211	
2241329	B	WHITE PLAINS ROAD	AMTRAK - CSX	AX	O		1	STATE	11/27/2018	5	4.844	FAIR	10,238	$46,071,000	211		
2248020	Q	WHITELAW PEDESTRIAN BRIDGE	NORTH AND SOUTH CONDUIT AVENUE		PEDESTRIAN-O		7	CITY	10/5/2018	4	4.423	FAIR	5,500	$24,750,000	410		
1065210	Q	WHITESTONE EXPRESSWAY NORTHBOUND	BELT SYSTEM - CROSS ISLAND		A		1	STATE	6/7/2018	5	5.127	GOOD	2,480	$11,160,000	407		
2266160	Q	WHITESTONE EXPRESSWAY 678I SOUTHBOUND TO BELT SYSTEM - CROSS ISLAND EASTBOUND	678I - BELT SYSTEM - CROSS ISLAND JUNCTION		A		1	STATE	6/8/2018	4	4.048	FAIR	2,320	$10,440,000	407		
2241369	B	WILLIAMSBRIDGE ROAD	AMTRAK - CSX	AX	O		2	STATE	11/15/2018	5	5.611	GOOD	6,510	$29,295,000	211		
2240039	KM	WILLIAMSBURG BRIDGE	EAST RIVER	T	WEO		53	STATE	10/19/2018	5	4.264	FAIR	824,000	$3,708,000,000	103	301	
2240059	BM	WILLIS AVENUE BRIDGE	HARLEM RIVER		WMO		15	STATE	10/29/2018	7	6.211	VGOOD	171,105	$769,972,500	111	201	
2248019	Q	WOODHAVEN BOULEVARD	ATLANTIC AVENUE		O		3	STATE	5/16/2018	4	4.200	FAIR	19,832	$89,244,000	409		
2248159	Q	WOODHAVEN BOULEVARD	QUEENS BOULEVARD		O		2	STATE	8/7/2018	4	4.588	FAIR	11,498	$51,741,000	404		
2230540	Q	WOODSIDE AVENUE	278I (BROOKLYN-QUEENS EXPRESSWAY)		A		1	STATE	2/9/2018	5	5.719	GOOD	7,308	$32,886,000	402		
2247400	Q	WOODSIDE AVENUE	CSX TRANSPORT	X	O		1	STATE	10/3/2017	5	6.038	VGOOD	4,970	$22,365,000	402	404	
2247120	Q	WOODSIDE AVENUE	LIRR MAIN LINE	L	O		3	STATE	8/16/2018	4	4.825	FAIR	15,750	$70,875,000	402		
786 OPEN BRIDGES			OPEN SPANS 4,878										15,482,655	$69,612,639,300	ALL		

VEHICULAR TUNNEL INVENTORY

TUNNEL IDENTIFICATION NUMBER	BORO	FEATURE CARRIED	FEATURE CROSSED	TUNNEL TYPE	SPANS	RATING SOURCE	INSPECTION DATE	GENERAL RECOMMENDATION**	CURRENT RATING*	VERBAL RATING	DECK AREA	REPLACEMENT COST	CD	CD2
NYCDOTN3101	M	EAST 34TH STREET (2246540)	PARK AVENUE TUNNEL	OT	1	STATE	08/24/16	4	4.133	FAIR	36,200	$162,900,000	105	106
NYCDOTN3102	M	EAST 42ND STREET - EAST 47TH STREET (2246570)	FIRST AVENUE TUNNEL	OT	2	STATE	05/18/16	5	6.421	VGOOD	95,000	$427,500,000	106	
NYCDOTN3103	M	BATTERY PLACE (2232000)	FDR DRIVE	AT	2	STATE	10/16/15	5	5.182	GOOD	142,000	$639,000,000	101	
NYCDOTN3104	M	WEST STREET (2267380)	RECTOR STREET - BROOKLYN BATTERY TUNNEL MANHATTAN PLAZA	AT	1	STATE	10/19/17	5	5.000	GOOD	25,760	$115,920,000	101	

STATEN ISLAND CULVERTS

BIN	FEATURE CARRIED	FEATURE CROSSED	BRIDGE TYPE	SPANS	SOURCE
R00141	ALTER AVE	STORM&GRND FED STREAM	O	1	CITY
R00036	AMBOY ROAD	ARBUTUS AVE	O	1	CITY
R00133	ARDEN AVE	HALPIN AVE	O	1	CITY
R00105	ARTHUR KILL ROAD	CLARKE AVENUE	O	1	CITY
R00086	ARTHUR KILL ROAD	ENGLEWOOD ST	O	1	CITY
R00084	ARTHUR KILL ROAD	MULDOON AVE	O	1	CITY
R00085	ARTHUR KILL ROAD	150' N.W. ELLIS ROAD	O	1	CITY
R00106	ARTHUR KILL ROAD	RICHMONDTOWN ROAD	O	1	CITY
R00122	ARTHUR KILL ROAD	RIDGEWOOD AVE	O	1	CITY
R00103	AULTMAN AVE	ST GEORGE ROAD	O	2	CITY
R00005	BIDWELL AVE	COLUMBUS PLACE	O	1	CITY
R00035	BRADLEY AVE	WILLOWBROOK ROAD	O	1	CITY
R00077	BUCHANAN AVE	HAROLD ST	O	1	CITY
R00139	DE PEW PL	MAGUIRE AVE	O	1	CITY
R00004	DICKIE AVE	NEAR COLUMBUS PLACE	O	1	CITY
R00027	ELEANOR ST	ROCKLAND AVE	O	1	CITY
R00011	FOREST AVE	CRYSTAL AVE	O	1	CITY
R00068	FOREST AVE	RANDALL AVE	O	1	CITY
R00041	93 FOSTER ROAD	AMBOY ROAD	O	1	CITY
R00010	GALLOWAY AVE	MARIANNE ST	O	1	CITY
R00016	GRAHAM BLVD	JAY ST	O	2	CITY
R00025	GREELEY AVE	SANILAC ST	O	1	CITY
R00069	GREGG PLACE	RANDALL AVE	O	1	CITY
R00051	HARBOR ROAD	DUBLIN PLACE	O	1	CITY
R00065	HENDERSON AVE	WESTBURY AVE	O	1	CITY
R00138	HOLLAND AVE	BENJAMIN PLACE	O	1	CITY
R00021	HUNTER AVE	IDLEASE PLACE	O	1	CITY
R00135	HYLAN BLVD	CORNELIA AVE	O	1	CITY
R00022	IDLEASE PLACE	HUNTER AVE	O	1	CITY
R00062	KISSEL AVE	SNUG HARBOR ROAD	O	1	CITY
R00042	LEDYARD PLACE	LACONIA AVE	O	1	CITY
R00024	LINCOLN AVE	SANILAC ST	O	1	CITY
R00038	MAGUIRE AVE	DEPEW PLACE	O	1	CITY
R00040	113 MAGUIRE AVE	DEPEW PLACE	O	1	CITY
R00095	MEISNER AVE	ROCKLAND AVE	O	1	CITY
R00023	MIDLAND AVE	HYLAN BLVD	O	1	CITY
R00013	NAUGHTON AVE	PATTERSON AVE	O	3	CITY
R00015	OLYMPIA BLVD	SLATER AVE	O	1	CITY
R00097	RICHMOND HILL ROAD	RICHMOND ROAD	O	1	CITY
R00046	RICHMOND TERRACE	SNUG HARBOUR	O	2	CITY
R00137	RICHMOND TERRACE	WESTERN AVE	O	2	CITY
R00034	ROCKLAND AVE	BRIELLE AVE	O	1	CITY
R00096	ROCKLAND AVE	MANOR ROAD	O	1	CITY
R00076	ROOSEVELT AVE	HAROLD ST	O	1	CITY
R00101	ST ANDREWS ROAD	LIGHTHOUSE AVE	O	1	CITY
R00032	SEGUINE AVE	PURDY PLACE	O	1	CITY
R00060	SIGNS ROAD	VICTORY BLVD	O	1	CITY
R00136	SNUG HARBOR ROAD	KISSEL AVE	O	1	CITY
R00114	SWEET BROOK ROAD	RIDGEWOOD ROAD	O	1	CITY
R00031	TARLTON ST	GREAT KILLS LANE	O	1	CITY
R00055	TRAVIS AVE	VICTORY BLVD	O	1	CITY
R00115	VICTORY BLVD	CLOVES LAKE PARK	O	3	CITY
R00059	WESTERN AVE	RR BRIDGE	WO	1	CITY

R00032 Seguine Avenue over Purdy Place. R00115 Victory Boulevard over Cloves Lake Park. R00114 Sweet Brook Road over Ridgewood Road. R00103 Aultman Avenue over St. George Road. R00139 De Pew Place over Maguire Avenue. R00105 Arthur Kill Road over Clarke Avenue. R00101 St. Andrews Road over Lighthouse Avenue. R00040 113 Maguire Avenue over Depew Place. R00059 Western Avenue over RR Bridge. R00005 Bidwell Avenue over Columbus Place. R00060 Signs Road over Victory Boulevard. R00062 Kissel Avenue over Snug Harbor Road. R00038 Maguire Avenue over Depew Place. R00036 Amboy Road over Arbutus Avenue.

Revised 2/26/13

A glossary of the terms most commonly used in bridge design, construction and maintenance is presented below. Cross-references are indicated through the use of BLOCK LETTERING.

AASHTO (AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS) - A nonprofit, nonpartisan association representing highway and transportation departments in the fifty states, the District of Columbia, and Puerto Rico, representing all five transportation modes air — highways, public transportation, rail, and water.

ABUTMENT - Walls of reinforced concrete or masonry. Abutments support a bridge's SUPERSTRUCTURE and APPROACHES, as well as retain the embankments that are positioned at the extreme ends of a multi-span bridge.

Riverside Drive Viaduct Abutment End. Battery Place Underpass Abutment. Macombs Dam Bridge Beginning Abutment. 79th Street Traffic Circle Abutment End. (Credit: NYSDOT) Constructing the Abutment of the Eastchester Bridge in 1921.

ADA (AMERICANS WITH DISABILITIES ACT) - The Americans with Disabilities Act of 1990 gives civil rights protections to individuals with disabilities, similar to those rights provided to individuals on the basis of race, color, sex, national origin, age, and religion. It guarantees equal opportunity for individuals with disabilities in public accommodations, employment, transportation, state and local government services, and telecommunications. Designing and constructing pedestrian facilities in the public right-of-way (ROW) which are not usable by people with disabilities may constitute discrimination. Section 504 of the Rehabilitation Act of 1973 includes similar prohibitions with respect to federally funded programs. The ADA requirements are more stringent and require public facilities to be accessible regardless of the funding source.

ADMIXTURE - Material, other than water, AGGREGATE, and hydraulic cement, used as an ingredient of concrete, mortar, grout, or plaster and added to the batch immediately before or during mixing.

AERIAL LIFT - Any vehicle-mounted device used to elevate personnel, including: extendable boom platforms, aerial ladders, articulating (jointed) boom platforms, vertical towers, or any combination of these. Aerial lifts have replaced ladders and scaffolding on many job sites due to their mobility and flexibility. They may be made of metal, fiberglass-reinforced plastic, or other materials. They may be powered or manually operated, and are considered to be aerial lifts whether or not they can rotate around a primarily vertical axis.

Inspecting the Belt Parkway Bridge over 26th Avenue in December 2012. (Credit: Artemio Angeles) Nereid Avenue Bridge over Bronx River Parkway in June 2012 - Using a 60 Foot Boom with Outriggers. (Credit: Bojidar Yanev) Brooklyn-Queens Expressway (Eastbound) over Cadman Plaza/Brooklyn-Queens Expressway (Westbound). Pulaski Bridge in July 2017. (Credit: Mitul Patel)

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.

ALLISION - The violent impact of a movable object (vessel) striking a stationary object (bridge or/and bridge protective system).

