

STAFF RECOMMENDATION



J. Koster

NCPC File No. 6885

WEST POTOMAC PARK LEVEE SYSTEM IMPROVEMENTS

17th Street, NW and Constitution Avenue, NW
Washington, DC

Submitted by the National Park Service

February 24, 2011

Abstract

The National Park Service (NPS) is seeking preliminary and final approval for the Phase 2 improvements to the Potomac Park levee system in the area of 17th Street and Constitution Avenue, NW. Phase 1, which was approved by the Commission on May 7, 2009, consisted of the structural elements necessary to provide reliable protection against a 100-year flood event in accordance with FEMA Flood Insurance Rate Maps. Phase 2 includes measures to enhance the visual character of those improvements consistent with their location on the National Mall and to meet the Congressionally-authorized flood protection level. The proposed improvements reviewed here include the 17th Street closure structure to the 185-year flood level, the final surface treatment of the exposed portions of the wall (stone cladding) and all of the associated earthwork, landscaping and hardscaping. A portion of Phase 2, specifically those actions related to raising the levee to meet the Congressionally-authorized level of protection (185 year flood) at 23rd Street, NW, in areas along the existing berm running parallel to the Lincoln Reflecting Pool, and at the overlook terrace in Constitution Gardens, will be constructed at a future date when funding becomes available. These portions of the levee currently are built to the 100-year flood protection level. This Commission action does not extend to these portions of the project. Levee improvements are being constructed on National Park Service land by the U.S. Army Corps of Engineers, using funds appropriated under the American Recovery and Reinvestment Act of 2009 (ARRA).

Commission Action Requested by Applicant

Approval of preliminary and final site development plans for Phase 2 improvements to the Potomac Park levee system in the area of 17th Streets and Constitution Avenue, NW, pursuant to 40 U.S.C. § 8722(b)(1) and (d).

Executive Director's Recommendation

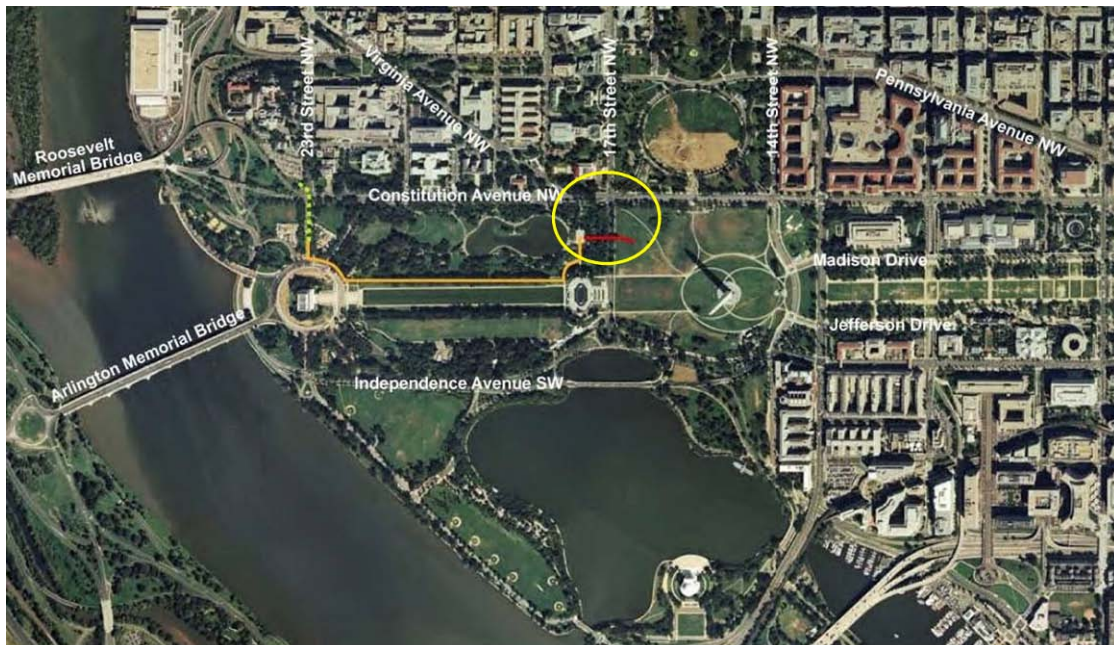
The Commission:

Approves the preliminary and final site development plans for Phase 2 improvements to the Potomac Park levee system near the intersection of 17th Street and Constitution Avenue NW, as shown on NCPC Map File No. 1.43(03.40)43263.

