



# Rock Creek Park Multi-Use Trail Rehabilitation

## FINAL ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT



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**FINAL ENVIRONMENTAL ASSESSMENT  
AND  
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FOR THE  
  
ROCK CREEK PARK  
MULTI-USE TRAIL REHABILITATION  
WASHINGTON, DC**

Prepared pursuant to 42 U.S.C. 4332(2)(c) by:  
U.S. Department of Transportation  
Federal Highway Administration  
The National Park Service  
District Department of Transportation

*with the cooperation of  
The National Capital Planning Commission*

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Date of Approval

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Date of Approval

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# **FINDING OF NO SIGNIFICANT IMPACT FOR ROCK CREEK PARK MULTI-USE TRAIL REHABILITATION WASHINGTON, DC**

The District Department of Transportation (DDOT), in conjunction with the Federal Highway Administration (FHWA), the National Park Service (NPS) and with the cooperation of the National Capital Planning Commission (NCPC) has prepared an Environmental Assessment (EA) to assess the potential effects of various alternatives for the rehabilitation of the Rock Creek Park multi-use trail in Washington, DC. Rock Creek Park is under the jurisdiction of the NPS, but implementation of the proposed action would be administered by DDOT and funded by FHWA. In accordance with the National Environmental Policy Act of 1969 (NEPA), Section 106 of the National Historic Preservation Act (NHPA), NPS Director's Order #12: *Conservation Planning, Environmental Impacts Analysis and Decision-Making* (NPS 2001), FHWA *Technical Advisory* (T6640.8a), and other applicable laws, regulations, and policies, an EA was prepared and was released for agency and public review on December 2, 2011. A public hearing was held on December 14, 2011. Subsequently, a Final EA and a Finding of No Significant Impact (FONSI) is prepared to fully address all agency and public comments received.

The proposed action includes the rehabilitation of a 3.7-mile segment of the Rock Creek Park multi-use trail from Broad Branch Road to P Street, NW; a 4,300-foot (0.8 mile) segment of the Piney Branch Parkway trail from Beach Drive to Arkansas Avenue, NW; a 1,929-foot (0.4 mile) segment of the Rose Park trail from P Street, NW to M Street, NW; a 363-foot ramp connecting the Rose Park trail to P Street, NW; and a new 1,247-foot (0.2 mile) paved trail segment from Broad Branch Road to Peirce Mill (referred to as the Peirce Mill Trail Spur). The proposed action includes resurfacing, trail widening where environmentally feasible, modifications to the trail alignments and road crossings, directional and interpretive signage, and connections to and from the trails to other pedestrian and bicycle facilities. The majority of the proposed improvements are located on NPS land, with some improvements located within District of Columbia right-of-way, and within the National Zoological Park property. The proposed action does not involve any transfer of ownership or change of jurisdiction of the trail or the land within the project area. Ownership of the trail and land within the project area will remain with the current owners.

The purpose of this action is to improve the overall condition and connectivity of the deteriorating Rock Creek Park multi-use trail system in order to enhance visitor use and experience within Rock Creek Park. The proposed action would result in improved visitor safety and experience and protection of park resources; improved access to the Rock Creek Park multi-use trail system from other pedestrian and bicycle facilities, as well as the surrounding neighborhoods; and more effective drainage and erosion control, thereby reducing trail maintenance. The proposed action would also include a number of spot improvements to more effectively separate trail users from vehicular traffic; to improve safety at roadway crossings; to improve sight distance at approaches and curves; to improve user accessibility; and to improve drainage and erosion control. In addition, a number of new connections to Rock Creek Park from the surrounding pedestrian and bicycle systems are proposed, as well as connections to and from the Piney Branch Parkway trail, within Rock Creek Park. The project is needed to improve safety conditions, protect park resources, and improve connectivity to the park from surrounding neighborhoods; to support the needs of diverse user groups who enjoy the trails and improve visitor experience; and to enhance opportunities for interpretation of park

history and resources. The proposed action would further increase connectivity and erosion control by creating the Pierce Mill Trail Spur and a formal link to the trail in Rose Park.

## **PREFERRED ALTERNATIVE**

In accordance with the project objectives established to meet the project purpose and need, two action alternatives for the rehabilitation of the Rock Creek Park multi-use trail were developed. In addition to the action alternatives, two options for the visitor-made social trail from Broad Branch Road to Peirce Mill, and three options for the Rose Park trail were analyzed as part of the EA. The work being proposed for the Peirce Mill trail spur and the Rose Park trail options are included in the EA for the Rock Creek Park Multi-Use Trail Rehabilitation project to improve surrounding communities' access and connectivity to the Rock Creek multi-use trail; however, the implementation of any of these options would not affect the implementation of the work proposed for the Rock Creek Park multi-use trail. The options for the Peirce Mill Trail Spur and the trail in Rose Park that are selected as preferred would be implemented in conjunction with the Preferred Alternative for the Rock Creek Park multi-use trail. The No Action Alternative was also included in the analysis.

### **Preferred Rock Creek Park Multi-Use Trail Rehabilitation Alternative**

Based on public comments and environmental analysis, DDOT in conjunction with FHWA and NPS identified Alternative 3: Trail Resurfacing and Widening, as the Preferred Alternative for the Rock Creek Park Multi-Use Trail Rehabilitation. Under Alternative 3, the Rock Creek Park multi-use trail would be resurfaced and widened to a maximum 10-foot width; the width will vary depending on environmental and physical constraints. Of the approximately 5.2 miles of trail resurfacing proposed under Alternative 3, 2.6 miles would be 10 feet in width. As discussed below, the proposed trail realignments, in certain areas, and other spot improvements would improve sight distance at approaches and curves, improve user accessibility, and improve drainage and erosion control.

The Piney Branch Parkway travel lanes are currently 12 feet wide and the Piney Branch Parkway Trail is 4.5 feet wide. By restriping this segment of the Parkway to 11-foot lanes, a six-foot trail would be achieved without creating a larger footprint. Depending on physical and environmental constraints, an approximately 50-foot segment of the Piney Branch Parkway Trail will be widened to separate trail users from vehicular traffic. Sections ranging from four to six feet wide would be located for a short segment along Piney Branch Parkway, through the Beach Drive tunnel, and along the connections to P Street, NW. A short segment from just north of Piney Branch Parkway to the National Zoo entrance will be widened to eight feet in width. The unpaved social trail connecting the Rock Creek Park multi-use trail to the Piney Branch Parkway trail would be paved to an eight-foot width. At the east end of the Piney Branch Parkway trail, the social trail along Arkansas Avenue will be resurfaced and will include new ADA sidewalk ramps that would tie into the existing sidewalks at 16<sup>th</sup> Street, NW and Taylor Street. Existing drainage features along the 50-foot segment, such as curb, will be shifted a maximum of two feet inward in order to accommodate the wider trail.

