Clara Barton Parkway Cantilever Structure and Glen Echo Overpass Project

NCPC Project Report

Presented to
National Capital Planning Commission

Clara Barton Parkway

Clara Barton Parkway, a 6.8-mile scenic parkway managed by the NPS as part of the George Washington Memorial Parkway, spans 280 acres along the Maryland side of the Potomac River, from Carderock to Chain Bridge in Washington, DC. Originally planned as part of a larger parkway system flanking both sides of the river, the Clara Barton segment was the last built and the only one constructed in Maryland.

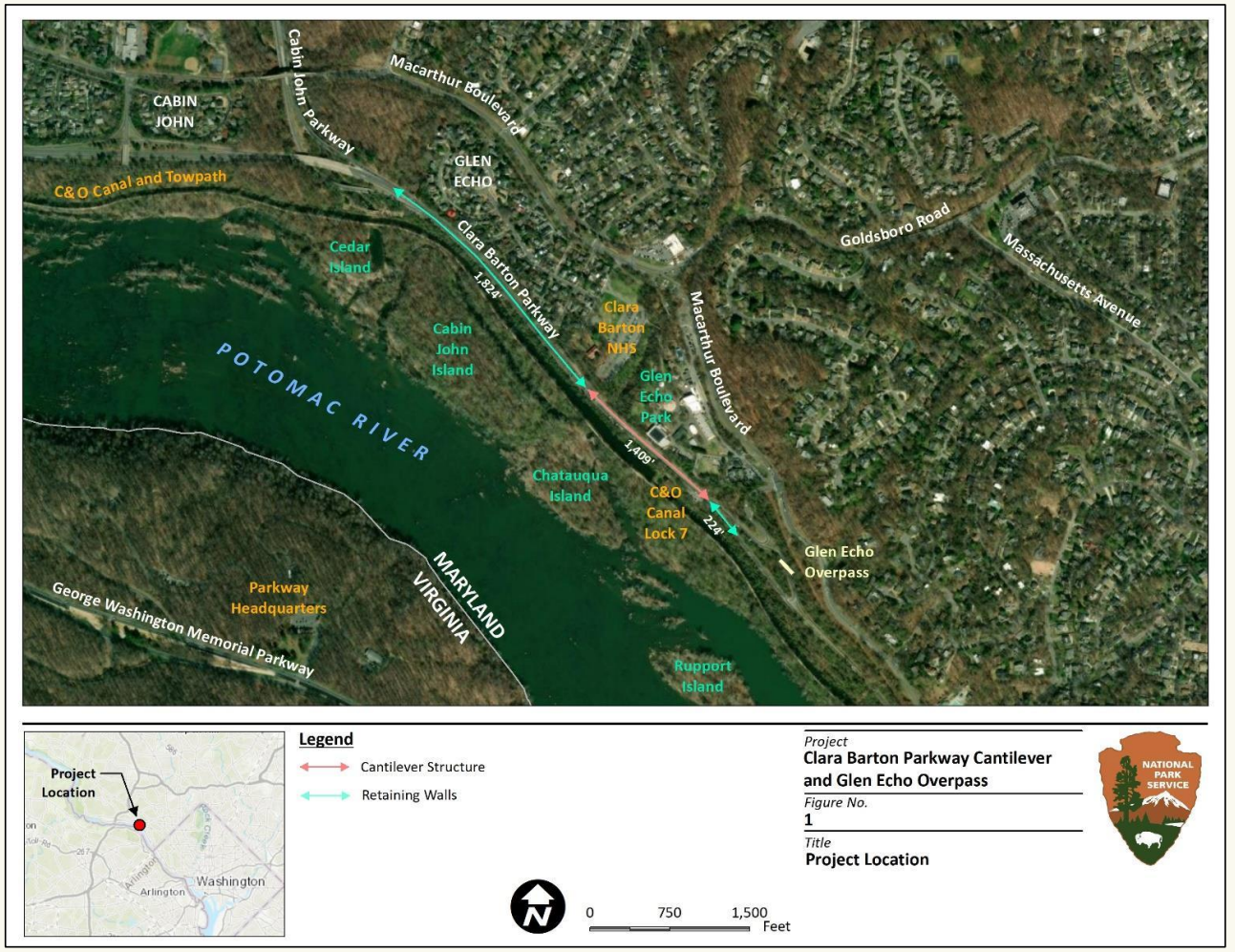
Its eastern third, built along a former streetcar right-of-way, differs in character from the rest of Clara Barton Parkway due to delays in land acquisition and changes in design. Named in 1989 to honor Clara Barton, the Parkway reflects both the ambition of the NPS to create a unified scenic and commemorative route and the public opposition that halted some of its planned extensions, such as the Palisades Parkway.