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PROJECT DESCRIPTION

Site



Aerial photograph showing project site (in circle) and vicinity

The existing levee system is designed to protect downtown Washington from Potomac River flooding. It extends from 23rd Street NW, north of the Lincoln Memorial, east to the raised mound on which the Washington Monument stands. It includes an earthen levee that extends from 23rd Street on the west to 17th Street on the east, between Constitution Gardens and the Reflecting Pool, and requires temporary measures (currently consisting of sandbags, Jersey barriers and an earthen dam) across 23rd and 17th Streets during flood events. The proposed project will provide a more secure closure system across 17th Street, consisting of a post-and-

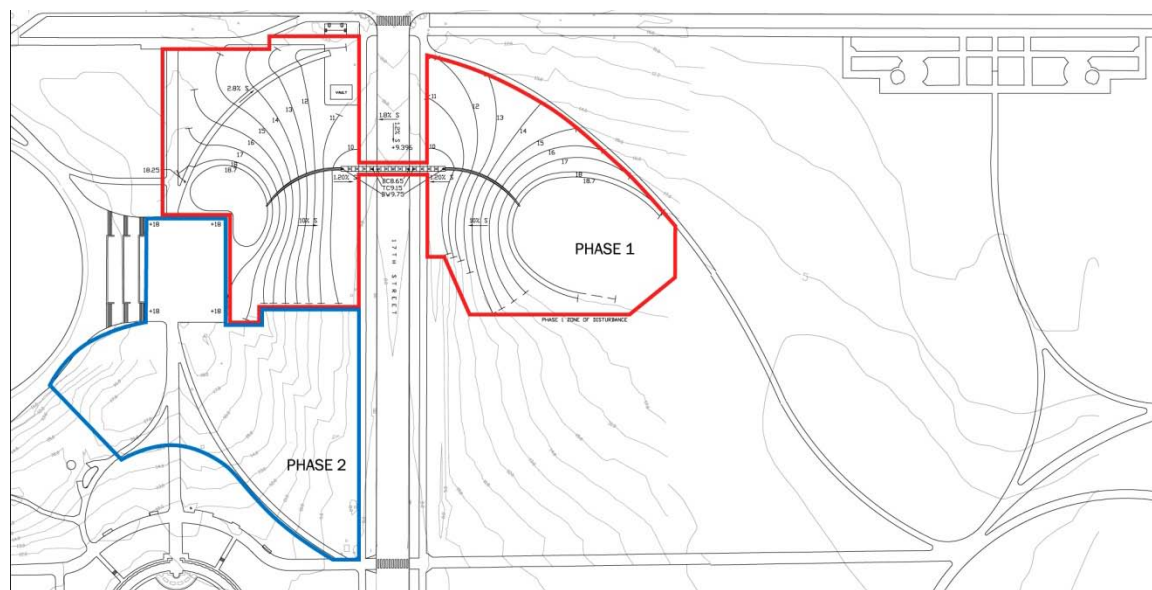
panel barrier system connected to masonry walls that tie into adjacent berms. The construction boundaries of the proposed project include portions of West Potomac Park and the Washington Monument grounds east and west of 17th Street south of Constitution Avenue.

Background

In 2007, as a result of new policies adopted following Hurricane Katrina, USACE determined that the temporary closure measures at 17th Street system no longer met the standard of protection authorized by Congress and de-certified the levee system. As a result of the USACE de-certification, FEMA proposed to issue new 100-year Flood Insurance Rate Maps (FIRMs) reflecting conditions as if there were no temporary closure system. The revised FIRMs would place portions of downtown Washington, including the Federal Triangle and museums along the north side of the Mall, as well as private property extending through Southwest DC to Ft. McNair, within the floodplain.

Because issuance of the revised FIRMs would mean that private property owners in the flood plain would be required to purchase flood insurance and federal property owners would be required to comply with development restrictions defined in Executive Order 11988, a concerted effort was made by the District and federal government agencies, working together, to design and construct the closure system before FEMA issued the new FIRMs. The lack of a secure funding source resulted in a proposal to build the project in Phases, with Phase 1 being the minimum necessary to provide a secure closure structure and Phase 2 being the elements of the design necessary to conform to the project's location on the National Mall, including stone cladding of the levee structure and landscape improvements. Phase 2 also included measures to provide flood protection to the Congressionally-authorized level, which is roughly equivalent to a 185-year flood. ARRA funds appropriated in mid-2010 was sufficient to allow the majority of both phases to be built concurrently, but too late to allow construction to proceed before the FIRMs were issued in the fall.