ANCHORAGE - A solid mass, usually comprised of concrete, that encases a grillage of heavy steel bars into which the ends of a SUSPENSION BRIDGE'S main CABLES are anchored. Anchorages are designed to resist the pull of the cables.

Inspecting the Exterior of the Manhattan Bridge Anchorage. Manhattan Bridge Brooklyn and Manhattan Anchorages. Ed Koch – Queensboro Bridge Queens Anchorage (Credit: NYSDOT)

ANTICIPATED SERVICE LIFE (ASL) – An estimate of the remaining life of a bridge based on current age, structural condition, specification used for design, and capacity to handle current and future traffic. The ASL may be taken as the expected life of a new bridge (75 years, AASHTO 1998) less the age of the bridge under consideration.

APPROACH - Roadway at each end of a bridge, beyond the ABUTMENT, providing access to the bridge.

End Approach to Bridge over Dam at Clove Lake. Metropolitan Avenue Bridge Approach. (Metropolitan Credit: NYSDOT) Belt Parkway Bridge over 26th Avenue Approach. (Credit: Artemio Angeles) Begin Approach to Delancey Street Pedestrian Bridge Over FDR Drive. Ed Koch – Queensboro Bridge Approach. End Approach to East 120th Pedestrian Bridge over FDR Drive. (QBB and East 120th Street Credit: NYSDOT) Begin Approach to Ocean Avenue Pedestrian Bridge Over Sheepshead Bay, and Begin Approach to Van Cortlandt Equestrian Bridge Over /Henry Hudson Parkway in 2018.

ARTERIAL BRIDGE - Any bridge upon which an arterial highway runs as it crosses streets, water, railroads, etc.

ASBESTOS – A generic name given to a fibrous variety of six naturally occurring minerals. The term "asbestos" is not a mineralogical definition but a commercial name given to a group of minerals that possess high tensile strength, flexibility, resistance to chemical and thermal degradation, and electrical resistance.

AS-BUILT DRAWINGS - Drawings that are prepared from measurements taken on-site to accurately depict the actual sizes and location of elements of the construction project. The as-built drawings indicate variations from the construction documents that occurred during construction.

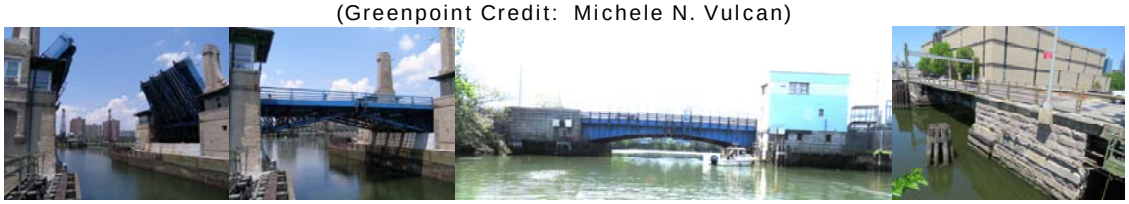
ASPHALT - Black bituminous surface material made from AGGREGATE and processed petroleum.

Hamilton Avenue Asphalt Plant Silo. (Credit: Sheena Diaz)

BACKFILL - Material used to refill an excavated area.

BASCULE BRIDGES - Bascule bridges are movable bridges, typically referred to as "draw bridges" which rotate the superstructure vertically. The movable leaf of the structure - known as a *bascule* - is counterbalanced by weights of such size that minimal power is required for operation - just enough to overcome inertia, frictional resistance, wind and snow loads. Such bridges are relatively speedy to operate and provide unlimited vertical clearance. Examples of bascule bridges currently under the jurisdiction of the New York City Department of Transportation include the *Unionport*, *Shore Road (Pelham)*, *Hamilton Avenue*, Third Street, *Union Street*, *Metropolitan Avenue*, *Hunters Point Avenue*, and *Greenpoint Avenue* Bridges.

Unionport and Hamilton Avenue Bridge. (Open Credits: NYSDOT) Union Street Bridge. Greenpoint Avenue Bridge. (Greenpoint Credit: Michele N. Vulcan)



Shore Road Bridge in July 2011. (Credit: Sergey Parayev) Metropolitan and Hunters Point Avenue Bridges.

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. Bearings that do not allow for horizontal movement of the superstructure are referred to as fixed bearings. Bearings that allow for horizontal movement of the superstructure are known as expansion bearings. Both fixed and expansion bearings permit rotation.

Truss Bearing on Manhattan Bridge. (Credit: NYSDOT)

BICYCLE LANE - A portion of the roadway that has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicycles. (New York State Vehicle and Traffic Law, Title 1, Article 1, §102–a)

BICYCLE PATH - A path physically separated from motorized vehicle traffic by an open space or barrier and either within the highway right–of–way or within an independent right–of–way and which is intended for the use of bicycles. (New York State Vehicle and Traffic Law, Title 1, Article 1, § 102–b)

Brooklyn Bridge Bicycle/Pedestrian Path in 2010. Manhattan Bridge Bicycle Path in 2013. Ed Koch – Queensboro Bicycle/Pedestrian Path in 2016. Entrance to Williamsburg Bridge Bicycle/Pedestrian Path in2017.

BID - A contractor's formal proposal, including prices, to perform the work set out in the project SPECIFICATIONS.

BLASTING - A method of cleaning or surface roughening by a forcibly projected stream of sharp angular abrasive.

BMP (BEST MANAGEMENT PRACTICES) - Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage, or leaks, sludge or waste disposal, or drainage from raw material storage.

BOAT BASIN - A naturally or artificially enclosed or nearly enclosed harbor area for small craft.

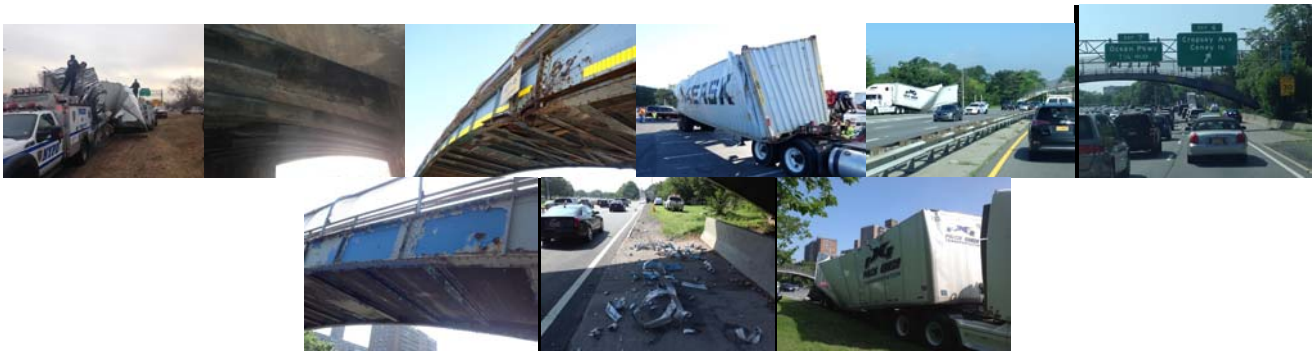
BORING - A soil exploration technique of drilling into the ground at various locations in an attempt to construct an accurate subsurface profile.

Conducting Soil Borings in 2008 as Part of the Seismic Retrofit Design of the Manhattan Bridge. Drilling to a Depth of Approximately 210 Feet to Obtain an 8-foot Long Hard Rock Sample. A 2 1/2 –Foot Long Hard Rock Sample Taken From a Depth of Between 202 and 204 ½ Feet.

BOX BEAM - A hollow structural beam with a square, rectangular, or trapezoidal cross-section.

BRIDGE - A structure connecting two points, greater than 20 feet in distance, which carries vehicular and/or pedestrian traffic over water, a descending slope, or another road.

BRIDGE STRIKE - An incident in which a vehicle, its load or equipment collides with a bridge. A majority of these strikes occur on low-vertical clearance bridges over parkways or other local roadways prohibited to truck traffic.



Douglaston Parkway Bridge Strike in 2015: Police Observing the Truck Damage. Underside of Bridge Concrete Beams Only Exhibited Scratches. (Credit: Artemio Angeles) 17th Avenue Pedestrian Bridge Strike in 2015. 27th Avenue Pedestrian Bridge Strike in 2018 – Truck, Bridge, and Debris.

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.

Replacing Cables on the Manhattan Bridge in 1955. (Credit: NYC Records) Inspector on Manhattan Bridge Cable. Cable B. (Credit: NYSDOT)

CABLE STAYED BRIDGES - Bridges in which the superstructure is directly supported by cables, or stays, passing over or attached to towers located at the main piers.

East 64th Street Pedestrian Bridge over FDR Drive.

CAISSON - A rectangular or cylindrical chamber for keeping water or soft ground from flowing into an excavation.

CAMELBACK TRUSS - A TRUSS having a curved top chord and straight bottom chord meeting at each end. There is a camelback truss on the Macombs Dam Bridge.

Macombs Dam Camelback Truss.

CANTILEVER BRIDGES - A cantilever is a BEAM that is supported only on one end. In a cantilever bridge, the tree branch-like beams project toward each other, forming a span of the bridge when connected in the center. Bridges of this type are economical to build because they require less material in construction and less condemnation of property is necessary for the narrow piers which are sufficient for support. Typically, no FALSEWORK is required during construction and the bridge does not exceed 1,800 feet in length. NYCDOT's *Ed Koch Queensboro Bridge* is a notable example of this type of structure.

Ed Koch Queensboro Bridge. (Credit: Russell Holcomb)

CAST-IN-PLACE - Concrete that is poured and cured in its final position at the project site.

CATCH BASIN - A receptacle, commonly box shaped and fitted with a 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, typically running parallel to the girders under the superstructure.

Ed Koch Queensboro Bridge Lower Level Flooring System Catwalk under Span 37. Manhattan Bridge Brooklyn Tower Catwalk. (Credit: NYSDOT) Fresh Creek Catwalk under Deck. Brooklyn Bridge Manhattan Side Catwalk. (Brooklyn Credit: NYSDOT)

CHANGE ORDER - An approved modification of the SPECIFICATIONS or the costs in a construction contract.

CHIPPING HAMMER - A welder's compressed-air tool for cleaning steel after welding. It is also used by bridge inspectors.

CITY ENVIRONMENTAL QUALITY REVIEW (CEQR) - Provides a means for City agencies and decision-makers to: systematically consider environmental effects along with other aspects of project planning and design; evaluate reasonable alternatives; identify the process by which agencies review proposed discretionary actions to identify and disclose the potential adverse effects those actions may have on the environment; and develop mitigation measures for those impacts, where appropriate and practicable. These procedures take into account the special circumstances of the City's urban environment. The CEQR process requires City agencies to assess, disclose,

and mitigate to the greatest extent practicable, the environmental consequences of their decisions to fund, directly undertake, or approve a project in the City of New York.

CLADDING - Non-load-bearing stone or brick veneer used as the facing material in exterior bridge wall construction.

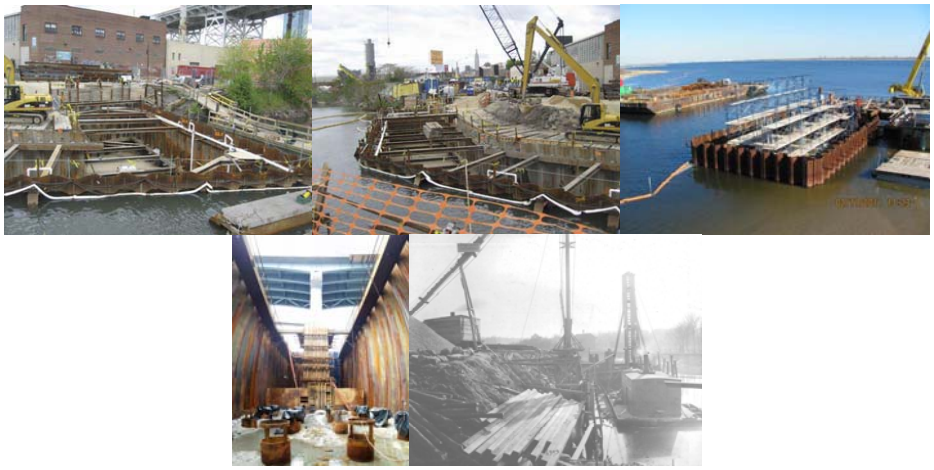
Hutchinson River Parkway Bridge. Brooklyn-Queens Expressway over Ramp to Brooklyn-Queens Expressway (Eastbound). Right Side Fascia on the Bronx Pelham Parkway Bridge. Inspecting the Cladding Stones of the Fascia of Span 1 on West 252nd Street Bridge over Henry Hudson Parkway. Eliot Avenue Bridge over Queens Boulevard. To Queens from East 59th Street over First Avenue – Cladding Stones of Span #11 to 13.