A new trail segment, which will separate trail users from vehicular traffic, will be constructed between the Broad Branch/Grove 2 North Parking Area and Rock Creek Park multi-use trail. The new trail will replace an existing social trail to the east of the parking area. The new trail segment will tie into the existing Rock Creek Park multi-use trail immediately south of the parking area.

Under the Preferred Alternative, the existing two-foot wide raised sidewalk along the west wall of the Beach Drive Tunnel will be widened to approximately four feet. To accommodate this widening within the existing tunnel, the vehicular travel lanes would be reduced from 12 feet in width to approximately 11 feet. In developed areas, where there are stringent controls on design, the use of 10-foot lanes is the minimum acceptable practice, according to the American Association of State Highway and Transportation Officials (AASHTO) guidance. Signage at the tunnel

approaches would alert drivers to the trail users ahead. Additionally, a barrier such as a low-profile guardrail will further alert drivers of the trail within the tunnel. Future NPS plans include replacement of the tunnel's existing lighting with LED lights. Light replacement is expected to be complete in 2014.

Under the Preferred Alternative, a new pedestrian bridge will be constructed south of the Beach Drive Tunnel immediately adjacent to the west side of the existing bridge. The proposed structure will be equal in length and style as the existing bridge, and will be constructed within five feet of the current bridge abutment. The five foot distance would allow for maintenance and future replacement of the vehicular bridge, if needed. The bridge materials would match the current concrete and stone aesthetics of the existing structure. The total width of the proposed bridge would be 12 feet, allowing for a 10-foot trail clearance. Currently, the Rock Creek Park multi-use trail crosses the bridge by way of a 3.5-foot raised sidewalk along the upstream (west) side of the bridge. Currently, sight distance at the Porter Street Bridge underpass is limited. However, physical and environmental constraints prevent realignment of the trail at this location. Under the Preferred Alternative, centerline stripping will be included at the approaches to this underpass to reduce potential user conflicts.

New crosswalks are proposed at Broad Branch Road to the north of the parking area entrance, and at P Street, NW to connect the existing sidewalks along the west end of the P Street ramp. The existing at-grade crosswalk on Jewett Street would be improved for trail user safety. In addition, the alignment of the crosswalk and approaches at the National Zoo entrance would be modified to create a shorter roadway crossing distance, as well as sight distance improvements for both trail users and vehicular traffic. On Beach Drive, north of Blagden Avenue, the existing sidewalk along the east side of the Beach Drive Bridge would be extended north to a new at-grade crossing to the existing trail to the north of Beach Drive. Another means of access to the trail network on Blagden Avenue is a sidewalk on the west side of Beach Drive. To connect sidewalks, a cross walk is proposed on Beach Drive south of Blagden Avenue. This sidewalk extension would give users an alternative way to gain access to Blagden Avenue and eliminate the need to traverse multiple roadway crossings on the east side of Beach Drive.

The Preferred Alternative also includes the construction of a new trail to connect the Rock Creek multi-use trail to the existing sidewalk along the Porter Street, NW ramp, and new trails along both sides of the P Street ramp to include a new crosswalk that would connect the existing P Street sidewalk, Rock Creek and Potomac Parkway trail, and Rose Park trail. The Preferred Alternative would also be compatible with the proposed trailhead at Klinge Valley.

Under the Preferred Alternative, minor trail realignments would improve sight distance and approaches along the trail to the south of Peirce Mill, to the south of Shoreham Drive, and at the approach to the Devil's Chair (Lyon's Mill) Bridge. In addition, minor grading is proposed for an approximate 180-foot segment of the multi-use trail, south of Calvert Street, to decrease the existing slope from approximately 12 percent to eight percent and improve user accessibility. Soil erosion and ponding conditions occur along an approximately 1,100-foot segment of the Rock Creek Park multi-use trail south of Peirce Mill. The Preferred Alternative includes raising the vertical profile of the trail to eliminate ponding, and stabilizing the slope between Beach Drive and this segment of the trail to improve soil erosion conditions. Additionally, restoration is proposed for a 45-foot timber retaining wall immediately adjacent to the trail. The wall is located approximately 100 feet northwest of the southern end of the Beach Drive tunnel. Deterioration of the wall is contributing to soil erosion conditions between the trail and Rock Creek. Under the Preferred Alternative, the timber retaining wall would be reconstructed to mitigate soil erosion. Another deteriorating wall is located in the project area along Piney Branch Parkway. It is anticipated that the wall will be evaluated and potentially stabilized under a separate project with the National Park Service and FHWA. This will occur prior to the rehabilitation of the Piney Branch Parkway trail.

Stormwater best management practices (BMPs) that meets DDOE requirements will be used under the Preferred Alternative to more effectively manage stormwater along the multi-use trail. Potential stormwater management

practices could include installation of bioretention areas could be included at some of the connections to DDOT right-of-way that would promote infiltration of stormwater in order to reduce its volume, improve its quality, and increase groundwater recharge. Other stormwater management techniques could include bioswales in order to reduce stormwater runoff. Bioswales could be constructed adjacent to the Broad Branch/Grove 2 North parking area, adjacent to the trail between the Beach Drive tunnel and Tilden Street, including the trail along Piney Branch Parkway, adjacent to the trail between Klinge Road and Shoreham Drive, including the parking areas, and adjacent to the trail between the P Street, NW bridge and Oak Hill Cemetery. The appropriate stormwater BMP that will be constructed or used at specific locations along the trail will be refined during the design phase of the project.

### **Preferred Peirce Mill Trail Spur**

The preferred option for the improvements to the Peirce Mill Trail Spur is Option B. Under this option, the existing unpaved social trail from south of the Broad Branch/Grove 2 North parking area to the Peirce Mill parking area would be resurfaced to a standard eight-foot width. Trail material selection would be considered during the detailed design phase of the project. Prior to any land disturbing activities, tree protection measures, erosion and sediment control measures, and other BMPs would be installed. Archeological testing along the spur alignment will be conducted if deemed necessary by the National Park Service, National Capital Region's Regional Archeologist. Limited testing in the area was undertaken as part of the Peirce Mill Rehabilitation project in 2010-2011.