Proposal



Phasing

Phasing:

The project includes a removable post and panel system across 17th Street south of Constitution Avenue. Posts will be set into a structural grade beam spanning 17th Street, and the panels will be flanked by two symmetrical concrete flood walls that tie into raised berms at the east and west end of the structure. The flood walls and the grade beam will be clad in granite. When not in use, the post and panel system will be stored off site. As a result of the grading associated with the construction of the closure system, most of the existing trees and the walkway leading from the Overlook Terrace to the Lock Keepers House will need to be removed. A plan for the construction of the closure structure (not including the stone cladding) and replacement of the trees and sidewalk approved by the Commission in May, 2009, as Phase 1.

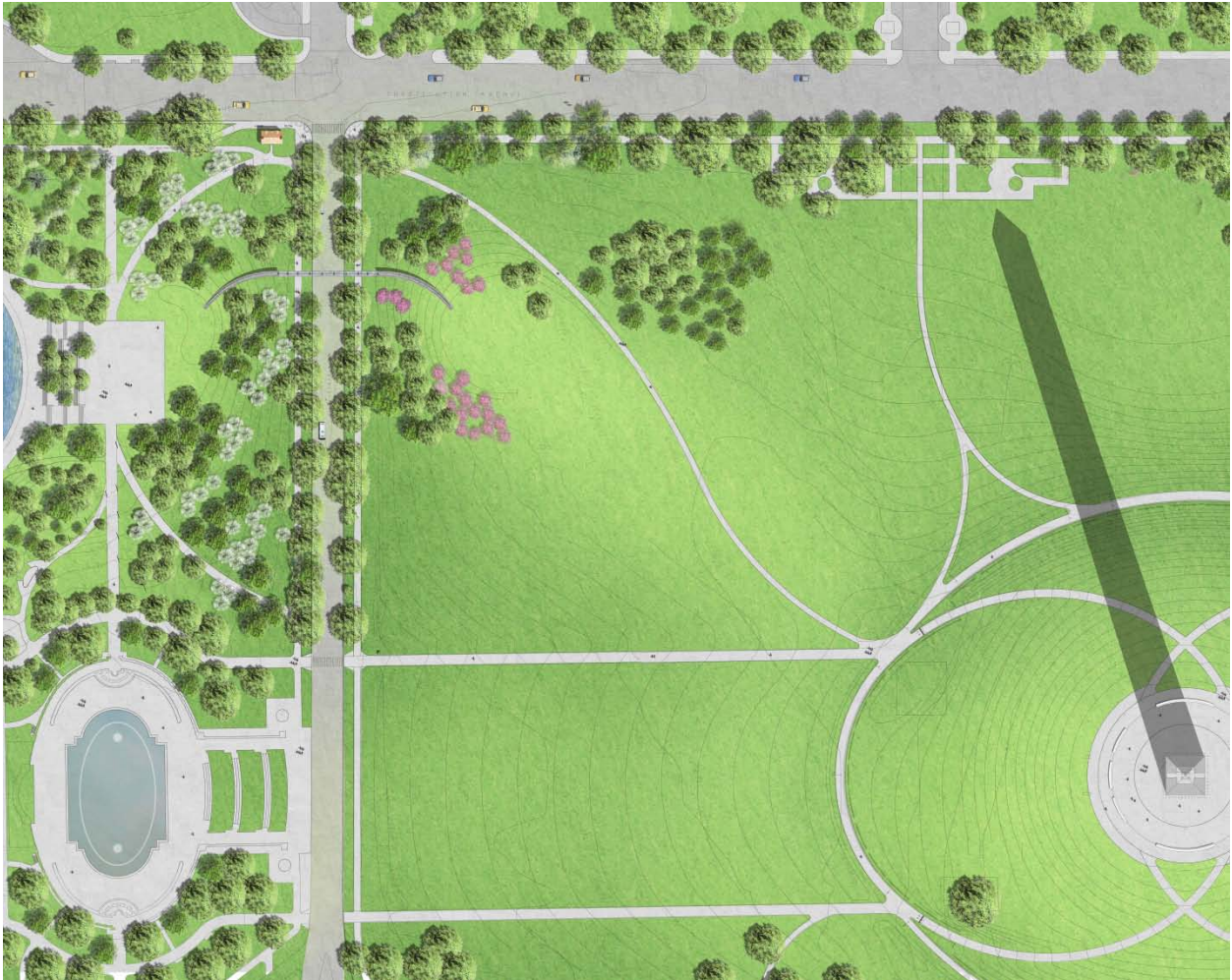
A concept design for the stone cladding for the levee walls and grade beam, regarding of the area around the sidewalk leading from the south side of the Overlook to 17th Street, and replacement of trees lost due to regarding was approved by the Commission in May, 2009, as Phase 2. The current submission is for preliminary and final approval of these elements of the design.