Clara Barton Parkway is listed in the National Register of Historic Places as part of the George Washington Memorial Parkway.

Cantilever Structure

When constructed between 1957 and 1965, designers used retaining walls and the cantilever structure to fit Clara Barton Parkway within the restrictive terrain between the Chesapeake and Ohio Canal National Historical Park (C&O NHP) and the bluffs leading up to Glen Echo and Brookmont. Clara Barton Parkway focuses on internal views to historic structures of the C&O Canal NHP and the Washington Aqueduct that represent the history of the landscape as an infrastructural corridor, instead of panoramic views like those seen from GW Parkway in Virginia.

The Clara Barton Parkway cantilever structure is a contributing feature of the Clara Barton Parkway Cultural Landscape.



Parkway westbound lanes facing west

Parkway eastbound lanes facing east

Parkway from C&O Canal NHP Lock 7 Parking Lot

Parkway westbound lanes facing east

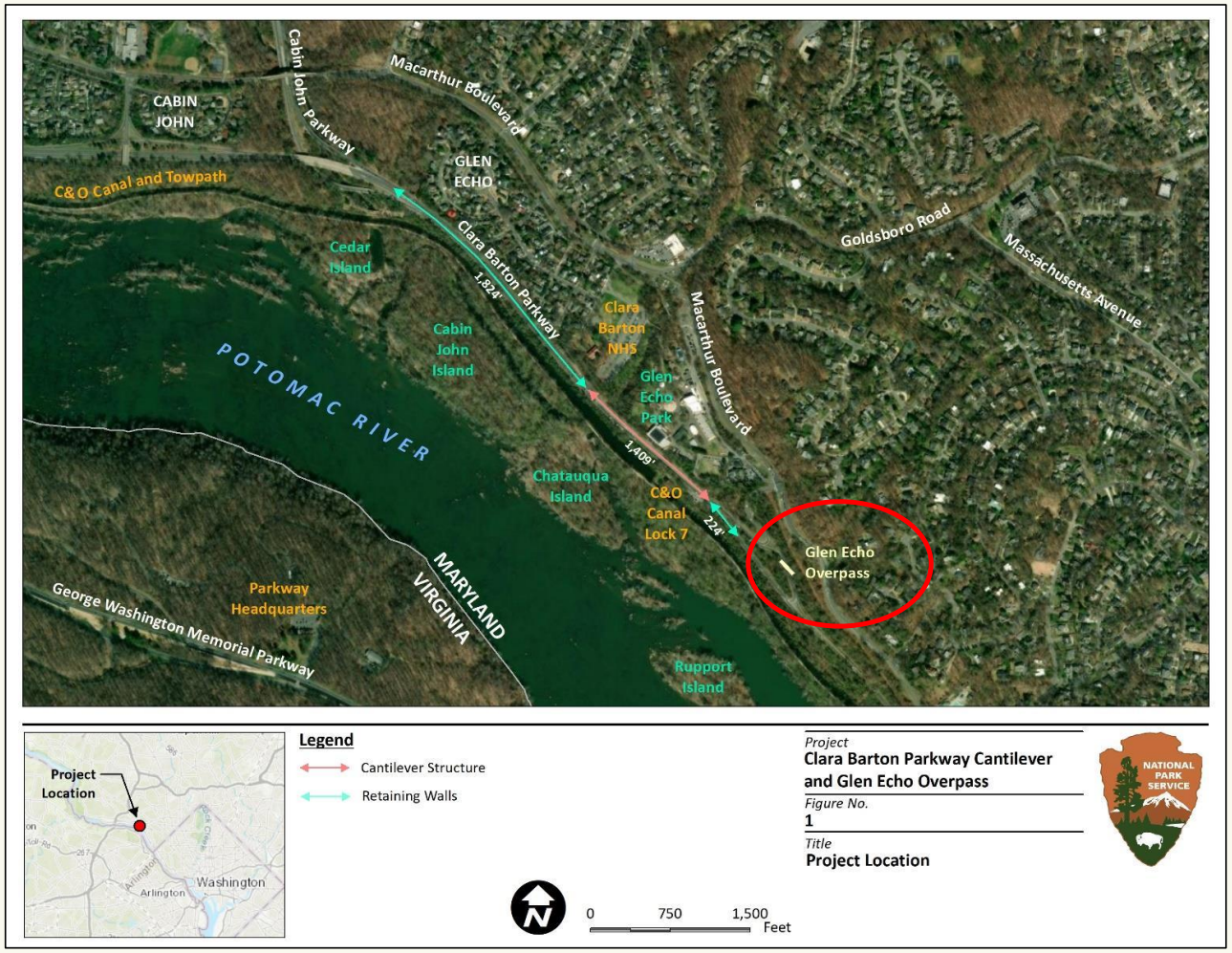
Parkway eastbound lanes facing west

Parkway eastbound lanes facing west

Glen Echo Overpass

The Glen Echo Overpass was built in 1961 as part of the later abandoned plan to expand Clara Barton Parkway to four travel lanes inbound into Washington, DC. The structure has remained unused by traffic since its completion as the Clara Barton Parkway expansion never came to fruition. The bridge crosses over the westbound lane of Clara Barton Parkway but is unconnected to the surrounding roadway network.