### **Preferred Rose Park Trail**

The preferred option for the improvements to the trail at Rose Park is Option B. Under this option, the Rose Park trail, from P Street to M Street, NW, would be resurfaced along its current alignment to a six-foot width. A six-foot width is the standard width of a DDOT residential sidewalk and would be a zero to two-foot width increase along the length of the trail. The connection to the M Street sidewalk would follow the current alignment of the unpaved social trail as it deviates from the paved segment. Under Option B, a new safety railing would be constructed along the Rose Park Trail to provide protection from a steep embankment to the east. Existing chain link fencing in Rose Park would be removed to construct the railing, which would be comprised of timber posts and rails. Design of the new railing would match the character of other safety rails on the Rock Creek multi-use trail and would be consistent with AASHTO guidelines for shared use paths. The existing brick pathway connection to the M Street sidewalk would remain unchanged. Yield signs or speed limit signs could be installed in and around the park to calm traffic, and raise safety awareness on the trail. Special provisions would be considered to preserve the large oak tree at the Dumbarton Street playground area such as alternative trail materials and/or modifying the trail to accommodate the tree. Prior to any land disturbing activities, tree protection measures, erosion and sediment control measures, and other BMPs would be installed. Archeological testing along this alignment will be conducted if deemed necessary by the National Park Service, National Capital Region's Regional Archeologist. Trail material selection would be considered during the detailed design phase of the project.

The total cost of the Preferred Alternative and options would range from \$9,068,802 to \$9,227,704. The duration of construction is anticipated to be 12 to 18 months. A complete description of the Preferred Alternative and options is provided in *Chapter 2* of the Final EA.

## **ALTERNATIVES CONSIDERED BUT NOT SELECTED**

The EA also evaluated alternatives and options that were not selected as preferred. These include the No Action Alternative (Alternative 1) and one additional alternative (Alternative 2) for the Rock Creek Park Multi-Use Trail Rehabilitation, in conjunction with options to improve the Peirce Mill Trail Spur and the trail in Rose Park. Additionally, other alternatives and options were considered but not retained for detailed analysis in the Final EA.



### **Rock Creek Park Multi-Use Trail Rehabilitation Alternatives Not Selected**

Under the No Action Alternative (Rock Creek Park Multi-Use Trail Alternative 1), the Rock Creek Park multi-use trail from the Broad Branch/Grove 2 North parking area to P Street, NW would continue to be maintained by the NPS. Neither the Rock Creek Park multi-use trail nor the Piney Branch Parkway trail would be rehabilitated, although basic maintenance such as spot repairs and debris removal would continue. The No Action Alternative was not chosen as the Preferred Alternative because it does not meet the project purpose and need.

Under Rock Creek Park Multi-Use Trail Alternative 2: Trail Resurfacing, the Rock Creek Park multi-use trail would be resurfaced at its existing variable (six-foot to 10-foot) widths. Trail material selection would be considered during the detailed design phase of the project. The unpaved social trail connecting the Rock Creek Park multi-use trail to the Piney Branch Parkway trail would be resurfaced to a six-foot width, and the Piney Branch Parkway trail would be resurfaced to a varying six-foot to eight-foot width, depending on physical and environmental constraints. Alternative 2 included all of the elements described above under the Preferred Alternative except that Alternative 2 did not include trail widening. Rock Creek Park Multi-Use Trail Alternative 2 was not chosen as the Preferred Alternative because it would not widen the trail and therefore would not resolve trail user conflicts and safety issues that are currently of concern.

### **Peirce Mill Trail Spur Options Not Selected**

Under Peirce Mill Trail Spur Option A, the unpaved social trail south of the Broad Branch/Grove 2 North parking area to Peirce Mill would remain unchanged. No new construction would occur. This option will not meet the need to improve access to the Rock Creek Park multi-use trail system or to improve visitor safety and experience and protection of park resources. Option A was not chosen as the preferred Peirce Mill Trail Spur option because it does not meet the project purpose and need.

### **Rose Park Trail Options Not Selected**

Under Rose Park Trail Option A, no new construction would occur along the four-foot to six-foot wide segment of the Rose Park trail between P Street, NW and M Street, NW. NPS would continue to maintain the trail in its existing state. This option will not meet the need to improve visitor safety and experience and protection of park resources. Option A was not chosen as the preferred Rose Park Trail option because it does not meet the project purpose and need.

Under Rose Park Trail Option C, the Rose Park trail, from P Street to M Street, NW, would be resurfaced along its current alignment to a standard eight-foot width, which is the minimum AASHTO recommended width for a multi-use trail (FHWA 2001). The connection to the M Street sidewalk would follow the current alignment of the unpaved social trail as it deviates from the paved segment. The existing brick pathway connection to the M Street sidewalk would remain unchanged. Prior to any land disturbing activities, tree protection measures, erosion and sediment control measures, and other BMPs would be installed. If necessary, archeology testing also would be performed. Trail material selection would be considered during the detailed design phase of the project. Option C was not chosen as the preferred Rose Park Trail option in consideration of nearby resident's concerns regarding the proximity of the widened trail to children's play areas and potential impacts to a large oak tree adjacent to the trail. More detailed descriptions of the trail alternatives and various options considered are provided in *Chapter 2* of the Final EA.

## **ANALYSIS OF SIGNIFICANT IMPACT**

As stated in 40 CFR 1508.27(a), the analysis of significance as used in NEPA requires consideration of both the context and intensity of an action:

(a) Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

(b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

- Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.
- The degree to which the proposed action affects public health or safety.
- Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
- The degree to which the effects on the quality of the human environment are likely to be highly controversial.
- The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
- The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
- Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
- The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
- The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
- Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

During the scoping process the project was determined to have no or negligible impacts to geology and topography, groundwater, surface waters, wetlands, floodplains, rare, threatened, and endangered species, scenic resources (aesthetics and viewsheds), museum collections, ethnography, socioeconomic, and environmental justice; therefore, these impact topics were dismissed from detailed analysis in the EA. The project would result in some adverse effects to the natural, cultural, and transportation environment based on the impact analysis presented in *Chapter 4* of the EA; however, the project would not result in significant impacts. A summary of these effects, and an evaluation of their significance per the CEQ guidance, is provided in the following paragraphs. A detailed analysis of these effects is provided in the EA.

