



June 2012

# BROOKLYN BRIDGE REHABILITATION

## Environmental Mitigation

### Project Overview

The Brooklyn Bridge, a National Historic Landmark and a New York City Landmark, has been in use for over 125 years and its ramps and approaches have been rated in poor condition. Rehabilitation and repainting of the structure, partially funded by the American Recovery and Reinvestment Act, began in January 2010 and will run until 2014.



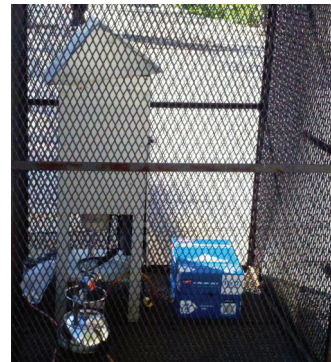
Two crews work along Frankfort St in April 2012. Cranes (on left) lift material in and out of walled enclosures of sound blankets.

While all construction activities generate disruption, the NYC Department of Transportation (DOT) is working closely with other agencies to mitigate the impacts of the Brooklyn Bridge Rehabilitation. DOT works with the NYC Department of Environmental Protection (DEP) to comply with the 2007 Noise Code, as described on Page 2. During the removal of the lead paint coating and underlying rust on the steel structures, DOT follows a stringent oversight and monitoring program, called the Lead Paint Removal Program, which complies with strict standards set by the the DOT Environmental Engineering Unit, the Society for Protective Coatings, the United States Environmental Protection Agency (EPA) Resource Conservation and Recovery Act, and the New York State Department of Environmental Conservation. ♦

### Airborne Particulate Testing

Lead paint removal operations are conducted in a Class 1A containment unit. We use rigid containment walls, HEPA filters, and negative air pressure to prevent material release. Ambient air quality readings are conducted during lead paint abatement work. As per the EPA, airborne lead levels are continuously monitored using high-volume total suspended particulate samplers (**shown below**) at multiple locations in Brooklyn and Manhattan. Additional indepth testing for Volatile Organic Compounds were conducted at five locations in the summer of 2011.

In March 2012, airborne particulate samples were collected in accordance with regulatory guidelines, at locations where dust is most likely to be deposited during dust-generating activities. Additional tests were replicated in June 2012 for respirable silica, suspended particulates and asbestos.



All results are acceptable according to standards set by the Occupational Safety and Health Administration, the National Institute for Occupational Safety and Health, and the American Conference of Industrial Hygienists. ♦



For all project related inquiries, or to be added to the email distribution list, contact Sabrina Lau at [brooklynbridgeoutreach@gmail.com](mailto:brooklynbridgeoutreach@gmail.com) or 347.647.0876



Contract BRC270C/P

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## Environmental Mitigation

## The Alternative Noise Mitigation Plan

The 2007 Noise Code administered by the NYC Department of Environmental Protection (DEP) proscribes how construction noise is governed: <http://www.nyc.gov/html/dep/html/noise/index.shtml>. All construction projects must have a *Construction Noise Mitigation Plan*. The Brooklyn Bridge Rehabilitation work occurs overnight, and thus requires an *Alternative Noise Mitigation Plan* (ANMP). An ANMP applies whenever strict compliance would result in unreasonable delay and/or increased expenditure for a necessary public improvement, and the alternative noise mitigation strategies, methods, procedures or equipment proposed are consistent with the purposes and policies of the NYC Noise Code (Section 24-221). ♦



THE CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Bureau of Environmental Compliance

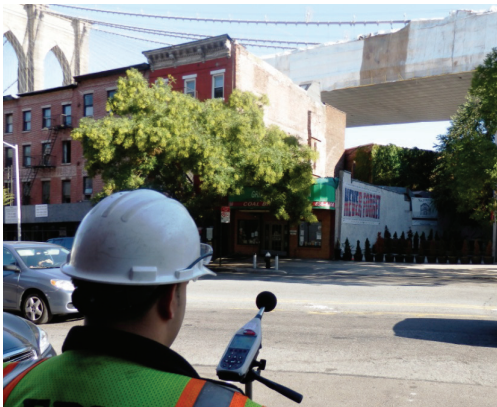
Alternative Noise Mitigation Plan  
Rev 12/2011

### Alternative Noise Mitigation Plan Application

IT IS NECESSARY TO FILE THIS DOCUMENT WITH DEP  
THE APPROVED PLAN MUST BE ACCESSIBLE TO INSPECTORS

*In accordance with Section 24-221 of the New York City Administrative Code, any individual or entity performing construction work in the city, shall adopt and implement an alternative noise mitigation plan for each construction site when any device or activity deviates from strict compliance with the noise mitigation rules as defined in Section 24-219. The attached sample form of an alternative noise mitigation plan is intended to inform the user of the required plan elements that a responsible party shall include when the listed devices are being used on site and the mitigation strategies and best management practices defined in Title 15 Rules of the City of New York - RCNY Section 28-102 cannot be strictly complied with. The responsible party shall be liable for the accuracy of this document and compliance with all applicable rules in Title 15 RCNY Chapter 28.*

*The Brooklyn Bridge Contract 6 Alternative Noise Mitigation Plan was approved by DEP on April 18, 2011*



## Noise Monitoring

Environmental air and noise monitoring is conducted by an independent, third-party contractor. Inspectors work closely with the community liaison to identify, target and prioritize operations for in-depth inspection.

Inspectors are on the job site during every work shift, day and night, taking noise measurements from a number of sites (**shown left**). They also confirm that appropriate noise mitigation measures are in place. ♦

## Noise Mitigation and Process Modification

DOT works closely with the contractor, other city agencies, and the community liaison to implement the measures required in the approved Alternative Noise Mitigation Plan. These measures can be grouped into three categories:

### Modifications to the Process

Construction processes are altered to reduce noise, including:

- storing machinery on the bridge to minimize motion
- shifting excavation activities to the daytime
- adding additional work crews
- working longer daytime hours on the weekends.

### Mitigation at the Source

Noise mitigation on the equipment itself includes:

- solar-powered generators
- custom-made sound enclosures around stationary equipment
- using smaller jackhammers with mufflers around the motor.

### Mitigation along the Sound Pathway

Noise absorption along the sound pathway includes:

- hanging sound blankets on fences
- enclosing the work area on four sides
- using the highest fences possible for the specific work site.