The overpass is a contributing feature of the Clara Barton Parkway.



Project Background – Cantilever Structure

The NPS is proposing to replace the cantilever structure and adjacent retaining walls on Clara Barton Parkway between Cabin John Parkway and the Macarthur Boulevard exit ramp.

The NPS last rehabilitated the cantilever structure and associated retaining walls in 1992 and performed spot repairs in 2020. The Federal Highway Administration (FHWA) conducted an in-depth special study of the concrete cantilever structure in 2020 that indicated the cantilever structure is exhibiting widespread deterioration. Corrosion of the reinforcing steel has begun and is likely to worsen. The FHWA estimated the useful remaining service life of the structure was approximately five years from completion of the study. Subsequent inspections confirmed the estimated remaining service life of the November 2020 special study, while verifying that **the structure remains safe for public travel at the present time**.

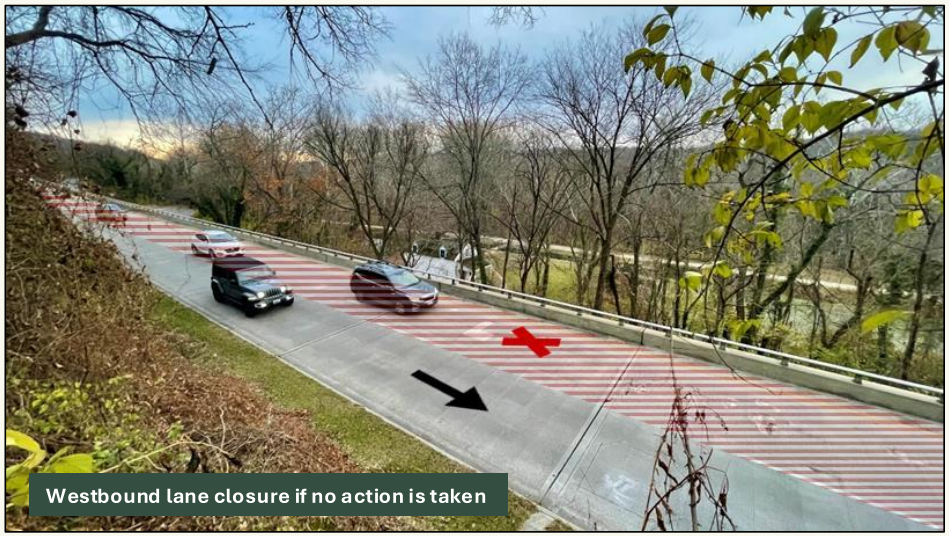
In 2023, a comprehensive study conducted on the adjacent retaining walls revealed they are also nearing the end of their useful service life. The FHWA has recommended action be taken since subsequent inspections have confirmed the timelines of the estimated remaining service lives of the structures. Otherwise, widespread corrosion of the steel and deterioration of the concrete will reduce the load-bearing capacity of the cantilever structure and severely impact its structural integrity.