Since the project was last reviewed by the Commission, the USACE and the NPS identified funding to construct Phase 1 and most of Phase 2. This includes the 17th Street closure structure to the 185-year flood level, the final surface treatment of the exposed portions of the wall (stone cladding) and all of the associated earthwork, landscaping and hardscaping. In addition, the post and panel system will be stored off-site, rather than on the west side of 17th Street.

The remaining portions of the project, specifically those actions related to raising the levee to meet the Congressionally-authorized level of protection (185 year flood) at 23rd Street, NW, in areas along the existing berm running parallel to the Lincoln Reflecting Pool, and at the overlook terrace in Constitution Gardens, will be constructed at a future date when funding becomes available. These portions of the levee currently are built to the 100-year flood protection level. This Commission action does not extend to these portions of the project.

Development Program:

The USACE is using \$4.6 million in funding from the American Reinvestment and Recovery Act to complete the structural components of the project. The NPS has identified \$1.5 million in funding to complete the cladding, grading, landscaping and hardscaping adjacent to the project. The NPS and the District of Columbia government had previously provided \$700,000 and \$2.8 million, respectively, for design development and environmental and historic review. This brings the project cost, in total, to \$9.6 million. The USACE has already hired a private contractor to complete the structural work, which is being mobilized. When approvals are secured for the project work described in this report, the intent is to complete all of the Phase 1 and Phase 2 work described in this report by Summer 2011. Once the work is completed and certified, the District of Columbia government will request the FEMA provide a Letter of Map Revision.



Rendered site plan

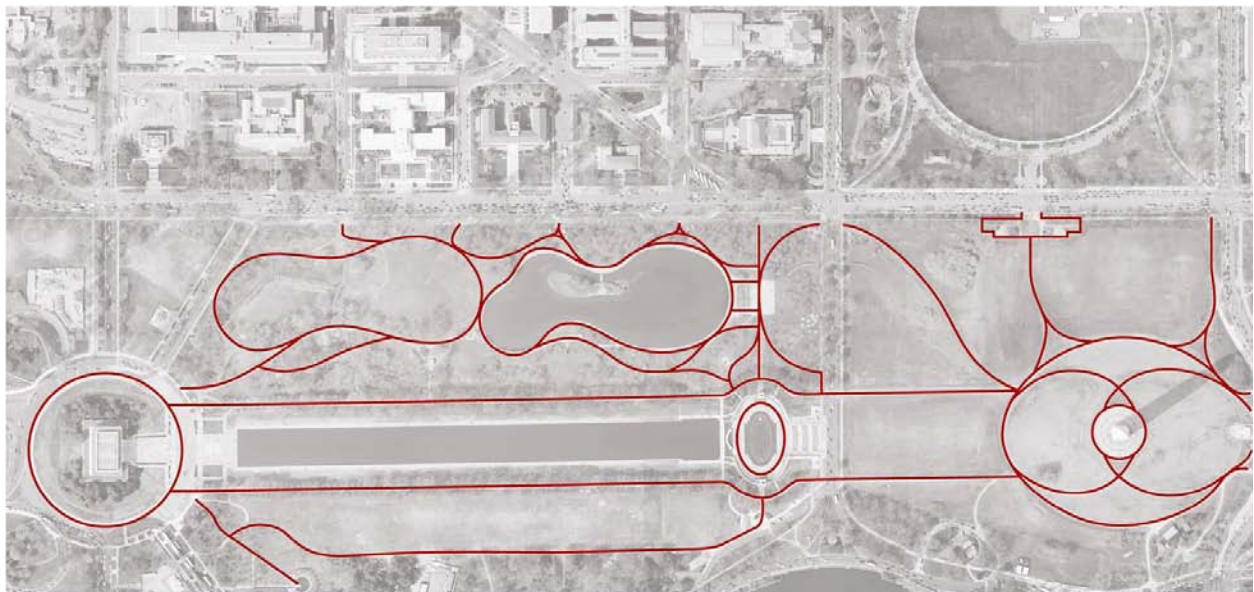
Design:

