Bridge and Tunnel Projects

**RFK Bridge Pedestals, Randall’s Island and Queens, NY**
Jablonski Building Conservation assisted with the conduct a conditions assessment of the granite façade pedestals of the RFK Bridge located on Randall’s Island and in Astoria, Queens. As part of the project cleaning tests and mortar analysis was undertaken to assist in producing the repair specifications for the bridge pedestals. As repairs started, JBC assisted with supervision of the work. The project was completed in 2016.

**High Bridge, Manhattan and Bronx, NY**
The High Bridge is the oldest bridge in New York City, having originally opened as part of the Croton Aqueduct in 1848 and reopened as a pedestrian walkway in 2015 after being closed for over 40 years. In the design phase of the project our firm performed materials testing for the masonry and cast iron components as well as cleaning tests to assist the architect with construction documents. In the construction phase of the project we worked with the contractor on the masonry issues and supervised the cleaning and pointing.

**Bridges 00698, 693, 694 Merritt Parkway, CT**
Performed concrete analyses and developed replication mixes and repair recommendations for 3 bridges. Petrographic and wet-chemical analyses of core samples were taken from three 1920s bridges on the Merritt Parkway and analyzed which allowed JBC to develop accurate replication concrete mixes.

**Four Merritt Parkway Bridges, Connecticut**
As part of the preparation of the “Restoration Guide for the Merritt Parkway Bridges”, JBC was engaged to analyze and replicate the historic concrete from four 1920s bridges. Samples were removed from the bridges and analyzed in our laboratory to determine their constituent parts, with additional testing conducted by a stone petrographer. Based on these analyses, replication mixes were developed for use in restoring the bridges to their original appearance. Special attention was paid to locating aggregates and other materials, which would be readily available near the proposed job sites, as well as developing mixes for easy execution by contractors.
Morehouse Parkway Bridge, Merritt Parkway, Connecticut.
The Morehouse Parkway Bridge was undergoing restoration when it was discovered that gray Portland cement had been used instead of colored cement and a coating had been specified. Working with the Merritt Parkway Conservancy, Connecticut DOT, and the contractor, a finish color and application technique were selected for the coating to try and replicate the original surface appearance.

Highland Park Bridge and Motor Parkway Bridge, Highland Park, Queens, NY.
Detailed Conditions Assessments were made and masonry testing undertaken. After analyzing the results we were able to provide restoration recommendations for the stone and brick Highland Park Bridge and the concrete Motor Parkway Bridge.

Nepperhan Avenue Bridge, Old Croton Aqueduct, Nepperhan Avenue, Yonkers, New York
The Old Croton Aqueduct was constructed between 1837 and 1842 as a part of the 41-mile-long Croton Aqueduct. The Old Croton Aqueduct is a gravity-fed, subterranean tunnel constructed from iron pipe, brick and natural (hydraulic) cement mortar. Masonry bridges were built to carry the aqueduct across small valleys and bodies of water or major roadways. These bridges were constructed with local stones, such as the gneiss and granite bridge spanning Nepperhan Avenue in Yonkers, New York. JBC produced a materials conditions assessment and undertook cleaning tests to determine the safest way of cleaning the bridge.

Grand Central Terminal Park Avenue Tunnels, New York, NY
As part of the Park Avenue Tunnel inspection and repair design that was recently carried out for Metro North Railroad, Jablonski Building Conservation performed a comprehensive materials characterization of the historic brick and mortar from the interior of the Park Avenue Tunnel, of Grand Central Terminal in New York City. The Park Avenue Tunnel was constructed by the Harlem Railroad Company from 1872 to 1874 and extends from the Grand Central Depot train sheds at 45th Street and runs northerly, underneath what is now Park Avenue. A visual examination of conditions within the tunnel was also conducted in conjunction with an extensive survey performed by engineers.
Park Avenue Bridge, Branch Brook Park Newark, NJ
Surveyed the bridge and wrote technical Specifications for concrete repair and replication, cleaning, pointing, new cast stone, cast stone restoration, and anti-graffiti coating.

Plainfield Bridge Abutments, New Jersey Transit
Provided concrete patching mix recipes for Central Avenue, Clinton Avenue, Grant Avenue, Liberty Avenue, Madison Avenue, New Street, and Plainfield Avenue abutments.

Bloomfield Bridge, Newark, NJ
Bloomfield Avenue Bridge in Branch Brook Park. Newark, NJ is a concrete single arch bridge built in 1909. The bridge was examined for types of deterioration and recommendations were made for repairs. Three samples of concrete were taken from bridge elements to develop repair mixes.