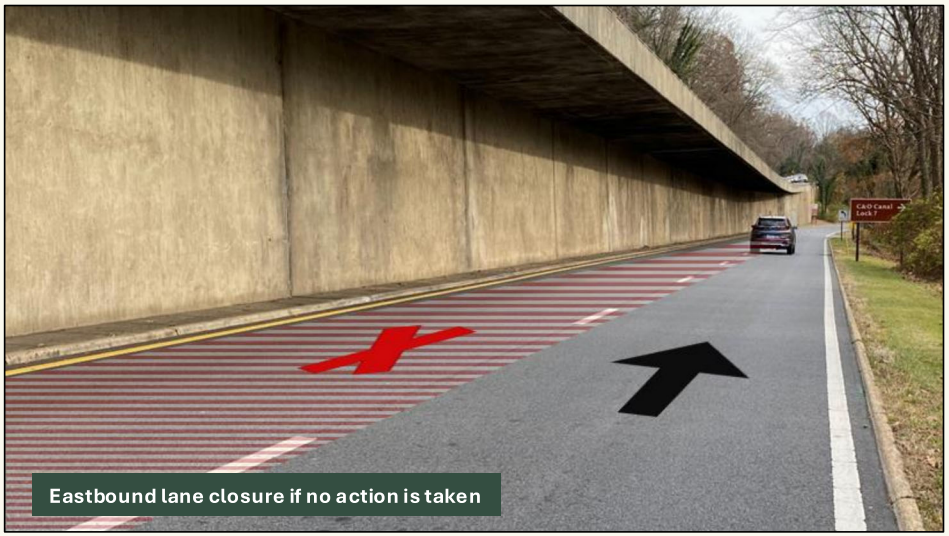
Photos from the 2020 Special Study Inspection of the Cantilever Structure Displaying Widespread Deterioration

Project Background – Cantilever Structure (cont'd)

The NPS will be required to implement weight restrictions on the westbound cantilevered lane of Clara Barton Parkway due to its reduced load-bearing capacity if action is not taken. Shortly thereafter, lane closures will be necessary for public safety on the westbound cantilevered lane and on the eastbound lane below the cantilever structure , which is at risk from falling concrete debris.

This would cause substantial indefinite traffic impacts, as approximately 40,000 people use Clara Barton Parkway daily, making it an essential thoroughfare in the area.


Westbound lane closure if no action is taken


Eastbound lane closure if no action is taken

Project Background – Glen Echo Overpass

The Glen Echo Overpass consists of reinforced concrete and an asphalt surface with metal safety railings. Demolition would first involve placing a protective material on top of the asphalt road surface underneath the overpass to prevent damage during bridge demolition. Then, excavators would remove the bridge deck and overhangs, girders/piers, and abutments by demolishing the concrete structure into smaller pieces to be transported offsite for proper disposal. Minimal site restoration would be necessary after the bridge is removed since it is anchored into exposed bedrock with limited opportunities to install trees and shrubs at the location.

Demolishing the bridge at the same time as the cantilever structure construction would be more cost-effective than a separate Project, meanwhile also consolidating the construction-related traffic impacts on visitors and daily commuters.