CLEARANCE - The unobstructed vertical and horizontal space provided between two objects.

United Nations – 1st Avenue Tunnel, Grand Street, Roosevelt Island, and Macombs Dam Bridge Vertical Clearance Posting. (Credit: NYSDOT)

Retro-reflective Material Improves Visibility of These Low Vertical Clearance Bridges: East 60th Street Bridge over FDR Drive and Westchester Avenue Bridge over Hutchinson River Parkway. Vertical Clearance Beam at Span 53,Southbound Roadway of the Promenade over the FDR Drive. (FDR Credit: NYSDOT)

COFFERDAM - A temporary dam-like structure constructed around an excavation to exclude water. Water is removed from the enclosure so the excavation for preparing a foundation and the ABUTMENT, PIER, or other construction may be done in the open air.



April 2010: Cofferdam With Filter Fabric and Gravel Placed Prior to Pile Driving During the Emergency Repair Project on the Borden Avenue Bridge over Dutch Kills. February 2011: Fresh Creek Bridge Cofferdam Pad. May 2016: View Inside the Gerritsen Inlet Pier 2 Cofferdam. Building the Cofferdam for the Eastchester Bridge in 1920.

COLLATERAL SEISMIC HAZARD – A seismic hazard other than direct ground shaking e.g. ground failure (slumping, settlement), liquefaction, fault rupture, landslide and the like.

COLONNADE - A series of regularly spaced columns.

Manhattan Colonnade Begin and End Face in 2016. (Credit: NYSDOT)

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.

CONSTRUCTION ZONE - The area from the first traffic control sign announcing that roadwork is being performed ahead to the last sign announcing the end of the roadwork.

CONTRACT LIMITS - The limits shown in the contract documents, in which all work occurs, including advanced signing and detours covered under an individual contract. The Contractor shall be responsible for the highway within the contract limits. For contracts with multiple sites, this may be defined as a single larger limit if the sites are in close proximity, or as multiple sets of contract limits if the sites are widely separated. On-site contract work cannot be conducted outside the contract limits. If the contract limits are not specified in the contact documents, the contract limits shall be the limits within which all work is performed, including advanced signing and detours included in the contract documents.

COPING - The material forming the top layer of a masonry unit which protects the MASONRY below from penetrating water.

CORE - A cylindrical sample of concrete removed from a bridge component for the purpose of destructive testing.

Removing a Core from 252nd Street Bridge over Henry Hudson Parkway in January 2009. (Credit: Masroor Mahmood) Core Sampling on the Bay Ridge Avenue Bridge in 2014. Utilizing a Coring Machine to Obtain a Concrete Core for Testing in June 2016 from the Westbound BQE over Adams Street.

CORROSION - The general disintegration of surface metal through oxidation.

COUPON - A sample of steel taken from an element in order to test material properties.

COUNTERWEIGHT - A weight which is used to balance the weight of a movable member; in bridge applications counterweights are used to balance a movable span so that it rotates or lifts with minimum resistance.

CRITICAL PATH - The set of activities that must be completed on time for the contract completion date to be met. Activities on the critical path have no slack time.

CULVERT - Any structure under the roadway with a clear opening of twenty feet or less, measured along the center of the roadway. A culvert is primarily a hydraulic structure, and its main purpose is to allow free flow of water under roadways.

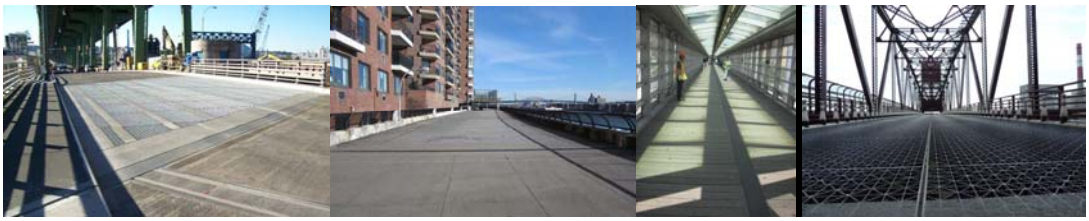
Sweet Brook Road Culvert. Richmond Terrace over Snug Harbor Culvert. Victory Boulevard Culvert. Arthur Kill Road over Clarke Avenue Culvert.

CURING - Process of maintaining freshly placed concrete mortar, grout, or plaster moist and at a favorable temperature for a suitable period of time during its early stages so that the desired properties of the material can develop. Curing assures satisfactory hydration and hardening of the cementitious materials.

DAMAGE INSPECTION - An unscheduled inspection to assess structural damage resulting from environmental factors or human actions.

DEAD LOAD - The weight of the bridge itself without any traffic or external loads.

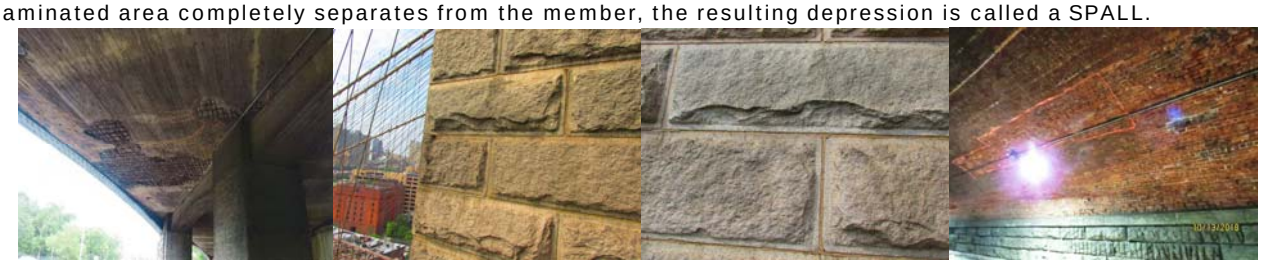
DECK - The supporting slab and wearing surface of a bridge. Since the deck is directly affected by traffic loads, it's most susceptible to traffic-related problems such as: traffic abrasion, corrosion effects of deicing chemicals, live load deflections and cracking, and impact loads that materially increase as the deck surface deteriorates.



Hamilton Avenue Bridge, East 81st to East 90th Street Promenade over FDR Drive, Chambers Street Pedestrian, and Roosevelt Island Bridge Decks. (Hamilton and FDR Drive Credit: NYSDOT)

DEFECT - A discontinuity or discontinuities which by nature or accumulated effect render a part or product unable to meet minimum applicable acceptance standards or specifications. This term designates rejectability.

DELAMINATION - The subsurface separation of concrete or steel into layers. Delaminated areas give off a hollow "clacking" sound when tapped with a hammer or chain drag. Hammer-sounding of large areas generally proves to be extremely time consuming. More productive sounding methods are available when working with horizontal flat surfaces. Chain dragging accomplishes the same result as hammer-sounding. As the chain is dragged across a concrete surface, a distinctly different sound is heard when it crosses over a delaminated area. When a delaminated area completely separates from the member, the resulting depression is called a SPALL.



Hollow Sounding And Delaminated Concrete Areas With Exposed Rebars on the Sunrise Highway Bridge Westbound over Laurelton Parkway in 2014. Brooklyn Bridge Tower Stone Delamination in 2016. West Drive over Transverse Road #3 in 2018: Span 1 underside of arch near beginning abutment -Large area of scaled and delaminated brick facing area near begin abutment.

DESIGN APPROVAL DOCUMENT (*DAD*) - A report documenting the condition, needs, objectives, and feasible alternatives of a proposed project. The DAD is used to obtain FHWA, NYSDOT or sponsor approval of a project, and may also be used in the solicitation of comments from other government agencies and the local community.

DESIGN DRAWINGS - The graphic and pictorial portions of the contract documents showing the design, location and dimensions of the work. These documents generally include plans, elevations, sections, details, schedules, diagrams and notes.

DESIGN-BUILD CONTRACTS - A delivery procedure where one company is retained to perform both design and construction, thus expediting the capital bridge rehabilitation program.

DIAPHRAGMS - Structural members used to tie adjoining girders together to improve the lateral stability of the girder and to distribute forces among adjacent longitudinal elements.

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 or floating debris. Smaller dolphins are comprised of a cluster of piles drawn together with wire rope while larger dolphins are typically fixed together using concrete capping or a structural steel frame.

2014: Union Street Bridge Dolphins. Greenpoint Avenue Bridge Dolphin & Fender System. (Greenpoint Credit: Peter Basich) Hunters Point Avenue Bridge Dolphins. (Credit: Michele N. Vulcan) 145th Street Bridge Dolphin. (Credit: NYSDOT)

DRAINAGE SYSTEM - A collection of surface and/or subsurface drains and pumps that are used to remove surface or ground water.

DRILLED SHAFT - A cylindrical structural column transmitting loads to soil and/or rock. The drilled shaft is constructed in a hole with a circular cross section. The hole is filled with concrete and may be reinforced with a steel REBAR CAGE.

EFFLORESCENCE - White salts that water movement brings to the surface of porous construction materials. Efflorescence may also occur because of contaminates in the ground water or de-icing salts.

Heavy Efflorescence on End Abutment Stem Wall of Bridge over Dam at Clove Lake in 2014. Efflorescent Stains on the Shielding of Span #1of the East Drive Bridge over Transverse Road #3 in 2015. Efflorescence, Stalactite Formations, and Scattered Areas of Dampness and Active Water Leakage on the Underside of the Span 3 Arch of the Mosholu Parkway Bridge over the Bronx River in 2016. (Mosholu Credit: NYSDOT) Heavy Efflorescence on Cladding Stones of Crotona Avenue Bridge over Bronx Pelham Parkway in 2016. Efflorescence and Discoloration on the Right Side Fascia of the Meadowport Arch in 2017.

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).

ELEVATION VIEW - A photograph or drawing of the side view of a structure.

Elevation View of Roosevelt Island Bridge. (Credit: NYSDOT) Right Elevation of Span 3 of the Randall's Island Connector Bridge over the Bronx Kill.

(EIS) ENVIRONMENTAL IMPACT STATEMENT - A comprehensive study of potential social, economic and environmental impacts related to a federally-assisted project. Projects for which an EIS is required are defined in the National Environmental Policy Act of 1969, as amended.

EXPANSION JOINTS - Located between bridge spans, 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.

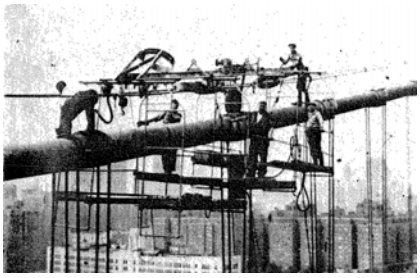
Constructing an Expansion Joint on the Riverside Drive Viaduct in 1918. Joint for Span 7 on the Chambers Street Pedestrian Bridge in 2017.

EXTREME EVENT - Large intensity events with a lower probability of occurrence that could push a structure beyond the expected response for which it was designed. These may be of geological origin (e.g., earthquakes and tsunamis), of hydro meteorological origin (e.g., hurricanes and floods), or man-made hazards with intentional sources (e.g., terrorist attacks) or accidental sources (e.g., vehicle and vessel collisions).

EYEBARS - Steel bars with each end shaped like the eyes of giant needles. They provide total anchorage of the cable and are buried deep within the ANCHORAGE structure. They also are configured with an eye on each end and are tension structural members connected by pins on truss structures.