### **Soils**

The Preferred Alternative would result in short-term negligible adverse impacts to soil resources from construction and long-term beneficial impacts from the stabilization of social trails, discouragement of social trail use, and rehabilitation of existing paved trails. The preferred options for the Peirce Mill Trail Spur and the Rose Park Trail would result in short-term minor adverse impacts to soil resources during construction and long-term beneficial impacts due to the stabilization of disturbed soils and rehabilitation of the trail segment. Impacts to soils do not meet the level of “significance” per the CEQ definition, and would not require a higher classification of NEPA documentation or study.

### **Water Quality**

Under the Preferred Alternative and options, soil disturbance associated with construction activities would result in short-term negligible adverse impacts to water quality due to the increased risk of sediment transport into nearby water bodies during construction. Long-term beneficial impacts would occur under the Preferred Alternative based on improvements to drainage infrastructure. The preferred options for the Peirce Mill Trail Spur and the Rose Park Trail would result in long-term negligible adverse impacts due to the paving of each trail segment and the associated increase in impervious surface. Impacts to water quality do not meet the level of “significance” per the CEQ definition, and would not require a higher classification of NEPA documentation or study.

### **Vegetation**

Under the selected alternative and options, short-term minor adverse impacts will occur to vegetation in small localized areas during construction. Long-term minor adverse impacts will occur to herbaceous vegetation and potential impacts to large trees may occur from trail widening under the selected alternative. The preferred Peirce Mill Trail Spur and Rose Park Trail options will both result in long-term negligible to minor adverse impacts due to the loss of herbaceous vegetation and potential impacts to large trees. Impacts to vegetation do not meet the level of “significance” per the CEQ definition, and would not require a higher classification of NEPA documentation or study.

### **Wildlife**

The Preferred Alternative and options would have short-term negligible adverse impacts to aquatic resources from soil disturbance during construction and the associated increase in sediment transport to nearby water bodies. Long-term beneficial impacts to aquatic resources would result from soil stabilization, the rehabilitation of existing timber retaining walls, and improved drainage infrastructure. Short- and long-term negligible adverse impacts to terrestrial species would occur under the Preferred Alternative and options due to disturbances during construction and vegetation removal and the associated loss of terrestrial wildlife habitat. Impacts to wildlife do not meet the level of “significance” per the CEQ definition, and would not require a higher classification of NEPA documentation or study.

### **Historic Structures and Districts**

The Preferred Alternative and options would introduce additional paving within the project’s Area of Potential Effect (APE) resulting in local direct long-term minor adverse impacts to the historic resources of Rock Creek Park and Rock Creek and Potomac Parkway. However, the actions proposed under the Preferred Alternative and options would not significantly diminish the overall integrity of any of the historic resources or cultural landscapes in the APE. The determination of effect for the Preferred Alternative and options for purposes of Section 106 would be *no adverse effect*. Impacts to historic structures and districts do not meet the level of “significance” per the CEQ definition, and would not require a higher classification of NEPA documentation or study.

### **Cultural Landscapes**

Impacts to the cultural landscape under the Preferred Alternative and options will be modest, and the historic alignments and characteristics of the trails and their cultural landscape setting would be appropriately treated to respect character-defining features of Rock Creek Park and of Rock Creek and Potomac Parkway. With the exception of the new trail along Piney Branch Parkway, all new trails would be introduced in short spans and would not significantly diminish the overall integrity of the historic resources or cultural landscapes within the APE. The preferred Peirce Mill Trail Spur option would result in a long-term beneficial impact due to the improvement of the deteriorated grounds where social trails exist. There would be additional long-term beneficial impacts created by utilizing the historic millrace alignment, which would help engage the public with the historic landscape patterns. There would be no effect on cultural landscapes from the implementation of the preferred Rose Park Trail option because Rose Park is not a component of Rock Creek Park’s cultural landscape. The determination of effect for the Preferred Alternative and

options for purposes of Section 106 would be *no adverse effects*. Impacts to cultural landscapes do not meet the level of “significance” per the CEQ definition, and would not require a higher classification of NEPA documentation or study.

### **Archeology**

Trail widening and spot improvements under the Preferred Alternative and options would result in limited and localized ground disturbance activities. The preferred Peirce Mill Trail Spur option would result in the paving of an existing social trail within a known resource (51NW154) that has not been evaluated for listing in the National Register of Historic Places (NRHP). The preferred Rose Park Trail option would result in widening and repaving in areas that have not been surveyed for the presence of archeological resources. Avoidance, minimization, and mitigation within known archeological resources such as 51NW154, or as yet unidentified archeological resources, would result in *no adverse effect*. Impacts to archeology do not meet the level of “significance” per the CEQ definition, and would not require a higher classification of NEPA documentation or study.

### **Visitor Use and Experience**

Under the Preferred Alternative, short-term moderate adverse impacts to visitors would occur because construction would temporarily impede trail use and construction equipment and noise would detract from the park aesthetics and natural soundscape. However, the Preferred Alternative would result in long-term beneficial impacts to visitors based on overall improvements because the trail would be smoother and more aesthetically pleasing, and trail widening would reduce the potential for user conflicts. The preferred Peirce Mill Trail Spur option would have a long-term beneficial impact as trail users of multiple types would be given another trail option to experience the park’s resources, and the preferred Rose Park Trail option would result in a long-term beneficial impact because safety issues would be mitigated by the trail resurfacing, widening, and access provided by new connections. Impacts to visitor use and experience do not meet the level of “significance” per the CEQ definition, and would not require a higher classification of NEPA documentation or study.

### **Human Health and Safety**

The Preferred Alternative and options would result in short-term negligible adverse impacts during construction. Long-term beneficial impacts would result under the Preferred Alternative from improved separation of trail users from vehicular traffic, improved roadway crossings, trail resurfacing, minor realignments, and trail widening. The preferred Peirce Mill Trail Spur option would have long-term beneficial impacts to human health and safety because resurfacing the social trail would provide safe access to a wider variety of users, including wheelchair users. The preferred Rose Park Trail option would have a long-term beneficial impact from the addition of paved connections and resurfacing. Impacts to human health and safety do not meet the level of “significance” per the CEQ definition, and would not require a higher classification of NEPA documentation or study.