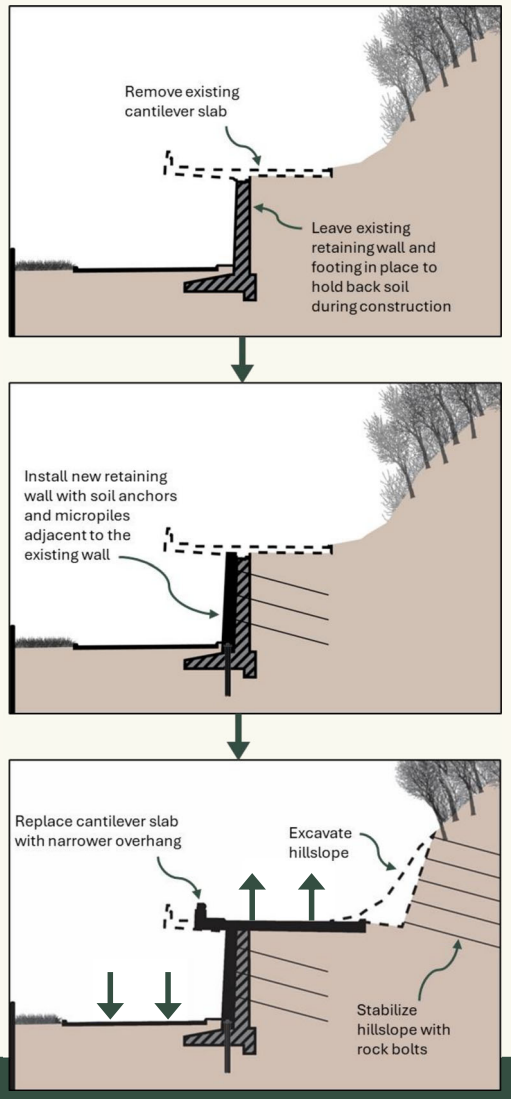
Image Capture: May 2023 © 2025 Google

Project Description – Cantilever Structure

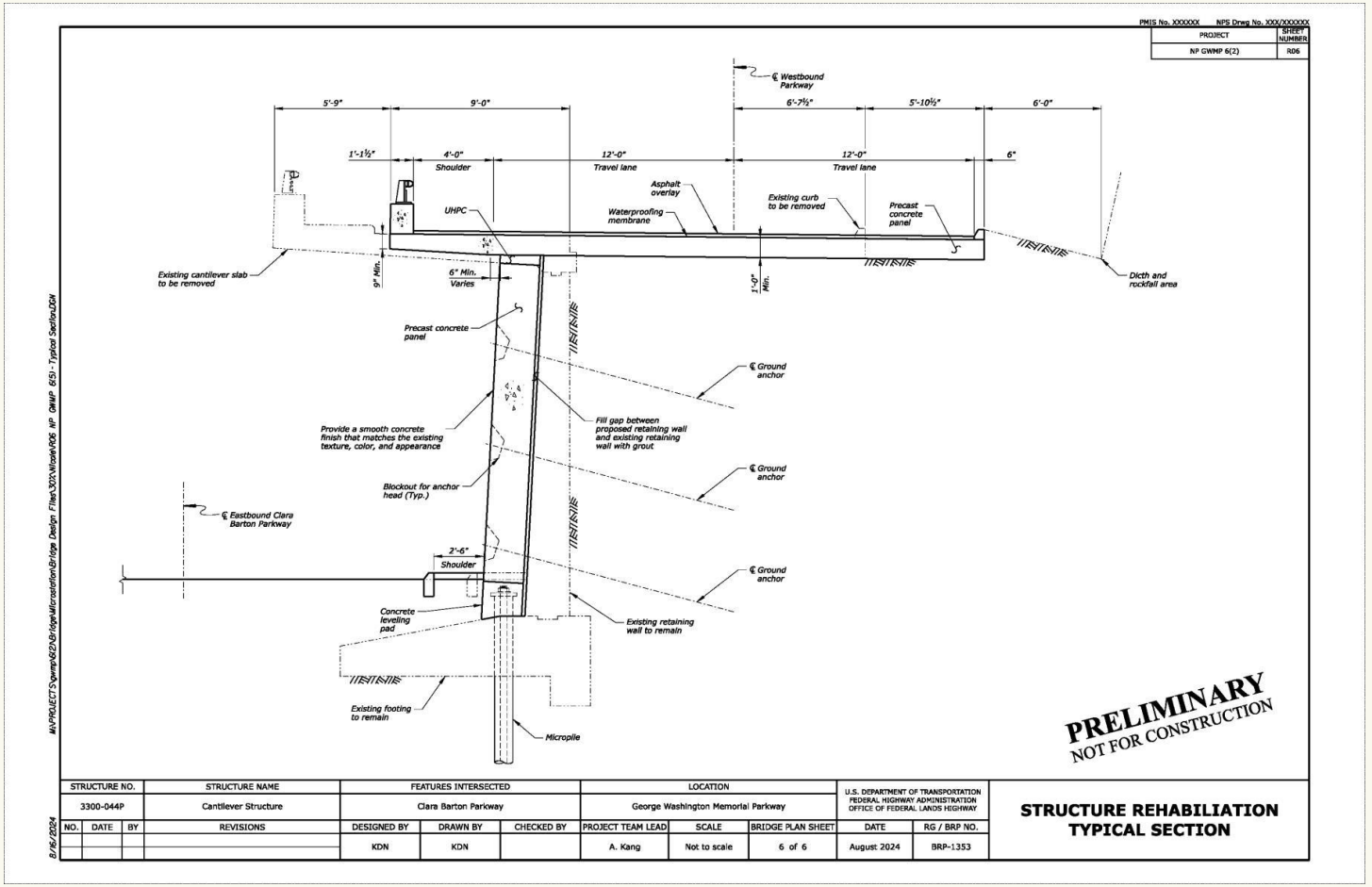
The NPS proposes to replace the existing 1,409-foot cantilever structure on Clara Barton Parkway. The replacement includes removing the existing cantilevered slab while keeping the existing retaining wall and footing in place to hold back soil during construction (right, top). The NPS would install a new retaining wall adjacent to the existing structure using soil anchors and reinforcing steel posts called micropiles after removing the existing cantilever structure (right, middle). Using this method, the new retaining wall would bear the load of the structure entirely, relieving the old wall of any structural burden.