FACE - The outer, exposed surface of a MASONRY unit.

FALSEWORK - Any temporary structure that facilitates the construction, modification, or removal of a bridge. Types of falsework include: work platforms, temporary bents, erection towers, and COFFERDAMS.



Platform for Aerial Work on the Manhattan Bridge Cables in 1957.

FATIGUE - Cause of structural deficiencies (such as metal fracture) due to repetitive (or cyclic) loading over time.

FENDER - A structure that acts as a buffer to protect the portions of a bridge exposed to floating debris and water-borne traffic from collision damage. It usually consists of timber, rubber, steel or concrete elements placed on or around a pier or abutment face. A fender may be supported by the pier it is intended to protect, or it may be independently supported.

Metropolitan Avenue Bridge Fender. Installing the Fresh Creek Bridge Fender System in 2013. Inspecting a Damaged 145th Street Bridge Fender in 1917. Madison Avenue Bridge North End Fender in 1932. North Fender Pier of 145th Street Bridge in 2015. (Credit: Litcy Barreto) Unionport Pier 8 Fender.

FINGER DAM - EXPANSION JOINT in which the opening is spanned by meshing steel fingers or teeth. Finger plate joints are made up of two loosely interlocking pieces of steel plates that cantilever out into the deck joint opening. The cantilevered portion of each plate is made up of rows of finger shaped protrusions that fit into the row of grooves in the opposing plate. The finger plates are anchored into the deck slab or directly attached to the underlying superstructure steel. Whenever the bridge spans undergo a movement, the finger plates move back and forth into the opposing grooves and accommodate this movement.

Manhattan Bridge Finger Dam. (Credit: Jagtar Khinda) Unionport Bridge Finger Dam at Span 9 in 2016. Riker's Island Finger Dam.

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.

FLAGPERSON - Controls movement of pedestrian and/or vehicular traffic through construction projects using sign, hand, and flag signals.

Flagperson at the Rockland Avenue at Manor Road Culvert, Hannah Street Over SIRT, Atlantic Avenue, and at the Queensboro Bridge Ramp to East 62nd Street From Queens.

FLOORBEAMS - Horizontal members placed crosswise to the bridge's major BEAMS, girders, or TRUSSES to support the deck.

South Transit Floorbeams, Stringers, and Bracing Members on the Manhattan Bridge. Ed Koch Queensboro Bridge North Outer Roadway Floorbeam. (Credit: NYSDOT) Eastchester Bridge Floorbeams in 1914.

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.

West 252nd Street Bridge Formwork at the Pier and West Abutment in 2007. Formwork for the Westbound Roadway of the Rockaway Parkway Bridge in 2010. (Rockaway Bridge Credit: Eric Callender) Gerritsen Inlet Bridge in March 2014: Putting up Insulated Forms in Preparation for the Placement of Concrete at the West Abutment Wingwall. The Insulation Helps Protect the Concrete From the Elements and Fluctuating Temperatures During the Curing Period.

FREEZE-THAW - Freezing of water within the capillaries and pores of cement paste and aggregate resulting in internal overstressing of the concrete, which leads to deterioration including cracking, scaling, and crumbling.

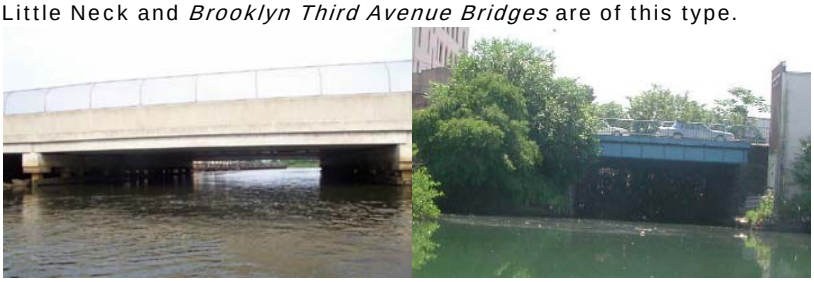
FULL STEEL PAINTING - A bridge painting technique that involves cleaning of steel surfaces using approved environmentally safe paint removal techniques (blasting, power tools, or hand tools). A full primer, intermediate and finish coat are applied using combinations of brush, roller, or (if necessary) spray painting.

FUNCTIONALLY OBSOLETE - A status used to describe a bridge that, because of its geometry, is no longer functionally adequate for its task. Reasons for this status include that the bridge doesn't have enough lanes to accommodate the traffic flow, it may be a drawbridge on a congested highway, or it may not have space for emergency shoulders. "Functionally Obsolete" does not communicate anything of a structural nature. A functionally obsolete bridge may be perfectly safe and structurally sound, but may be the source of traffic jams or may not have a high enough CLEARANCE to allow an oversized vehicle.

GENERAL CONTRACTOR - has overall responsibility for a construction project. The general contractor may break down the project into smaller pieces to be handled by subcontractors.

GEOMETRIC IMPROVEMENT - Roadway improvements other than a surface treatment, such as shoulder and lane widening, curb and gutter, or roadway alignment.

GIRDER SPAN BRIDGES - are primarily employed in bridging short distances, and may be classified as either simple or continuous. The steel girders carry the roadway and roadway load to end supports. The Midtown Highway, *Hook Creek*, Little Neck and *Brooklyn Third Avenue Bridges* are of this type.



Hook Creek Bridge and Brooklyn's Third Avenue Bridge. (Credit: NYSDOT)

GRADE - The degree of inclination of the ground surface.

GRID FLOORING - A steel floor system comprising a lattice pattern which may or may not be filled with concrete.

Installation of Full Width Grid Deck Panels on the Manhattan Bridge Lower Roadway in 2006. Pouring the Concrete. Grand Street Deck. (Grand Street Credit: NYSDOT)

GRIZZLY - A coarse screen used to remove oversize pieces from ASPHALT or earth.

New Grizzly under Fabrication for the Agency Hamilton Asphalt Plant. (Credit: Russell Holcomb)

GUSSET PLATE - A metal plate connecting truss members.

Grand Street Bridge Span 1 Truss Diagonal Member Gusset Plate.

GUTTER - A paved drain commonly constructed in conjunction with the curbs of the roadway.

HISTORIC PROPERTIES - Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.

(I/D) INCENTIVE/DISINCENTIVE - Predetermined adjustment to the total contract amount for each day or portion thereof that the work is completed ahead of or behind a specific milestone, phase or contract completion date.

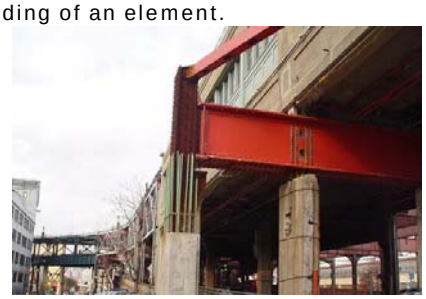
*IMPACT ATTENUATOR*s also known as crash cushions, crash attenuators, or cowboy cushions are systems that mitigate the effects of errant vehicles that strike hazards, either by smoothly decelerating the vehicle to a stop when hit head-on, or by redirecting the errant vehicle. Periodic inspection of these devices is necessary to assure that attenuators function as intended throughout their useful life or that they undergo prompt repair/replacement if hit or damaged.

Williamsburg Bridge Impact Attenuators in 2014 and 2018.

INDEPENDENT ASSURANCE SAMPLING AND TESTING (IAST) - Periodic testing by a specially trained tester to verify that materials testing is being performed correctly with accurate test equipment.

INLET – A short, narrow waterway connecting a bay, lagoon, or similar body of water with a large parent body of water.

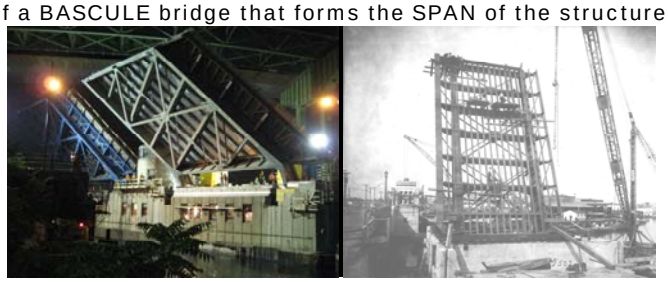
JACKING - The mechanical lifting or sliding of an element.



Ed Koch Queensboro Bridge Bent Column Ready for Jacking in 2005.

JERSEY BARRIER - A low, gradually narrowing, reinforced concrete wall used as a highway divider and as a means of preventing a vehicle from crossing a median or leaving the roadway. These barriers were first used on the New Jersey Turnpike.

LEAF - The movable portion of a BASCULE bridge that forms the SPAN of the structure.



Leaves of the Hamilton Avenue Bridge. Cropsey Avenue Bridge Leaf under Construction in 1932.

LEVEL - An instrument mostly made of a parallelepiped block, of variable length, having a perfectly levelled surface. This instrument is equipped, in the longitudinal axis, of a restrained horizontal vial containing an air bubble on its top. Reference marks allow the verification of the horizontality. Also known as a SPIRIT LEVEL.

Engineer Using a Level on the Ed Koch – Queensboro Bridge in 1955.

LIVE LOAD - The weight of the traffic crossing a bridge and of other external loads applied to the structure (excluding the weight of the bridge itself.)

LOAD RATING - A value that indicates the LIVE LOAD capacity of a bridge. This is determined by analytic and experimental procedures specified by ASSHTO, using design documents and information gathered from field inspection and testing.

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.

MANUAL FOR UNIFORM RECORD KEEPING ON CONSTRUCTION CONTRACTS (MURK - Manual(s) containing uniform contract record keeping forms and procedures to be followed by the engineer, current on the date of contract award. MURK Part 1A is the Contract Administration Manual (CAM), Part 1B is the Construction Inspection Manual (CIM), Part 1C is the Safety and Health Program Manual, and Part 2A is the Materials Inspection Manual (MIM). The MURK manuals are guidance documents, and are not a part of the contract documents.

MAP CRACKING (CRAZE CRACKING) - Large pattern cracking can be caused by alkali-silica reaction within the concrete. Environmental conditions such as low humidity, high outside temperatures, direct sunlight, and wind can create high rates of evaporation from the surface layer of concrete. Resistance to shrinkage from the underlying concrete causes stress that is relieved by map cracking.

Union Street Bridge over Brooklyn-Queens Expressway in 2012 – Extensive Map Cracking With Efflorescence on the Underside of the Deck. (Credit: NYSDOT) Tompkins Avenue Bridge over B&O Railroad (Abandoned) in 2016 - Map Cracks With Efflorescence Near the End of the Wing Wall.

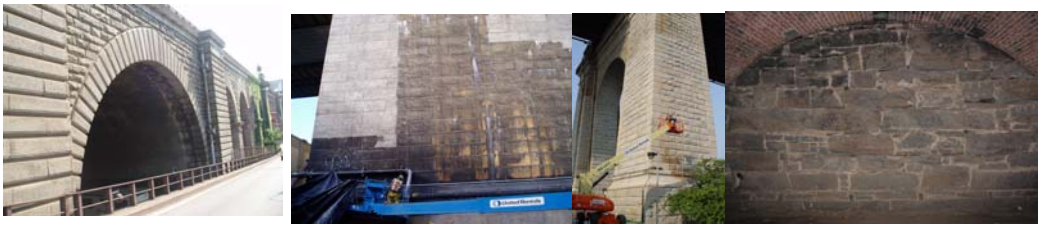
MARINE BORERS - Mollusks and crustaceans which live in water and destroy wood by digesting it. Marine borers pose an immediate and serious danger to the thousands of piles and other structures of timber built in the marine environment. In New York Harbor, as the water quality improved due to many years of clean-up efforts, marine borer (limnoria, teredo, etc.) activity has increased significantly in recent years.