### **Park Operations and Management**

Under the Preferred Alternative and options, trail improvements, detours and closings, and maintenance of traffic (MOT) would be conducted by DDOT. DDOT would implement temporary traffic controls along the trail and at road crossings as needed. Overall, the construction of the trail will be relatively simple, will be completed by small groups of workers, and will require relatively small equipment and machinery. Construction of the bridge will have short-term minor adverse impacts. DDOT will perform all of the temporary trail closings, MOT, and trail rehabilitation. During construction, short-term, minor adverse impacts to park operations and management will occur to NPS staff resources under the selected alternative and options because of their participation in the planning and coordination efforts. Implementation of the Preferred Alternative would result in long-term beneficial impacts to park operations by reducing the maintenance needs of the Rock Creek Park multi-use trail. The preferred Peirce Mill Trail Spur option would have a long-term minor adverse impact from the additional maintenance required for the newly paved trail spur.

The preferred Rose Park Trail option would have a long-term beneficial impact due to the reduction in maintenance needs of the trail. Impacts to park operations do not meet the level of “significance” per the CEQ definition, and would not require a higher classification of NEPA documentation or study.

### **Traffic and Transportation**

The Preferred Alternative would result in short-term moderate adverse impacts from temporary inconveniences caused by road and trail detours and closings and extended travel times. Long-term beneficial impacts would occur as a result of the Preferred Alternative due to reductions in user conflicts between trail users and motorists, and enhanced connectivity between the trail system and surrounding bicycle and pedestrian networks. The preferred Peirce Mill Trail Spur option would result in long-term beneficial impacts by providing trail users with additional access to Rock Creek. The preferred Rose Park Trail option would result in short-term moderate adverse impacts due to detours and temporary trail and roadway closures during construction, but long-term beneficial impacts would result due to the additional access to M Street. Impacts to traffic and transportation do not meet the level of “significance” per the CEQ definition, and would not require a higher classification of NEPA documentation or study.

### **Section 106 Determination of Effects**

Based on the criteria of adverse effect and potential effects, under Section 106, of the build alternatives on the integrity of each property and on consultation with the DC SHPO office, FHWA has determined that the Rock Creek Park Multi-Use Trail Rehabilitation project will have “no adverse effect” on historic properties and archaeological resources as defined by 36 CFR 800. Prior to implementation of the project, FHWA and DDOT will ensure the following:

- DC SHPO will be provided an opportunity to review and comment on the additional information such as maps, plans, and detailed project descriptions that defined the undertaking in more details; and
- In consultation with the DC SHPO, DDOT shall conduct archaeological survey in all locations where ground disturbance if previously unsurveyed areas are proposed and any locations warrant testing for the presence of potentially significant archaeological resources.

Based on a letter to DDOT, dated 19 October 2011, DC SHPO concurred with the FHWA determination that the project will have “No Adverse Effect” on historic properties and archeological resources as defined by 36 CFR 800.

### **Section 4(f) Resource**

Rock Creek Park is national public park and as such, is afforded special protection by legislation including Section 4(f) of the U.S. DOT Act of 1966, the National Park Service Organic Act, and the 1890 Rock Creek Enabling Legislation. Rock Creek Trail is an existing trail and will continue to be owned and maintained by NPS. The trail is a contributing element to the Rock Creek Park and Rock Creek and Potomac Parkway historic district. For the Rock Creek Park Multi-Use Trail Rehabilitation Project, no land will be permanently incorporated into a transportation facility with either of the action alternatives, including the Preferred Alternative. Although the Rock Creek Park Multi-Use Trail Rehabilitation Project will involve temporary occupancy of park resources, the project has been determined to have “No Adverse Effect under Section 106; therefore, it does not involve the use of a Section 4(f) resource. Furthermore, according to the 2004 Cooperative Agreement between the National Park Service, the DC Department of Transportation and the DC Department of Parks and Recreation for the rehabilitation of Rock Creek Park multi-use trail and the Rose Park trail, this project is funded through the Recreational Trails Program. Under 23 CFR 774.13 and 23 CFR 774.17, the Rock Creek Park Multi-Use Rehabilitation Project will not use a Section 4(f) resource and is applicable for an exception; therefore the project is legislatively exempt from the requirements of Section 4(f).

## MITIGATION MEASURES

The following mitigation measures would be implemented to mitigate or minimize adverse impacts of the Preferred Alternative and options:

### Soils

During the design phase of the project, erosion and sediment control plans would be prepared in accordance with the DDOE current *Standards and Specifications for Soil Erosion and Sediment Control*. These plans would include specific measures and BMPs to avoid and/or minimize soil erosion and transport due to ground-disturbing activities such as grading. Such measures may include, but would not be limited to, stabilized construction entrances, silt fences, temporary sediment traps and filtering devices and earth dikes. Once approved, these plans would be implemented during construction.

### Water Quality

Implementation of erosion and sediment control practices, such as installation of silt fence, sediment trapping or filtering, and other BMPs, would help to avoid temporary impacts to water quality during construction. Stormwater management plans would be prepared and implemented onsite to address long-term stormwater runoff.

### Vegetation

Protection measures and BMPs would be implemented to avoid impacts to park vegetation to the extent possible. Vegetation protection measures would be detailed in the design phase of the project and may include, but would not be limited to: evaluation of large trees (such as the large oak tree at the Dumbarton Street playground area on the Rose Park Trail segment) and development of a tree save plan by an arborist or licensed tree expert; installation of tree protection fencing, root pruning for trees whose critical root zones (CRZs) lie within the existing trail alignment or proposed construction area; and staging construction equipment to avoid damage to park vegetation. All revegetation would fulfill NPS functional and aesthetic requirements. Landscape plans would be developed in coordination with the NPS and DDOT's Urban Forestry Administration. Areas replanted following construction would be monitored to ensure successful establishment.

### Wildlife

Best management practices would be utilized to minimize impacts to terrestrial and aquatic habitats. Detailed tree save plans would be developed and implemented during construction to protect surrounding trees that form forest habitat for park wildlife. Erosion and sediment control plans would also be prepared and implemented to avoid and minimize potential impacts to aquatic habitat within Rock Creek and Piney Branch that could be caused by soil erosion and sediment transport.

