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Press Release

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[Metro-North](#)

IMMEDIATE

Metro-North Railroad's Bridge to Manhattan To Get New Cables

Harlem River Lift Bridge Will Be Closed to Boats During Work

A crucial bridge that provides the only access into Manhattan for all Metro-North trains traveling to and from Grand Central Terminal is due for a major upgrade, the railroad announced today.

The job was advertised Friday and a construction contract will be awarded this fall for the replacement of all the original cables that lift the two, 330-foot-long main spans of the Harlem River Lift Bridge, located about 4 ½ miles north of Grand Central.

"Metro-North must maintain this crucial piece of infrastructure so that it can be used by both train customers and maritime traffic. It is vital to the more than 280,000 Metro-North customers and 750 trains that use it each weekday," said Metro-North President Howard Permut.

The work has been scheduled to do the job in the most efficient way possible to take full advantage of a six-month Coast Guard outage, during which time the bridge will not have to be opened on demand. While the cable replacement is underway, the railroad also will replace the electrical control system and most of the wiring on the bridge as well as install a new power supply system.

All the original circuit boards in the control room also will be computerized with the installation of a programmable logic control system. The elevator from the track level up to the operator's room at the counterweight level also will be rehabilitated.

The entire two-year project, which is expected to cost \$30 million, is being paid for by the Metropolitan Transportation Authority's 2010-2014 Capital Program with help from a federal grant of \$19 million.

The bridge was built in the 1950's and completed in 1954 to replace an earlier swing span crossing over the Harlem River between Manhattan and the Bronx.

The Harlem River is a navigable waterway and is subject to the requirements of the U.S. Coast Guard that boats using the river are entitled to unhindered access along the river. The lift bridge provides adequate clearance so that any vessel capable of traveling the river can safely pass underneath the raised span, which is 135 feet above mean high water.

The bridge has parallel lift spans, each with two tracks. The spans operate independently. At either end of the bridge are steel towers that contain the machinery to hoist the spans. In all, 128 stranded cables each 2¾ inches in diameter and 185 feet long are attached at one end to the span and at the other end to the counterweight. The cables wind around large diameter spools located in the lift towers along with the hoist machinery. In the closed position, the spans sit on bearings at track level.

The cables are original to the bridge construction and some individual wires that make up the cable strands are corroded. There also is deterioration where the cables are attached to the spans and counterweights.

During the project, temporary work platforms will be built above the tracks to allow trains to pass underneath while the individual cables are replaced one at a time. Spools of replacement cables will be brought to the bridge on flat cars or high-rail equipment sited on the tracks directly underneath the work. The retired cables will be removed from the area using the same equipment. A cable lubrication system will also be installed to forestall future deterioration.

The work will require occasional track outages but they will be scheduled to minimize impacts to Metro-North customers.

After the cable job is done, all the wooden bridge ties will be replaced and a steel-framed safety walkway with a fiberglass grating will be installed next to Tracks 1 and 2.

A small portion of the Harlem River Park will be leased from the NYC Parks Department for contractor staging but the riverfront path will remain open during the project. Park landscaping will be restored after the bridge work is finished.

The bridge will need additional work in the next Capital Program, when deterioration in the abutments and all four piers will be addressed. In addition, the original lead-based paint needs to be removed and the entire bridge needs to be repainted.