Marine Borer – Limnoria Species (the Common "Gribble," a Genus of Crustacea Borers). Marine Borer – Teredo Species (a Genus of Molluscan Borers, Commonly Called the "Shipworm"). Teredo Damage (Holes up to ¼" Diameter). During the Demolition of the North End of the Existing University Heights Bridge Fender in 2016, Marine Borers were Discovered in the Southern Yellow Pine Piles. The End of a Pile Segment Removed From the Fender - Based on the Size of the Holes, *Teredo Navalis* is the Likely Species.

MARINE NAVIGATIONAL LIGHTING - The lights maintained on a bridge for the protection of marine navigation.

Northern Boulevard Bridge - Bridge and Pier Marine Navigational Lighting. Grand Street Bridge– Left Side Channel Light. Pulaski Bridge - Center Lights at Span #26. Third Street Bridge – Span #3. Ninth Street Span 2 Right Fascia and End Left Channel Embankment. (Credit Grand, Third, and Ninth Street: NYSDOT)

MASONRY - Construction materials made of concrete, brick, tile, or stone.



Brooklyn Bridge Cliff Street Arch Masonry. Cleaning the Masonry of the North Face of the Manhattan Bridge's Brooklyn Anchorage and of the North and East Faces of the Roosevelt Island Pier of the Ed Koch Queensboro Bridge. Masonry of the East Drive Bridge over Eastwood Arch.

MITIGATION WETLAND – A WETLAND constructed to replace the functions lost by human development, usually in the same or adjacent watershed.

MORTAR - Mixture of cementitious materials, fine AGGREGATE, and water, which may contain ADMIXTURES, and is usually used to bond MASONRY units.

MOVABLE BRIDGE - A type of bridge which carries vehicular or pedestrian traffic over a navigable waterway, and which opens to permit the passage of a ship, barge or boat. The 24 movable bridges currently under the jurisdiction of the New York City Department of Transportation include the Harlem River group (Broadway, West 207th/West Fordham Road, Macombs Dam, 145th Street, Madison Avenue, Third Avenue, *Willis Avenue*, and *Wards Island*); the Bronx group (Hutchinson River Parkway, *Shore Road*, and Bruckner Expressway/Westchester Creek); the Queens group (Borden Avenue, Grand Street, Greenpoint Avenue, Hunterspoint Avenue, *Pulaski Avenue*, and

Roosevelt Island); and the Brooklyn group (Hamilton Avenue, Ninth Street, *Third Street*, *Carroll Street*, Union Street, and Metropolitan Avenue.)

Roosevelt Island Bridge in 2013. (Credit: Stephen Mallon). Shore Road Bridge in 2009. (Credit: George Kern) Wards Island Pedestrian Bridge in 2009. (Credit: Duane Bailey-Castro) Carroll Street Bridge in 2012 and Third Street Bridge in 2015. (Credit: NYSDOT) Pulaski Bridge.

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 bridges which, when illuminated at night, resemble a necklace.

Repairing a Manhattan Bridge Necklace Light. Bridge Repairer and Riveter Neil Dalton Installing a New Light on the Williamsburg Bridge in 2012. (Credit: Hany Soliman) Manhattan Bridge Side Necklace Light. (Credit: NYSDOT)

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.

Ninth Street Bridge over Gowanus Canal, Metropolitan Avenue Bridge over English Kills and Grand Street Bridge Operator Houses. (Metropolitan Avenue Credit: Sunil Desai)

ORTHOTROPIC DECK - A lightweight decking system that uses closely spaced open or closed steel ribs and a horizontal steel deck plate.

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.

East 81st to East 90th Street Promenade over FDR Drive – Right Parapet at Span 45. West 65th Street Entrance Eastbound over Bridle Path West End – Right Parapet, Looking Southeast. Belt Parkway Bridge over Rockaway Parkway – Right Side Parapet. Congress Street Bridge over Brooklyn-Queens Expressway - Span 1 & 2 Parapet Right side, Looking Northwest. Woodside Avenue Bridge over Brooklyn-Queens Expressway – Left Parapet above Beginning Abutment. (Promenade and Rockaway Parkway Credit: NYSDOT)

PEDESTRIAN BRIDGES - Bridges designed and constructed to provide means of crossing for pedestrian traffic only.

West 181st Street, PS-5, Carroll Street over Franklin Shuttle, and Staten Island Ferry (Over Parking Lot Exit Roadway) Pedestrian Bridges.

East 78th Street over FDR Drive, Bridge Opposite 65th Street over Transverse Road #1, Springville Greenway over Freshwater Wetlands, and 94th Street over LIRR 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.

Madison Avenue Bridge Center Pier under Construction in September 1909, Pier 2 of Broadway Bridge. Piers 12, 33, 37, and 42 of Macombs Dam Bridge. (Credit: NYSDOT) Pier 1 (Looking East) of Hutchinson River Parkway Bridge over Hutchinson River. Pier 6 of Manhattan Bridge. Pier 39 of Brooklyn Bridge. (Manhattan and Brooklyn 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. Piles are also used to found a structure below the depth of potential scour, and for fender systems.

PLAZA - An area designated for use by pedestrians, which may vary in size and shape; which may abut a sidewalk and is located fully within the bed of a roadway; may be at the same level as the roadway or raised above the level of the roadway; may be physically separated from the roadway by curbing, bollards, or other separators; may be treated with special markings and materials; and may contain benches, tables, or other facilities for pedestrian use.

Manhattan Bridge Brooklyn Plaza. Evening View of the Plaza Looking Southeast With Benches, Lights, and Granite Pavers in Foreground. Aerial View of the Plaza. Looking South from the Pedestrian Entrance. Delancey Street Plaza near the Williamsburg Bridge.

PLUMB BOB - A weight hanging on a string (plumb line), used by bridge inspectors to show the direction of the vertical distance.

Plumb Bob Demonstrated by Department Engineer in 1951. In Use at Eliot Avenue Bridge over Queens Boulevard in 2016, and the Lower Level of the Ed Koch – Queensboro Bridge in 2018.

POINTING - The compacting of the mortar in the outermost portion of a joint and the troweling of its exposed surface to secure water tightness or desired architectural effect.

Pointing Joints on the East Face of the Brooklyn Anchorage of the Manhattan Bridge. Pointing the Masonry on the East Drive Bridge (East Wood Arch).

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. Portland cement is made with the following raw materials: limestone - provides lime, quartz or cement rock - provides silica, claystone - provides aluminum oxide, and iron ore - provides iron oxide.

POSTED - An announcement or sign limiting dimension, speed, or loading, indicating that larger dimensions and higher speeds and loads cannot be safely taken by the bridge.

Roosevelt Island Bridge Vertical Clearance Restriction and Posted Weight Signs. Ed Koch – Queensboro Vertical Clearance Signs. (Credit: NYSDOT)

POTHOLE - A hole in a roadway or pavement, usually caused by heavy vehicular traffic or weathering.

Repairing Potholes on the Roosevelt Avenue Bridge Deck Between Janet Place and 126th Street in January 2016. Each Perimeter is Sawcut. Filling in the Pothole With Asphalt. Paver Rolls Over the Pothole to Compact the Fill Material and Level the Surface. Finished Repair.

PRECAST CONCRETE - Concrete members that are cast and cured before being placed into their final positions on the construction site.

PRESTRESSED CONCRETE ELEMENTS - Concrete elements that are pre-compressed with high-strength steel tendons under tension. The tendons can be pre - or post – tensioned, relative to the setting of the concrete.

PREVENTIVE MAINTENANCE - Preventive maintenance involves cleaning, protecting, and performing minor repairs of bridge components to prevent deterioration from becoming so extensive that major REHABILITATION or RECONSTRUCTION is needed. Specified interval maintenance, such as cleaning DRAINAGE SYSTEMS and lubrication, are done on a scheduled basis. Other maintenance is carried out when inspectors point out the need for it, such as resealing an EXPANSION JOINT or replacing the wearing surface. Preventive maintenance tasks on the bridges include: the cleaning of drainage systems, gratings, and expansion joints; the washing of the deck area and salt splash zones; full-steel, salt splash, and spot painting; the patching of sidewalks; the maintenance of electrical devices; and the oiling of mechanical components.

Power Washing the Corrosive Deicing Solvents Within the Range of the Roadway Splash Zone on The Manhattan Bridge in October 2007. Particular Attention is Directed to Cleaning the Gusset Plate. (Credit: Albert Hong) Performing Wear and Tear Resurfacing Work on the Roosevelt Avenue Bridges in April 2010: Assistant City Highway Repairer Victor Magagna, Supervisor Highway Repairer Joseph Palemine, Assistant City Highway Repairer Jonathan Adorno (Obscured), Assistant City Highway Repairer Anthony Montalbano, and Area Supervisor Highway Maintenance Edward Pedersen. Assistant City Highway Repairers Jonathan Adorno and Victor Magagna. (Credit: Joseph Flood)

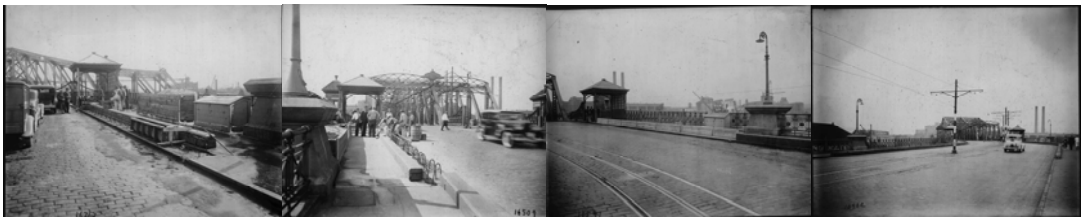
PRIMER - The first layer of paint used to cover the unsealed surface. This is followed by at least one more coat of paint.

PROTECTION SYSTEM - Methods used to prevent CABLE corrosion, including wire coating, impregnation with oil, wire wrapping, painting, neoprene or plastic sheathing, and injection of dried air.

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.



Constructing Guide Railing on the Madison Avenue Bridge in 1935.

University Heights Bridge Railing. (Credit: NYSDOT) Manhattan Bridge Railing. (Credit: Russell Holcomb) Greywacke Arch Guide Railing in 2017. Northern Boulevard over Cross Island Parkway – Left Sidewalk Railing in 2016. Staten Island Pedestrian Bridge over Parking Lot Exit Roadway – Right Side Railing of Span #2. 14th Avenue Bridge over Cross Island Parkway -End Approach Guide Railing in 2017. New Belt Parkway Bridge over Mill Basin Guide Railing. Center Drive Bridge (Playmates Arch) - Timber Guide Railing Near the Beginning Abutment.

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 CAGES - Rebar cages are placed in large cast-in-place concrete columns (DRILLED SHAFTS), and are fabricated from steel reinforcing bars. The reinforcement will typically include concentric hoops (or spirals) along the length of the cage, which are tied to longitudinal bars perpendicular to the hoops.

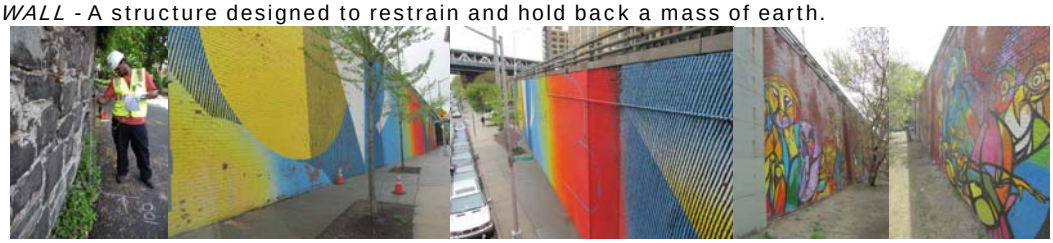
City Island, Gerritsen Inlet, and Bay Ridge Avenue Bridge Rebar Cages. 2016: Rebar Cage Assembly for the City Island Bridge. May 2016: Each Drilled Shaft Requires a Custom-Built Rebar Cage. These Steel Structures Strengthen the Concrete That is Placed Within Each Shaft Casing. Steel Bars are Laid Out on a Template to Form the Shape of the Cage, and are Then Tied Together. Once completed, the Cage is Lifted by Crane and Placed Within a Corresponding Drilled Shaft.