Afterward, the NPS would excavate approximately 12 feet of hillside adjacent to the westbound lanes of Clara Barton Parkway to allow for installation of a new cantilevered slab with a narrower overhang, approximately six feet shorter than the existing structure at its widest section, and to establish a drainage ditch and rock fall area for traffic safety. The NPS would then install rock bolts into the hillside to stabilize the newly exposed bedrock (right, bottom). The NPS would also install new safety railings that meet current safety hardware standards and mountable curbs, and roadway signage would be replaced or reinstalled, as needed, to complete the cantilever structure replacement.

The new structures would have an expected service life of 75 years, ensure the safety of the travelling public, and avoid long-term traffic impacts.



Cantilever Structure Replacement Typical Section

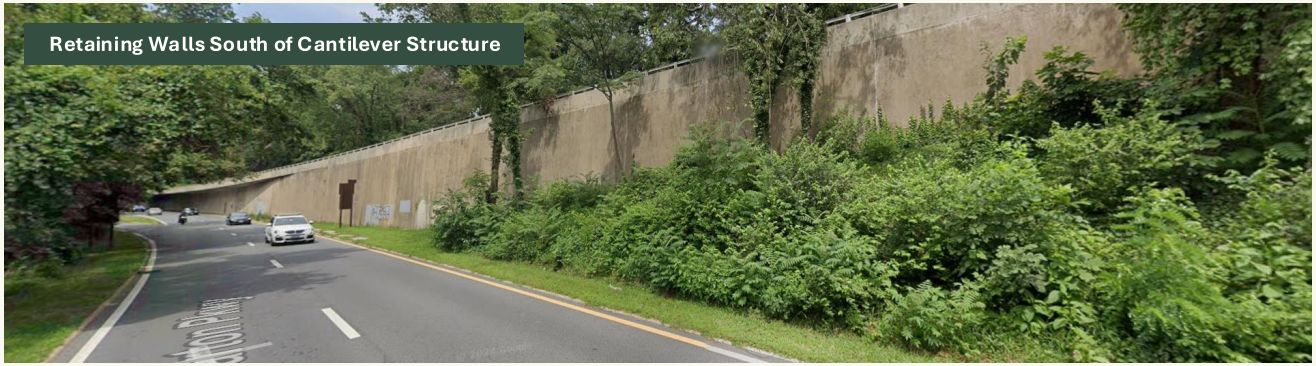


Project Description – Retaining Walls

The NPS proposes to replace 2,048 feet of concrete retaining walls along Clara Barton Parkway associated with the cantilever structure, including 1,824 feet of wall north of the structure, and 224 feet of wall to the south of the structure. The NPS would use a similar approach to the cantilever structure that would involve constructing the new retaining walls adjacent to the existing walls. The NPS would also install new safety railings on the retaining walls that meet current safety hardware standards.