The masonry grade beam that crosses 17th Street and the curved levee walls will be clad in American granite. The stone was selected to complement the color and texture of the stone façade of the Lock Keeper's House. The levee walls will be battered, with ashlar coursing that becomes smaller as it progresses from the base of the wall to the top. The walls are topped with an angled capstone designed to discourage people from walking along the top of the wall. When in place, the ends of the panels will fit into channels made of naval brass at the ends of the walls. Naval brass will also be used for expansion joints installed every 30' along the face of the walls.



Levee walls

Curved walkways extending from the Overlook Terrace will complement the existing curved walkways on the Washington Monument Grounds and in Constitution Gardens. Walkways will be surfaced with the NPS standard for this area, and will be compliant with all accessibility standards. A plaza shown in the concept design to the south of the Lock Keeper’s House, where a vault to store the post and panel elements was to be located, has been eliminated. The post and panel elements will now be stored off-site.

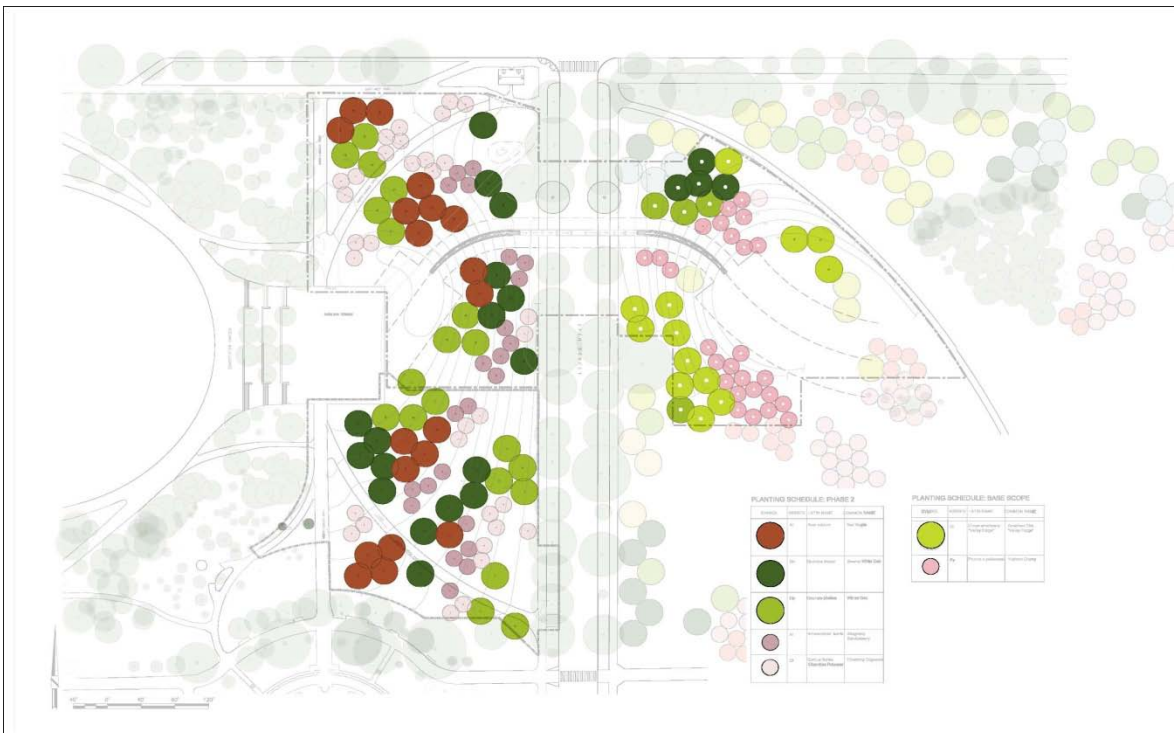


Path alignments on Washington Monument Grounds and Constitution Gardens

Existing soil in this area is very poor, and existing trees are stunted. Planting of replacement trees will be done in conjunction with soil improvement to improve the health and longevity of new trees. Replacement trees will include a combination of native species, including a canopy of oaks and maples and an understory of flowering trees. Mitigation required under the NPS and NCPC FONSI requires a 1:1 replacement of trees lost during construction, but trees will be grouped to avoid a “no planting zone” required along the levee, to preserve views of the Washington Monument from the Overlook Terrace, and to complement the Olin and SOM plans for the landscaping of the Washington Monument Grounds. Where possible, elms along 17th Street that are lost due to construction will be replaced.