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.

RELIEVING PLATFORM – A platform supported on piles or fill, adjacent to and capable to carry live loads diverted from a roadway.

REPLACEMENT - That type of work where an existing bridge is removed and is fully replaced at the same site, or at an adjacent location, by a substitute bridge, as part of the same project.

RETAINING WALL - A structure designed to restrain and hold back a mass of earth.



Inspecting a Bulge in a Retaining Wall Along Douglas Road in Staten Island in 2014. Brooklyn-Queens Expressway (BQE) Retaining Wall Between Washington and Adams Streets – Looking Northeast and Southwest. BQE Retaining Wall Between Adams and Pearl Streets – Looking Northeast and Southwest.

RETARDING AGENT - A chemical added to mortar to slow down the set.

RETRACTILE BRIDGES - Retractile 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. (1st and 2nd Credit: Peter Basich, 3rd: Vadim Sokolovsky) Carroll Street Bridge. (1st Credit: NYSDOT, 2nd: Russell Holcomb)

RETROFIT - Upgrading parts of an existing structure to meet current standards.

(RFI) REQUEST FOR INFORMATION - A written inquiry for information or clarification generated during the construction phase of the project.

RIGHT-OF-WAY - A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

RIPRAP - Irregularly broken, random-sized pieces of rock used for a foundation or to prevent soil erosion.

Riprap Installed in 2013 on South Side of Belt Parkway Bridge over Fresh Creek, Facing East. Riprap at the Southwest Side of the South Approach of the Shore Road Bridge over Hutchinson River in 1908. Barge-Mounted Crane Placing Riprap Stones on the South Slope of Gerritsen Inlet at the West Abutment in 2017.

ROADWAY - The portion of the road intended for the use of vehicular traffic.

University Heights Roadway and Sidewalk in 1922.

ROCKER BEARING - A bridge support that accommodates expansion and contraction of the superstructure through a rocking action.

ROUTINE INSPECTION - Regularly scheduled inspection or condition assessment that consists of observations and/or measurements needed to determine the physical and functional condition of the bridge, to identify any changes from initial or previously recorded conditions, and to ensure that the structure continues to satisfy present service requirements.

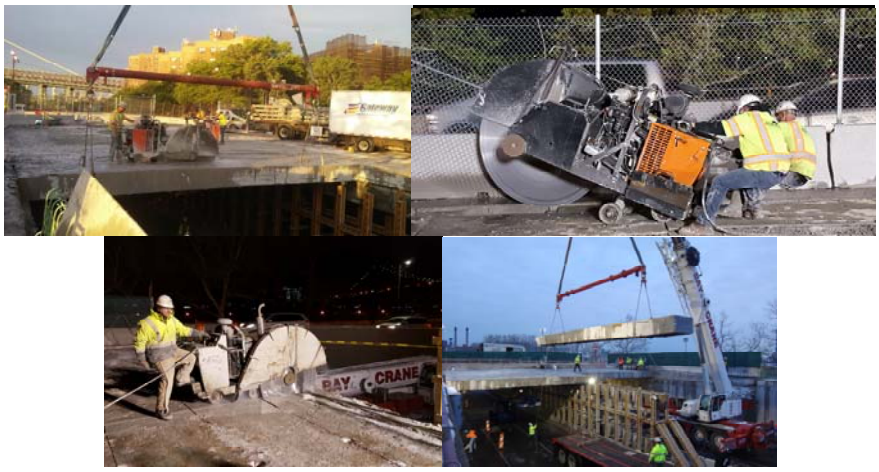
SADDLE - A special curved casting atop a SUSPENSION BRIDGE tower into which the cables are placed to avoid sharp bends in directional changes of the cable.

Manhattan Bridge Saddle. (Credit: Jagtar Khinda)

SAFETY HARNESS - Harness with shoulder, leg, and waist straps of approved OSHA design used as personal fall protection in conjunction with appropriate lanyards and tie off devices.

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.

SAW CUT Saws are commonly used in bridge deck removal. Bridge decks are typically saw cut into manageable sections and then removed by an overhead crane or other vertical lift equipment.



Saw Cutting the Old Deck at the FDR Drive at the Houston Street Overpass in 2016 and 2017. Full Depth Saw Cutting of Deck Panels. Loading of Deck Slab Panels for Disposal Off-Site.

SCAFFOLD - Any temporary elevated platform (supported or suspended) and its supporting structure (including points of anchorage), used for supporting employees or materials or both.

Old Mill Basin Bridge Scaffold Used During Pier Cap and Pier Column Repairs.

SCALING - Also known as surface breakdown, scaling is the gradual and continuing loss of concrete's surface mortar and aggregate over an area due to the chemical breakdown of the cement bond. Scaling is accelerated when the member is exposed to a harsh environment.

Brooklyn Bridge Tower Stone Scaling in 2016.

SCOUR - The washing away of stream bed material around or underneath the bridge abutments or piers that is caused by water channel flow.

Scour on Pier 2 End Face of Mosholu Parkway Bridge Over Bronx River in 2008. (Credit: NYSDOT)

SCREED - A long section of metal or wood which is dragged across freshly placed concrete to both smooth the surface and consolidate the concrete.

Screed at East 8th Street Ramp in 2011, and at West Approach of Gerritsen Inlet Bridge in 2014.

SCUPPER - An opening in the deck portion of a bridge to provide means for rain or other water accumulated upon the roadway surface to drain through it into the space beneath the structure.

Scuppers on the Pulaski, Madison Avenue, and Brooklyn Bridges. (Credit: NYSDOT) Delancey Street Pedestrian Bridge – Span 8.

SERVICE LIFE - The expected duration of satisfactory operation of a structure, component, or system under routine operating and maintenance conditions.

SET - When the consistency of mortar changes from plastic to hard.

SHOP DRAWINGS - detailed drawings developed from the more general design drawings used in the manufacture or fabrication of bridge components.

SHORING - Temporary bracing to support a structure.

2014: Timber Shoring at Spans 7 and 8 of the Harlem River Drive over Ramp to and From Northbound Harlem River Drive. Steel Shoring of the Damaged Column at Pier 4 of the Crocheron Park Pedestrian Bridge. Timber Shoring at Piers 5 and 6. 2016: Steel Shoring at Span 5 of the East 174th Street Bridge over the Sheridan Expressway. Eastbound Brooklyn-Queens Expressway over Washington Street – Shoring on the Right Side of the End Abutment.

SHOTCRETE - MORTAR or small-AGGREGATE concrete that is conveyed by compressed air through a hose and applied at high velocity to a surface. Also known as gunite and sprayed concrete.

(SHPO) State Historic Preservation Office A subdivision of the NYS Office of Parks, Recreation, and Historic Preservation (OPRHP). Coordination with SHPO is required on projects involving historic properties.

SOFFIT - The underside of a structural component, such as a beam or arch.

SOUNDING - A method of checking for voids or DELAMINATIONS in concrete by striking a hammer against the structure and listening for a hollow sound.

SPALLING - The flaking or breaking out of concrete parallel to the main surface, caused by a blow, or by the action of weather or pressure.

Spalled Section of Curb on the East 8th Street Bridge in 2006. (Credit: NYSDOT) Spalling With Exposed Rebar on the Beginning Abutment Joint Header of the Westchester Avenue Bridge over the Bronx River in 2011. Underdeck Spalling With Exposed Rebar on the Concourse Village Avenue Bridge over Metro North in 2012.

SPAN – Portions of the bridge SUPERSTRUCTURE between consecutive supports or joints.

(SPDES) State Pollution Discharge Elimination System A State program, approved by the United States Environmental Protection Agency (USEPA), for the control of wastewater and stormwater discharges in accordance with the Clean Water Act. SPDES is broader in scope than what is required by the Clean Water Act in that it controls point source discharges to groundwater, as well as to surface waters. SPDES operates through the USEPA's National Pollutant Discharge Elimination System (NPDES) program. Permits are issued in accordance with the requirements of the New York State Environmental Conservation Law ("ECL"). Discharges of pollutants to all "Waters of New York State," including groundwater, are unlawful unless they are authorized by a SPDES permit.

SPECIFICATIONS OR SPECS - A detailed listing of required construction materials and methods to be used in the project. This information is a supplement to the blue prints and working drawings.

SPLAY CASTING - A steel or cast-iron collar fitted around a bridge suspension CABLE at the location where it spreads out (splays) into separate bundles of wires which are then attached to the ANCHORAGE EYEBARS. It is used to control the degree and location of the splay. These castings are usually located at the entry point of the cable into the anchorage chamber.

SPOT PAINTING - When the surface to be painted is contaminated with de-icing salts, sea salt, bird excrement, or other corrosive agents, the area is prepared by power washing, using clean water or steam. When grease or oil is present, it is removed by solvents. Mechanical cleaning with hand and/or power tools is performed in the areas containing deteriorated paint. A spot PRIMER coat and a single finish coat are applied by brush or roller. Occasionally, when there is no danger of overspray, spray painting may be performed.

STAGED CONSTRUCTION - Construction done so that traffic may be maintained on a portion of an existing bridge structure while a longitudinal section of a new structure is constructed. Traffic is then shifted over to that portion of the new structure while the existing structure is removed and the new structure is completed.

STAINING - a discoloration of the concrete surface caused by the passing of dissolved materials through cracks and the re-depositing of the materials on the surface as water emerges and then evaporates. Although staining can be of any color, brown staining usually signifies that corrosion is occurring in the underlying steel reinforcing.

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: NYSDOT) Washington Bridge in 2008. (Credit: Duane Bailey-Castro) 2010.

STEEL ERECTION - the process of lifting, placing, and connecting structural steel elements in their intended final position in a bridge.

STEM - The vertical part of a retaining wall, usually made of concrete or masonry.

East Face of Brooklyn Bridge North Stem Wall. (Credit: NYSDOT) West 176th Street Pedestrian Bridge Beginning Abutment Stem Wall.

STOPPING SIGHT DISTANCE - The distance required for a vehicle to stop before hitting a stationary object in its path. It is equal to the distance required for the driver to react and apply the brakes plus the distance required for the vehicle to stop once the brakes are applied.

STORM SURGE - The water, combined with normal tides, that is pushed toward the shore by strong winds during a storm. This rise in water level can cause severe flooding in coastal areas, particularly when the storm coincides with the normal high tides. The height of the storm surge is affected by many variables, including storm intensity, storm track and speed, the presence of waves, offshore depths, and shoreline configuration.

STRAIN GAUGE TESTING - Small strips of material (imagine a small band-aid) are glued onto part of a structure to measure the stress in the material under load. Inside the small "band-aid" are tiny electrical wires. When a structure is under load it stretches (tension) or contracts (compression). When this happens, the resistance in the tiny wires in the strain gauge changes, resulting in a change in the wire's current. What is actually being measured are changes in the electrical current in the tiny wires. Knowing the physical properties of the structural member that the gauge is attached to, (such as steel), a calculation is can then be made to convert these changes in current to changes in stress. The readings are taken with special instruments that record the information over the desired period of time or loading sequences.

June 2012 - Metropolitan Avenue Bridge. Summer College Intern Nikita Gupta Unsealing the Wire for Strain Gauge Testing. July 2012 – Unionport Bridge. Summer College Intern Kevin Hillery Setting up Inclinometer Calibration. August 2012 – Hunters Point Avenue Bridge. Kevin Hillery Checking Strain Gauge Connections With a Millimeter. (Credit: Vera Ovetskaya)

STRAND - Comprised of hundreds of thin wires laid parallel to form a bundle, strands comprise the base element in the CABLES, or main cables, on a SUSPENSION BRIDGE or cable stayed bridge.

STRINGER - A part of a bridge's SUPERSTRUCTURE, a stringer is essentially a BEAM parallel to the span used to support the road DECK.