### Historic Structures and Districts / Cultural Landscapes

All work proposed under Action Alternatives would be completed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* in order to avoid and/or minimize any adverse impacts to cultural resources. Efforts to minimize impacts to cultural resources through design include: trail improvements that would retain the curvilinear design of the trail; proposed trail connections that would be the minimum span needed to achieve the stated goals and laid directly on the existing topography; new trail connectors consistent in material and design features with the existing trails and that would not introduce new elements inconsistent with the park and parkway's other features; minimal new paving in areas of the trail that follow historic alignments; and spot improvements and trail widening that would avoid damage to, and loss of, existing vegetation.

### **Cultural Landscapes**

Plans for construction staging of equipment and materials would be developed in order to least impact views within the cultural landscape. Landscape plans would be developed considering the cultural landscape, and in accordance with NPS policies. The NPS currently is developing a cultural landscape report for the historic trails in the park. This documentation and planning effort will be completed in the fall of 2012.

### **Archeology**

Mitigation for impacts to archeological resources may include, but would not be limited to the following: conducting a Phase IB survey within areas of the LOD not previously surveyed, hand removal of vegetation to minimize impacts to identified archeological resources within the LOD, and retaining current trail widths within identified archeological resources. Testing areas would include, but would not be limited to, the location of the former headrace near Piney Branch. In locations where measures to avoid and minimize impacts to archeological resources cannot be instituted, mitigation through excavation within identified sites may be implemented. NPS, DDOT, and FHWA would continue to consult with the DC HPO throughout the project to avoid impacts to potential archeological resource areas.

### **Visitor Use and Experience**

To notify trail users, park visitors, and motorized commuters of temporary closures or changes in traffic patterns, public notifications may include electronic notification and detour signage, postings to the Rock Creek Park website, and email and listserv notices for stakeholders and interested parties. Additionally, plans for construction equipment and materials staging areas would be developed to cause the least practicable disruption to park visitors.

### **Human Health and Safety**

To minimize risk to public safety, short-term safety measures would be implemented in proposed construction areas throughout the Rock Creek Park multi-use trail. Signage would be utilized in order to warn pedestrians and bicyclists in zones that are under construction. Staging areas that house equipment and materials would be fenced off from the public. At road crossings, maintenance of traffic during construction stages would be conducted to provide safe conditions for trail users, drivers and workers. After construction, NPS would follow established maintenance practices such as removal of debris, and repairs to potholes and cracks to ensure trail safety for park visitors.

### **Park Operations and Management**

No mitigations measures were identified for park operations and management.

### **Traffic and Transportation**

Plans to maintain traffic during construction would be developed to minimize impacts to trail users and motorized commuters. Advance notifications of temporary closures or changes in traffic patterns would be implemented and may include electronic notification and detour signage, postings to the Rock Creek Park website, and email and listserv notices for stakeholders and interested parties. At some locations, such as the Beach Drive tunnel, work would be scheduled to avoid times of peak traffic volumes.

## **AGENCY CONSULTATION**

As part of the planning process for the Rock Creek Park Multi-Use Trail Rehabilitation EA, DDOT, in conjunction with the NPS and FHWA, conducted agency coordination as detailed in *Chapter 5* of the EA. Coordination included project scoping, consultation with resource agencies in accordance with Section 7 of the Endangered Species Act of 1973, consultation with the DC Historic Preservation Office (DC HPO) in accordance with Section 106 of the NHPA, and coordination with the National Zoological Park (NZIP).

In accordance with Section 7 of the Endangered Species Act, consultation letters were sent from DDOT to District of Columbia Department of Health (DDOH), the U.S. Fish and Wildlife Service (USFWS), and the NPS Center for Urban Ecology on December 14, 2010. In a letter dated April 20, 2011, the USFWS confirmed that there are no known federally listed species or habitat within the project limits, and Section 7 consultation with USFWS for the project was complete. No additional responses were received.

On February 27, 2009, scoping letters were sent to several local and federal agencies to solicit comments on the proposed project. The National Capitol Planning Commission (NCPC) responded via a letter dated March 23, 2009 and asked that they be identified as a cooperating federal agency for NEPA. NCPC asked that the EA analyze elements of the *Comprehensive Plan for the National Capital*, stormwater management, impacts to forest corridors and buffers, and historic resources and attributes. The Smithsonian Institute (SI) responded by an email dated March 18, 2009 and commented that the National Zoo Property and the Holt House are both in the NRHP. SI also provided concerns that they would like to be addressed in the EA including Historic Districts, transportation issues regarding road crossings, protection of Rock Creek Valley, and analysis of visual and aesthetic features. The District of Columbia Office of Planning (DC OP) provided comments by letter dated March 25, 2009 discussing policies of the District's Comprehensive Plan that promote multi-modal accessibility to District neighborhoods and key destinations. DC OP also asked that the EA assess the impacts of the proposed trail rehabilitation on the adjacent communities.

Scoping letters were sent again on January 24, 2011 to local and federal agencies to solicit comments and to invite recipients to an Agency Scoping Meeting. The Agency Scoping Meeting was held on February 15, 2011 at the Rock Creek Park Maintenance Yard Conference Room, 5000 Glover Road, Washington, DC 20015. The purpose of the meeting was to obtain agency and elected officials feedback on the proposed action and scope of the EA and to present the preliminary project alternatives. Agencies attending the meeting included DC Water, Commission of Fine Arts (CFA), NCPC, District Department of the Environment (DDOE), and a representative of District of Columbia Councilmember Muriel Bowser (Ward 4). The attendees were supportive of the project and provided recommendations to refine the preliminary alternative concepts including preliminary design and stormwater management concepts. The discussion also included suggestions for items to consider in the design phase of the project, such as materials selection and signage styles.

The project team met with National Zoo senior managers on June 1, 2011 to present the proposed action and alternatives, and discuss issues such as the Zoo gates to the north and south of the Beach Drive tunnel and the deteriorating timber retaining wall within the perimeter fence. The National Zoo staff explained that the outer perimeter fence and accompanying gates, as well as their timed closures, are required in order to maintain the National Zoo's accreditation by the American Zoological and Aquarium Association (AZA). After a presentation and discussion, the National Zoo senior management endorsed Rock Creek Park Multi-Use Trail Rehabilitation Project Alternative 3: Trail Resurfacing and Widening, including trail widening from eight feet to 10 feet on National Zoo property.