View from the Overlook Terrace to the Washington Monument



Proposed Landscaping Plan

PROJECT ANALYSIS

The design for this project was developed in very close consultation among staff of the National Park Service (NPS), the National Capital Planning Commission (NCPC), the U.S. Commission of Fine Arts (CFA), the U.S. Army Corps of Engineers (USACE), the District of Columbia Historic Preservation Officer (SHPO), and others. The design of the stone cladding and the planting plan is consistent with the recommendations made during consultation and virtually unchanged from the concept design on which the Commission commented favorably in May, 2009. The design also is consistent with mitigation measures included in the NPS and NCPC FONSI and the Programmatic Agreement. **Staff therefore recommends preliminary and final approval of Phase 2 to the Potomac Park levee system in the area of 17th Streets and Constitution Avenue, NW.**

CONFORMANCE

Comprehensive Plan for the National Capital

The proposal is consistent with the Comprehensive Plan for the National Capital. Specifically, it is consistent with policies that encourage modification of existing developments to correct flood hazards and to restore floodplain values, as well as with policies stating that elements designed to provide security shall be designed in a manner that enhances and beautifies the public realm, does not excessively restrict or impede operational use of sidewalks and vehicular mobility, and minimizes impact on the health of existing mature trees.

Federal Capital Improvements Plan

The project first appeared in the FCIP for FY 2000-2004. The FY 2009-2014 FCIP lists the project as Recommended and Strongly Endorsed.

Relevant Federal Facility Master Plan

The NPS has developed a National Mall Management Plan, adopted by the Commission in January 2011. The levee improvement project as described in this report was considered and included in the Management Plan, and NPS has confirmed that the proposal is consistent with this Plan.

National Environmental Policy Act (NEPA)

In accordance with the National Environmental Policy Act of 1969 (NEPA) and in cooperation with NCPC, the National Park Service prepared an Environmental Assessment (EA) for the project in January 2009. Based on the EA, NPS executed a Finding of No Significant Impact (FONSI) with mitigation.

As a result of its approval authority under the National Capital Planning Act, NCPC has independent responsibility under the National Environmental Policy Act and the National Historic Preservation Act for Federal projects in the District of Columbia. Based on the EA

prepared by NPS, NCPC executed a Finding of No Significant Impact (FONSI), with mitigation, for the project.

Mitigation included in both the NPS and NCPC FONSI includes rehabilitation of the area disturbed by construction, stone cladding of the levee walls to match the historic character of the adjacent cultural landscape and historic resources, and additional interpretation and education appropriate to the historic context of the project and the site.

National Historic Preservation Act (NHPA)

A Programmatic Agreement (PA) was executed on May 1, 2009. The PA stipulated mitigation measures and addressed the process and goals for further consultation for the development and review of levee improvement plans for Phase 2. A modified PA is currently being developed in accordance with the process and goals outlined in the original PA that reflects the noted changes in the project phasing and agency responsibilities for implementation. Also, for clarification, the modified PA will note that the off-site storage of the post and panel system, rather than on-site storage near the Lock Keeper's House, will not increase any adverse impacts of the project.

CONSULTATION

Coordinating Committee

The Coordinating Committee reviewed the proposal on December 17, 2008, and forwarded the proposal to the Commission with the statement that the project has been coordinated with all agencies represented. The participating agencies were NCPC, the General Services Administration, the National Park Service, the Washington Metropolitan Area Transit Authority, and the District of Columbia Departments of Transportation, of Housing and Community Development, and of Fire and Emergency Medical Services.

Commission of Fine Arts

The Commission of Fine Arts reviewed and approved Phase 1 at its meeting on April 16, 2009, and approved Phase 2 by consent at its meeting on February 17, 2011.