Stringers on the Manhattan Bridge. (Credit: NYSDOT) Bridge Repairer and Riveter Joseph Antony Repairing a Red-Flagged Stringer on the Bridge. (Credit: Hany Soliman)

STRUCTURAL DEFICIENCY - An engineering term-of-art used by the Federal government to indicate that there are elements of the bridge that need to be monitored and/or repaired. It covers a wide range of conditions and does not reflect the fundamental integrity of a structure. Any city bridge deemed unsafe would be shut to the public.

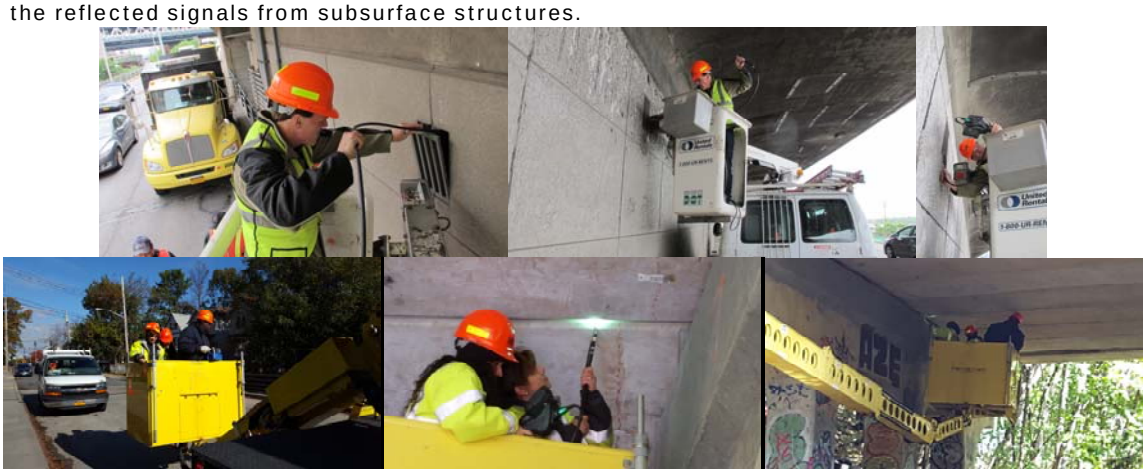
STRUCTURAL HEALTH MONITORING - The continuous or regular monitoring of the condition of a structure or system using built-in or autonomous sensory systems, and any resultant intervention to preserve structural integrity.

Borescope Investigations: The borescope is a high-tech device combining fiber-optic technology with digitized computer memory. It allows scanning and photographing of otherwise inaccessible locations.

Corrosion Sensors: Corrosion sensors were developed for the first time under a FHWA contract specifically for New York City's suspension bridges.

Fiber Optic Sensors: Fiber optic sensors can measure very small displacements as well as strain gauges, but are more resilient and insensitive to temperature changes. The information is readily transmitted online and lends itself to real-time monitoring.

Ground Penetrating Radar: Ground penetrating radar uses the propagation and retraction of high frequency waves through materials such as concrete to detect the presence of voids. This nondestructive method uses electromagnetic radiation in the microwave band (UHF/VHF frequencies) of the radio spectrum and detects the reflected signals from subsurface structures.



2015: Director of Bridge Management Kevin McAnulty Inspecting the Brooklyn-Queens Expressway Between Cadman Plaza and Atlantic Avenue, Utilizing the Unit's Borescope. 2017: Assistant Civil Engineers Sarah Jurado and Nahed Yaaqoub Utilizing a Borescope at the Van Name Avenue Bridge Over B&O Railroad (Abandoned) in Staten Island. The Snooper was Operated by Assistant City Highway Repairer Derrick Butler.

Experimental Corrosion Sensors Installed for a Test on Cable D of the Manhattan Bridge in 2011 (Left Corner). A Fiber Optic Sensor Monitoring a Crack in the Masonry of the Brooklyn Bridge's Manhattan Approach. A Ground Penetrating Radar Inspection of the Belt Parkway Bridge over Ocean Parkway. (Credit: Bojidar Yanev) 2016: Ground Penetrating Radar Utilized to Locate Rebars in the Brooklyn Heights Promenade Pavement. 2017: Ground Penetrating Radar Utilized to Detect Possible Subsurface Voids and Areas of Disturbed Soils That Could Cause Settlement in a Fenced, Paved Maintenance Storage Yard Located Under an Elevated Section of the FDR Drive Near its Intersection With the Avenue C Loop.

SUBSTRUCTURE - The name given to those elements below a bridge's road deck system, namely the ABUTMENTS, ANCHORAGES, BEARINGS, and PIERS.

SUICIDE BARRIER - A barrier on a bridge, observation deck or other structure designed to prevent people from attempting suicide by deliberately jumping.

Suicide Gates on the Cables of the Manhattan (Credit: NYSDOT) and Brooklyn Bridges.

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.

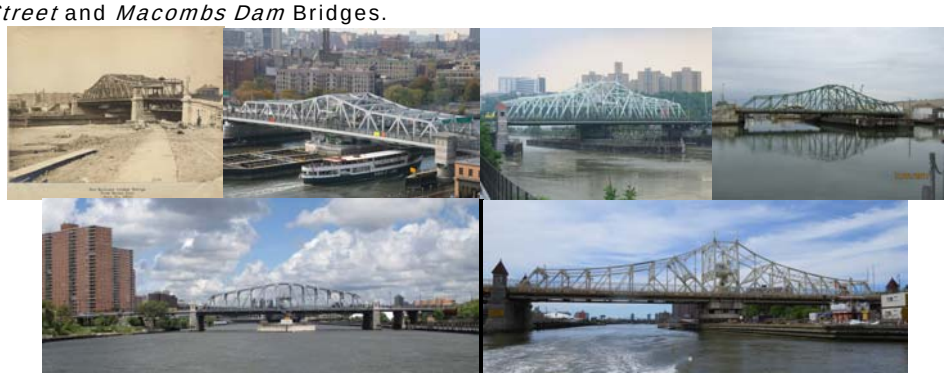
SUSPENDER - A wire rope or a short vertical rod that transmits forces from the roadway of a SUSPENSION BRIDGE to the supporting CABLES. The suspenders assist in supporting the bridge floor system and its superimposed loads by transferring loads to the main suspension members of the structure. They support other members against sagging, twisting, or other deformation due to its own weight.

Manhattan Bridge Suspenders. (Credit: NYSDOT and Jagtar Khinda)

SUSPENSION BRIDGES - Suspension bridges are high level bridges with spans that usually exceed 1,500 feet in length. Supported by large wire CABLES that are anchored to masses of concrete and which pass over the tops of towers, the road DECK is suspended at regular intervals by smaller cables called suspenders. While the main cables carry the entire live and dead load, stiffening TRUSSES are required to distribute the LIVE LOAD and prevent excessive deflection at any point. The Brooklyn, *Manhattan* and *Williamsburg* Bridges are noted New York City examples of this type.

Manhattan Bridge. (Credit: Bernard Ente) Williamsburg Bridge in October 2016: Left Elevation Spans 24 – 28. (Credit: NYSDOT)

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 (from the Bronx Side) in 1910. (Credit: NYC Records) Third Avenue and University Heights Bridges. (Credit: Michele N. Vulcan) Grand Street and 145th Street Bridges. (Credit: NYSDOT) Macombs Dam Bridge.

TEMPORARY BRIDGE - A pedestrian and/or vehicular bridge built to carry traffic around an active construction site in lieu of STAGE CONSTRUCTION. The structure is removed after the new bridge is open to traffic.

1911 Boston Road Bridge over Hutchinson River Temporary Bridge. Temporary 174th Street Bridge over the Bronx River in 1927. 2011: Fresh Creek Temporary Bridge.

2004: Almost Completed New Third Avenue Span and Temporary Bridge. (Credit: Daniel Hom) 2005: Pontoon Bridge Used During the Emergency Reconstruction of the Ocean Avenue Pedestrian Bridge over Sheepshead Bay. (Credit: Russell Holcomb) 2015: City Island Temporary Bridge.

THERMAL EXPANSION - Temperature-induced changes in the lengths of steel and other materials used to construct bridges. Thermal expansion governs the design of joints and can, in extreme cases, impact the operation of movable bridges.

TORSION - Twisting force usually caused by unbalanced or asymmetrical loading.

TOWER - Often the most majestic element in a SUSPENSION or cable stayed bridge, the *tower* serves as a support for the structure's main CABLES.

Inspectors on Manhattan Bridge Tower. (Inspector Credit: NYSDOT) Manhattan Bridge Tower. (Credit: Michele N. Vulcan) Manhattan Bridge Tower Detail. (Credit: Russell Holcomb) Williamsburg Tower Detail. (Credit: Bojidar Yanev) Brooklyn Bridge Tower. (Credit: Earlene Powell) Ed Koch – Queensboro Bridge Tower Top. Broadway Bridge Begin and End South Tower Face. (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. A traveler platform is typically perpendicular to the girders and the platform runs on a rail system between substructure elements.

Manhattan Bridge and Ed Koch – Queensboro Bridge Travelers. (Credit: NYSDOT) Williamsburg Bridge in 1942: First Traveler in Place at the Brooklyn Tower. Second Traveler Shown on Scow Prior to Lifting.

TREMIE SEAL - concrete placed under water through the use of a tremie placement tube. As the concrete is placed, water is displaced and the tube is gradually raised keeping the outlet below the level of the placed concrete. Tremie seals are usually used where piers need to be constructed in fairly deep water and it is difficult to dewater the excavation.

TRENCH DRAIN - These drainage structures consist of a slotted opening with bars perpendicular to the opening. Trench drains (also known as slotted drains) function as weirs with flow entering from the side. They can be used to intercept sheet flow, collect gutter flow with or without curbs, modify existing systems to accommodate roadway widening or increased runoff, and reduce ponding depth and spread at grate inlets. The two types of trench drains in general use are the vertical riser type and the vane type.

Manhattan Bridge Trench Drain.

TRUSS - A rigid framework built of interconnecting steel beams, creating a large "girder" to support the floor system and transfer loads to the substructure over a longer span.

Brooklyn Bridge Franklin Square Truss. General View of Manhattan Bridge Trusses B and C from the Lower Roadway on the Main Span. (Credit: NYSDOT) Chambers Street Pedestrian Bridge Truss. Madison Avenue Bridge Truss Swinging. (Credit: NYSDOT)

TRUSS BRIDGES - Truss bridges possess road decks that are supported by Steel TRUSSES that rest on PIERS and ABUTMENTS, and which span short distances. The 174th Street Bridge in the Bronx is an example of a truss bridge.

East 174th Street Truss Bridge over Sheridan Expressway and 204th Street Pedestrian Bridge over Metro North in 2017.

TUNNEL - An enclosed roadway for motor vehicle traffic with vehicle access limited to portals, regardless of type of structure or method of construction, that requires, based on the owner's determination, special design considerations to include lighting, ventilation, fire protection systems, and emergency egress capacity.

First Avenue Tunnel.

TURBIDITY CURTAIN - A flexible, impermeable barrier used to trap sediment in water bodies. This curtain is generally weighted at the bottom to ensure that sediment does not travel under the curtain, which is supported at the top through a flotation system. Turbidity curtains prevent the migration of sediment from a work site in a water environment into the larger body of water. Also known as a turbidity barrier or silt curtain.

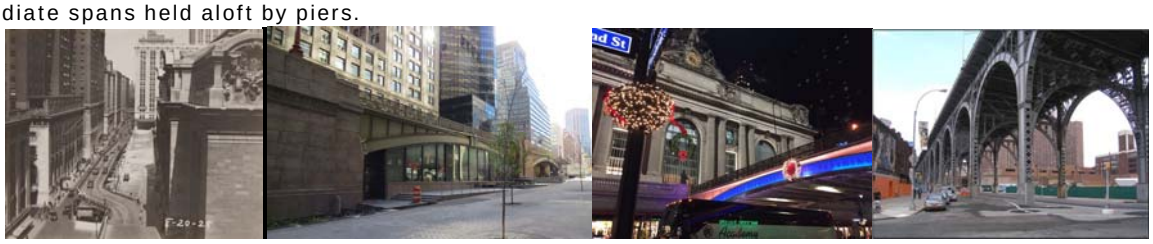
Installation of a Turbidity Curtain to Protect the Shore During Construction of the Temporary City Island Bridge in 2014.