Section 106 consultation was originally initiated in 2009 for the previous EA effort. On March 19, 2009, DC HPO replied with a letter stating that the project would occur within or immediately adjacent to several sites listed on the NRHP or DC Inventory of Historic Sites, including Rock Creek Park, Greystone Enclave, Piney Branch Parkway, National Zoological Park, and the Rock Creek and Potomac Parkway. The DC HPO also stated that the project may result in direct or indirect effects on the following historic districts: Mount Pleasant, Woodley Park, Kalorama Triangle, Sheridan-Kalorama, Massachusetts Avenue, Oak Hill Cemetery, Montrose Park, and Georgetown. The DC HPO stated the EA should evaluate the potential for direct and indirect effects such as visual and audible impacts within these historic districts, as appropriate.



With the continuation of the EA process and in accordance with the regulations implementing Section 106 of the NHPA, letters initiating the process were resent to the DC HPO and the Advisory Council on Historic Preservation (ACHP) on December 14, 2010. No response was received from the ACHP and a response is not expected since it has been determined that the project would result in a Finding of No Adverse Effect. The DC HPO responded to the initiation letter on January 18, 2011 via a letter confirming that the project will occur within or adjacent to three historic districts listed in the NRHP; the Rock Creek Park, Rock Creek and Potomac Parkway, and the National Zoological Park Historic Districts. DDOT submitted a letter requesting concurrence on the APE on July 5, 2011 and DC HPO concurred with the APE on July 14, 2011. Since numerous archeology sites have been identified near the project area, the DC HPO recommended coordination with Dr. Ruth Troccoli and Dr. Stephen Potter (NPS Regional Archeologist) prior to ground disturbance. DDOT also coordinated archeological resource concerns with NPS and DC HPO as part of the archeological investigation, EA, and Section 106 processes. DDOT/FHWA then submitted an Assessment of Effect to the DC HPO on September 18, 2011 and received DC HPO concurrence on the Finding of No Adverse Effect on October 19, 2011.

## **PUBLIC INVOLVEMENT**

Public scoping for the proposed action was originally initiated by NPS in 2006. A meeting was held on October 26, 2006 at Peirce Mill to give the public the opportunity to share ideas on the potential rehabilitation of the trail. Based on comments received during the 2006 scoping, a project to prepare an EA commenced in 2009. During this time, federal and local agencies, as well as community stakeholders, were invited to provide comments on the scope of the EA and the proposed action. Three letters were received from the public during the scoping period. A letter from Friends of Peirce Mill was received describing the restoration efforts underway at the Mill in 2009. The Friends of Rose Park commented on their preference to see the Rose Park Trail renovated in its current location and at its current width. The Beall Court Condominium Association also commented that the Rose Park Trail should not be widened. Prior to the release of the EA, the project was put on hold.

In November 2010, the Rock Creek Park Multi-Use Trail Rehabilitation Project was reinitiated. In addition to an agency scoping period, a public scoping period was opened from January 28, 2011 through February 28, 2011. During this time, the public was invited to provide comments on the proposed action and scope of the EA, and issues and concerns regarding natural, socioeconomic and cultural resources. Public notices were posted on the National Park Service's Planning, Environment, and Public Comment website (PEPC); the DDOT website and Facebook pages; and advertised in *The Washington Post* and *The Current* newspapers. The project team also sent email notices or posted to listservs of Advisory Neighborhood Commissions (ANC), community groups, and potential stakeholders, including individuals and groups who previously expressed an interest in the project.

A public scoping meeting was held on February 23, 2011, at the National Zoological Park Visitor Center Auditorium, 3001 Connecticut Avenue, NW, Washington, DC. The purpose of this meeting was to solicit public input on the purpose, need, and objectives of the project, major issues, and alternatives. A total of fifty-four (54) people signed in to the meeting. The meeting was held in an open-house format followed by an open microphone session in which attendees could sign up to speak at a microphone. The open microphone session was recorded by a court reporter. In addition, attendees were encouraged to comment in writing.

About six hundred (600) comments were received during the scoping period from January 28, 2011 through February 28, 2011. In general, the comments articulated support for the action alternatives. The vast majority of commenters favored Rock Creek Park Multi-Use Trail Alternative 3, Peirce Mill Trail Spur Option B, and Rose Park Trail Option C. Many commenters replied that the portion of the Rock Creek Trail on the National Zoo property should remain open 24 hours per day, or improvements should be made to the trail as it runs through the Beach Drive tunnel detour.

Commenters articulated concern over trail detours during construction and stated that detours should be well marked and easy to use. Many commenters expressed safety concerns due to trail deterioration, poor visibility, and road crossings. Some commenters asked that signage be added to the trail indicating trail connections and distances. Other concerns included trail maintenance, natural resource protection, and stormwater management. Comments were received from the Friends of Rose Park stating preference for the Rose Park trail to be resurfaced, but not moved or widened. Some commenters asked that speed control measures be used in Rose Park to slow bikers.

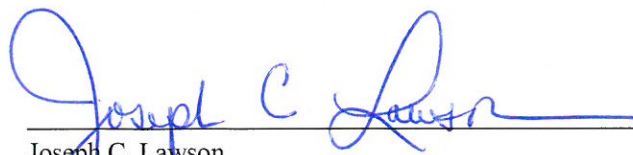
In addition to public scoping, the project team held a meeting with the Friends of Rose Park on April 13, 2011. At the meeting, Rose Park Trail options were presented and comments were received. Comments received from the Friends of Rose Park expressed concerns regarding widening of the trail, the proximity of the trail to children's play areas, and the preservation of an oak tree adjacent to the trail at the Dumbarton Street playground area.

Following the release of the EA, DDOT held a public hearing on December 14, 2011. The meeting provided the public with an opportunity to review the Rock Creek Park Multi-Use Trail Rehabilitation EA and Section 106 Evaluation and provide formal comments. The majority of hearing comments indicated Alternative 3 as the preferred alternative for the Rock Creek Trail. No comments were received in support of Alternative 2. For the Rose Park Trail, the majority of hearing comments were in favor of Option B, C, or either option. However, comments were received questioning the safety of Options B and C, and the protection of vegetation in Rose Park.