The new structures would have an expected service life of 75 years, ensure the safety of the travelling public, and avoid long-term traffic impacts.

Retaining Walls North of Cantilever Structure



Retaining Walls South of Cantilever Structure

Image Capture: Aug 2023 © 2025 Google

Project Description – Glen Echo Overpass

The NPS is also proposing to demolish the Glen Echo Overpass. The FHWA conducted a routine inspection of the bridge in 2023 that identified issues with bridge safety railings, accumulation of debris that is inhibiting proper drainage, encroaching tree growth, concrete spalling with exposed rebar, loose rock adjacent to pier columns, and erosion of the embankment in front of the south abutment and south pier columns. The FHWA recommended corrective actions, and as such, the NPS is proposing demolition because the bridge is likely to require eventual rehabilitation if left in place.

Glen Echo Overpass

Bridge surface existing condition

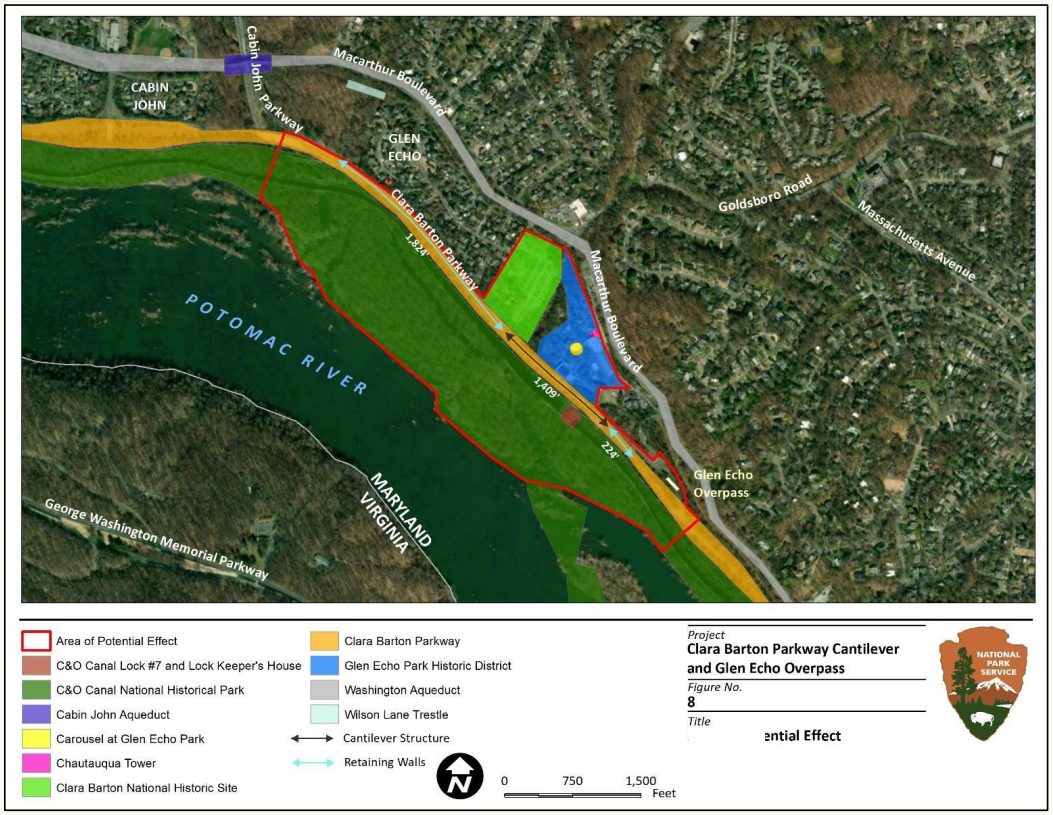
Outreach and Coordination

National Historic Preservation Act, Section 106 review, and National Environmental Policy Act (NEPA) compliance, are being coordinated for the Clara Barton Parkway Cantilever and Glen Echo Overpass Project. The NPS is conducting consultation under Section 106, which was initiated with Maryland Historical Trust (MHT) on December 18, 2024. A consulting party meeting was conducted on June 16, 2025, to present the project, Area of Potential Effect (APE), and potentially affected historic properties in the APE.