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 *Roosevelt Island Bridge*, *103rd Street - Wards Island Pedestrian Bridge*, *Ninth Street Bridge*, and *Broadway Bridge* are examples of this type of bridge.

Lifted Roosevelt Island Bridge. (Credit: NYSDOT). Wards Island Pedestrian Bridge. Ninth Street Bridge. (9th Street Credits: Bojidar Yanev and Roly Parroco) Broadway Bridge.

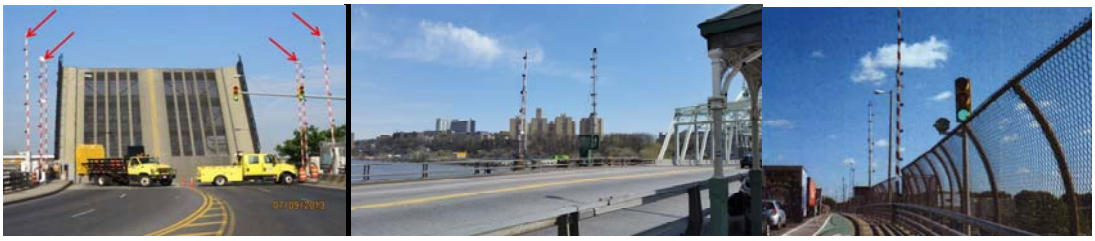
VIADUCT BRIDGES - Viaduct bridges are multi-span bridges containing two end spans and any number of intermediate SPANS. The end spans are supported by an ABUTMENT on one end and a PIER on the other. The intermediate spans held aloft by piers.



Park Avenue Viaduct Bridge – 1928 and 2018. (1928 Credit: NYC Records) Newly Installed Color-Changing LED Lighting in 2016. (LED Credit: MTA) Riverside Drive Viaduct.

VOIDS - An empty or unfilled space in concrete.

WARNING GATE - Warning gates are installed at movable bridges to decrease the likelihood of vehicles and pedestrians passing the stop line and entering an area where potential hazards exist because of bridge operations. The gates are striped with 16-inch alternate vertical, fully reflectorized red and white stripes. Flashing red lights are included on the gate arm and they are only operated if the gate is closed or in the process of being opened or closed.



Metropolitan Avenue Bridge over English Kills Warning Gates. (Credit: NYSDOT) West 207th Street//West Fordham Road Bridge Warning Gate. Greenpoint Avenue Bridge over Newtown Creek Southwest Warning Gate.

WATERPROOFING MEMBRANE - A protective sheet placed between a WEARING SURFACE and concrete DECK to shield the concrete deck from water and corrosive chemicals which could cause DELAMINATION and SPALLING.

WEARING SURFACE - The topmost layer of material applied on the DECK or roadway that receives the traffic loads; also known as wearing course. Wearing surfaces perform two functions in protecting the deck: they provide a seal and prevent water and deicing chemicals from penetrating into the deck slab, and they provide a smooth, skid-resistant surface for vehicular traffic, minimizing impact forces to the structure.

Brooklyn Bridge Wearing Surface. Manhattan Bridge Wearing Surface and Safety-Shaped Barriers. Williamsburg Bridge South Inner Roadway Wearing Surface. (Credit: NYSDOT) West 86th Street Pedestrian Bridge (Southwest Reservoir Bridge) Wooden Wearing Surface. Ocean Avenue Pedestrian Bridge over Sheepshead Bay. 60th Road Pedestrian Bridge over LIRR. Promenade over FDR Drive Span 43. (FDR Credit: NYSDOT)

WELD - To fasten together metals by bonding with molten metal.

Welding Steel Packs for the Southbound Bruckner Expressway Bridge.

WETLAND - Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Springville Greenway Pedestrian Bridge over Freshwater Wetlands.

WICK DRAINS – A mechanism used to accelerate the process in which water travels through the layers of soft soil, therefore allowing the soil to reach its full level of compaction (settling). Once full soil compaction is reached, the roadway surface can be built on top with a reduced risk for pavement damage due to additional settling in the future.

Northwest Quadrant Wick Drains for the New Mill Basin Bridge. Drains Backfilled.

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. Wingwalls may extend over longer distances into retaining walls. Wingwalls are extensions of ABUTMENT STEMS, not supporting direct loads from the SUPERSTRUCTURE.

Belt Parkway over Rockaway Parkway, Grand Street, 145th Street, and Center Drive (Playmates Arch) Wingwalls. (First Four Credit: NYSDOT) Belt Parkway Over Bay Ridge Avenue Bridge Northwest and Southeast Wingwalls in 2015. Brooklyn Bridge North Wingwall in 2016. (Brooklyn Bridge Credit: NYSDOT) Van Cortlandt Equestrian Bridge over Henry Hudson Parkway End Abutment Right Wingwall in 2018.

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)

7/26/18

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August 2017: Bridge Operator Kenneth Crandell Operating the Third Avenue Bridge. (Credit: Vera Ovetskaya) Summer College Intern Litcy Barreto on the Third Street Bridge During Strain Gauge Installation in June 2015. (Credit: Vera Ovetskaya) Construction Project Manager Beatriz Duran and Administrative Engineer Bhaskar Gusani in the Battery Park Underpass. (Credit: Tamara Berlyavsky). Assistant Civil Engineer Clara Medina on the Brooklyn Bridge.

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"Most engineers won't go to the top of the bridges. They prefer to do their work from the ground, but I'm not like most. I love going up. It's hard work getting there, too. You have to clip into your safety gear and walk up the cables step-by-careful-step. You get out of breath. If it's windy, your hands can blow off the lines. If it's rainy, your feet can slip. But when I make it to the top, I feel so free! As a civil engineer, I've been supervising crews on all of New York City's bridges for 16 years now. Just yesterday, I went up with a new guy, who just graduated from school. When we got to the top, he told me he'd never go up again. I said, "Well if this is once-in-a-lifetime for you, we should take a picture." He said, "Clara, my hands are shaking too much! I can't even grab my camera!" So, I took a picture for him. Of course, you feel fear, especially when you try something new, but you can never let that stop you. You have to use it to make you stronger. That's what I do."

—Assistant Civil Engineer Clara Medina, as told to the Kazoo Magazine for girls, ages 5 to 10, in the architecture issue, published in Winter 2016/2017.

Construction Apprentice Utilizing a Hydraulic Tension Calibrator to Test the High-Strength Bolts for the Belt Parkway Over Mill Basin Bridge. (Credit: Jessica Wang). Component Rehabilitation Engineer Malgorzata Banka. Bridge Painters Elisangela Oliveira and Joice White. (Credit: Jaclyn Jablkowski and Earlene Powell) Director of Personnel and Payroll Helene Holloway. Assistant Commissioner of Management and Support Services Dorothy Roses.

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""No matter how tough, no matter how high it is, this woman can do anything."
— Bridge Painter Elisangela Oliveira, as told to NY1's Jose Martinez on International Women's Day, March 8, 2017.

Associate Staff Analyst Susan Garcia. (Credit: Vera Ovetskaya. Project Manager Tamara Berlyavsky. (Credit: Kamran Sikandar). Associate Staff Analyst Laurie Oberson. (Credit: Samuel Teaw) Associate Staff Analyst Barbara Pedersen. Assistant Mechanical Engineer Nancy Guernsey, City Research Scientist Dr. Tehrani Ghodsieh, and Administrative Manager Milagros Jorge. (Credit: Samuel Teaw) Construction Project Manager Beatriz Duran at the Houston Street Bridge Project Site. Administrative Engineer Hui Yang.

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Supervisor Bridge Painter Cesar Pazmino is responsible for the two American flags atop the towers of the Brooklyn Bridge. "It's beautiful. It's like, when you go underneath those two towers, it's like being in a cathedral We go up as often as needed. For the most part I'll be going up there to raise, lower, change the flags, paint the flag poles...the Brooklyn Bridge, you're walking up the tower, and you have the honor to raise and lower the flags...I love doing what I do... I'm standing on top of the world."
—Supervisor Bridge Painter Cesar Pazmino, as told to Michael Scotto of NY1, broadcast on July 30, 2018.

Checking the Brooklyn Bridge American Flag in July 2018.

Brooklyn Bridge: 2009 Tower Closeup, 2010 View, 2010 Biennial Inspection. (2009 Credit: Emily Goodman, 2010 Credit: Jagtar Khinda, Inspection Credit: NYSDOT)

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View of Brooklyn Bridge from a Ferryboat. American Mutoscope & Biograph, silent black and white, 1899.

Manhattan Bridge – Replacing Cables in 1955. (Credit: NYC Records) Plaque Detail. (Credit: Peter Basich)

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In Memoriam

The 2018 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 his 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.

George J. Staab, Electrician

January 11, 1961 – April 4, 2018 4 years, 3 months City service

Electrican George Staab was a master of his craft and a mentor to younger workers. He was our top expert on the 23 movable bridges that span the City's waterways for vehicular traffic but can be opened to permit maritime traffic. Mr. Staab died in the line of duty while he was working on the southbound side of the Hutchinson Parkway Bridge. As he and a colleague were exiting their vehicle to approach the bridge's electrical house, George was fatally struck by a driver who lost control of his vehicle.

Mayor Bill de Blasio declared: "He served us, served 8.5 million people, and gave his life in that service. He had the ability to achieve things and teach others how to do them and that was so rare and so special – and particularly with these movable bridges that are a part of the landscape of the city. It's that very reason - there are very few people sophisticated enough to know how to actually make them work and to keep them working. George was one of those people. He helped to keep the City moving. It was well known that he loved his loved his work, he had a passion for it, he had a passion for teaching others, and he was an example that others followed. He also exemplified a group of people who often don't get to praise and the appreciation they deserve. There are almost 5,500 people who work for our City's Department of Transportation. They do so much, their work is essential, but it's unsung, it's not the kind of work that makes the front pages, but it's the kind of work that is essential so everyone else's life can come together - so everyone can get where they're trying to go - so the busiest place on earth keeps moving. George's devotion is an example to all of us."

Commissioner Polly Trottenberg recalled: "The work of our Agency employees is essential, but unsung. George Staab was a man of great technical gifts, who knew how the movable bridges work, and he enjoyed teaching others. He helped keep the infrastructure of our City, the busiest place on earth, moving. Electrical work on our bridges can be perilous. George's meticulous, thoughtful nature and deep planning helped keep those dangers at bay. He would come to work early and pore over the plans of our complicated and exotic bridges. He was revered within the Agency as a man who could fix an electrical problem on a bridge that no one else could fix. George was beloved by the Harlem River Bridges Group. He was an extraordinary colleague, a man of incredible positivity, experience, and energy. He mentored the younger staffers at DOT, encouraging them to better their skills and their professional growth. He will be missed and remembered by all of his DOT family."

George Staab.

Adrienne Foster, Clerical Associate

March 13, 1955 – September 7, 2018 14 years, 6 months City service

Adrienne Foster was a dedicated and diligent member of the Flags Engineering Team. She processed the flag paperwork generated by the section engineers, handling complex clerical and administrative duties, and

enthusiastically took on new assignments and challenges as the needs of the section changed over time. Adrienne maintained the file room containing paperwork for over 48,000 flags.

Ms. Foster was a team player who was always willing to pitch in and help with any task. We will miss her gentle ways, her dancing, and her beautiful smile.

Adrienne Foster.

Michael Eamon Nallen, Carpenter
April 2, 1987 – August 3, 2018 1 year, 7 months City service

Michael Nallen was very well liked by his co-workers at the ERB Carpenter Shop. He was a jolly person, had a good sense of humor, knew his craft, worked in a professional manner, had a good working relationship with his peers, and had a terrific character. He is greatly missed.

Michael Nallen. On the Brooklyn Bridge in December 2016.