The NPS prepared an Assessment of Effects that found there would be an adverse effect on Clara Barton Parkway. MHT concurred with the NPS' adverse effect finding on July 1, 2025. The NPS notified the Advisory Council on Historic Preservation (ACHP) of the adverse effect on July 9, 2025, and invited ACHP to participate in consultation to resolve the adverse effect. ACHP declined to participate.

The NPS and MHT have prepared a Memorandum of Agreement (MOA) that provides the mechanism to resolve the adverse effects of the Undertaking and complete the requirements of Section 106 and its implementing regulations. A consulting party meeting to review the MOA occurred on September 23, 2025.

The George Washington Memorial Parkway also released an Environmental Assessment (EA) for a 30-day public review beginning September 9, 2025. We hope to have the FONSI signed in December 2025 following the completion of the Section 106 process.



Environmental and Historical Considerations

Historic Properties and the Clara Barton Parkway Cultural Landscape

The proposed Project would have an adverse effect on Clara Barton Parkway from replacement of the original cantilever structure and retaining walls, the addition of new retaining walls that would obscure views of the current walls, realignment of the roadway, excavation into the hillside and the associated removal of trees and exposure of bedrock, and removal of the Glen Echo Overpass. No adverse effects would be expected on the other historic properties within the APE. The NPS and MHT have drafted a MOA to resolve the adverse effects, which include preparing Level II HAER documentation for both the cantilever structure and Glen Echo Overpass, vibration and noise monitoring and resource protection, and public interpretation signage.

Water Resources

NPS will prepare Erosion and Sediment Control (ESC) and Stormwater Management (SWM) Plans incorporating silt fencing, stabilized construction entrances, temporary sediment traps, or other best management practices (BMP) to prevent sediment transport offsite and ensure water quality is protected from erosion and stormwater runoff.

Threatened and Endangered Species

According to the US Fish and Wildlife Service (USFWS), the federally listed endangered northern long-eared bat (*Myotis septentrionalis*), the proposed endangered tricolored bat (*Perimyotis subflavus*), and the proposed threatened monarch butterfly (*Danaus plexippus*), potentially occur in the Project area. NPS will conduct informal Section 7 consultation with USFWS as project designs are progressed to identify conservation measures, such as restricting tree clearing during the bat's active season between April 1 and November 15, to reduce any impacts to threatened and endangered species that arise from the Project.

Vegetation

The Project will require tree removal and understory growth primarily from excavation of the hillside along Clara Barton Parkway westbound to accommodate a shift in the road alignment, a drainage ditch, and rockfall area. Most of the trees to be removed include a variety of small to medium diameter deciduous species, many of which have been overtaken by invasive vines. The NPS will conduct a tree survey within the limits of disturbance once detailed design plans have been developed. Trees that cannot be avoided will be replaced in accordance with the NCPC Tree Preservation and Replacement Policy.

Archeological Resources

There are no known archeological resources in the APE. The area of direct effects, where ground-disturbing activities would occur, is within the terrain that saw extensive grading for the construction of Clara Barton Parkway, and therefore the soils are heavily disturbed, and no intact archeological resources are expected to be present. In their response to consultation initiation, Maryland Historical Trust (MHT) recommended that no archeological investigations are necessary and the NPS concurred.

Traffic & Noise

The NPS anticipates substantial traffic impacts on Clara Barton Parkway from lane closures required to complete construction. The Design-Builder will prepare maintenance of traffic (MOT) Plans coordinated with the appropriate agencies and local stakeholders to minimize delays as much as possible. Additionally, construction-related noise may be disruptive to visitors to Glen Echo Park and nearby residents; however, NPS would ensure the Design-Builder adheres to the Montgomery County Noise Control Ordinance and noise monitoring and resource protection program. Traffic and noise are expected to return to pre-construction conditions once the Project has been completed.