## CONCLUSION

The FHWA has determined that the Preferred Alternative and options for the proposed Rock Creek Park Multi-Use Trail Rehabilitation Project will not have a significant impact on the natural, human or built environment as defined by CEQ. This Finding of No Significant Impact (FONSI) is based on the findings of the proposed project's Final EA and comments submitted during preparation of the EA. The Final EA has been evaluated by the FHWA, using CEQ regulations and FHWA guidelines, and has been determined to adequately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an environmental impact statement is not required. The FHWA takes full responsibility for the accuracy, scope, and content of the attached Final EA.

Approved:

  
\_\_\_\_\_  
Joseph C. Lawson  
Division Administrator  
Federal Highway Administration  
District of Columbia Division

6/11/2014  
\_\_\_\_\_  
Date

*Text that has been added or modified since the release of the November 2011  
Rock Creek Park Multi-Use Trail Rehabilitation Environmental Assessment is  
denoted in bold and italic fonts.*



## PROJECT SUMMARY

### S.1. INTRODUCTION

Pursuant to Section 101(2)(C) of the National Environmental Policy Act (NEPA) of 1969, as amended, *the District Department of Transportation (DDOT) in conjunction with the Federal Highway Administration (FHWA), the National Park Service (NPS), and with the cooperation of the National Capital Planning Commission (NCPC)*, proposes to rehabilitate the Rock Creek Park multi-use trail in Washington, DC. The project area includes a 3.7-mile section of the Rock Creek Park multi-use trail from Broad Branch Road to P Street, NW; a 4,300-foot (0.8 mile) section of the Piney Branch Parkway trail from Beach Drive to Arkansas Avenue, NW; a 1,247-foot (0.2 mile) section of social trail from Broad Branch Road to Peirce Mill (referred to as the Peirce Mill trail spur); *a 1,929-foot (0.4 mile) section of the Rose Park trail from P Street, NW to M Street, NW; and a 363-foot ramp connecting the Rose Park trail to P Street, NW.* The proposed action includes resurfacing, trail widening where environmentally feasible, modifications to the trail alignments and road crossings, directional and interpretive signage, and connections to and from the trails to other pedestrian and bicycle facilities. *Rock Creek Park and the Rock Creek and Potomac Parkway are under the jurisdiction of the NPS, but implementation of the proposed action will be administered by DDOT and funded by FHWA.* The majority of the proposed improvements are located on NPS land, with some improvements located within the District of Columbia right-of-way. A section of the trail also passes through National Zoological Park property. *The proposed action does not involve any transfer of ownership or change of jurisdiction of the trail or the land within the project area. Ownership of the trail and land within the project area will remain with the current owners.*

*DDOT in conjunction with the FHWA and NPS prepared an Environmental Assessment (EA), which evaluated the potential environmental impacts of the No Action Alternative and two Action Alternatives, in accordance with NEPA and implementing regulations, the Council of Environmental Quality (CEQ) regulations (40 CFR 1500-1508), Section 106 of the National Historic Preservation Act (NHPA), NPS Director's Order #12: Conservation Planning, Environmental Impacts Analysis and Decision-Making (NPS 2001), FHWA Technical Advisory Guidance for Preparing and Processing Environmental Documents (T6640.8a), and other applicable laws, regulations, and policies. The EA identified the agencies' Preferred Alternative and was released for agency and public review in November 2011. The public comment period ran from December 2, 2011 to January 13, 2012. A public hearing was held on December 14, 2011. Subsequently, this Final EA has been prepared to address agency and public comments received.*

### S.2. PURPOSE AND NEED FOR THE ACTION

The purpose of this action is to improve the overall condition and connectivity of the deteriorating Rock Creek Park multi-use trail system in order to enhance visitor use and experience within Rock Creek Park. The proposed action would result in:

- improved visitor safety and experience and protection of park resources;
- improved access to the Rock Creek Park multi-use trail system from other pedestrian and bicycle facilities, as well as the surrounding neighborhoods; and
- more effective drainage and erosion control, thereby reducing trail maintenance.

The project is needed to improve safety conditions, protect park resources, and improve connectivity to the park from surrounding neighborhoods; to support the needs of diverse user groups who enjoy the trails and improve visitor experience; and to enhance opportunities for interpretation of park history and resources.

### **S.3. OVERVIEW OF THE ALTERNATIVES**

This Environmental Assessment (EA) analyzes the No Action Alternative along with two Action Alternatives for the Rock Creek Park Multi-Use Trail Rehabilitation. The project includes spot improvements for safety and visitor experience, as well as new connections to Rock Creek Park from the surrounding neighborhoods. Under the No Action Alternative (Alternative 1), NPS would continue its current trail maintenance activities and no new construction would occur. Under Alternative 2, the Rock Creek Park multi-use trail would be resurfaced at its current width, which varies throughout the trail. Under Alternative 3, the Rock Creek Park multi-use trail would be resurfaced and widened to a minimum of six feet, up to a maximum of 10 feet, depending on physical and environmental constraints.

In addition to the Action Alternatives, *which involve the rehabilitation of the Rock Creek Park multi-use trail*, two Options for the visitor-made social trail from Broad Branch Road to Peirce Mill, and three Options for the Rose Park trail were analyzed *as part of this EA. The work being proposed for the Peirce Mill trail spur and the Rose Park trail options are included in this EA for the Rock Creek Park Multi-Use Trail Rehabilitation project to improve surrounding communities' access and connectivity to the Rock Creek Park multi-use trail.* For the Peirce Mill trail spur, under Option A, the trail would remain unchanged; and under Option B, the current social trail would be paved to an eight-foot width and connected to a recently improved pathway at the Peirce Mill complex. For the Rose Park trail, under Option A, NPS would continue its current maintenance practices and no new construction would occur. Under Option B, the Rose Park trail would be resurfaced at its current location to a six-foot width *through the length of the trail, as feasible.* Under Option C, the Rose Park trail would be resurfaced at its current location to an eight-foot width *through the length of the trail, as feasible.*

The Action Alternatives would also include a number of spot improvements to more effectively separate trail users from vehicular traffic; to improve safety at roadway crossings; to improve sight distance at approaches and curves; to improve user accessibility; and to improve drainage and erosion control. In addition, a number of new connections to Rock Creek Park from the surrounding pedestrian and bicycle systems are proposed, as well as connections to and from the Piney Branch Parkway trail, within Rock Creek Park.

### **S.4. PREFERRED ALTERNATIVE**

*Based on the analysis of environmental consequences of each alternative and comments received from the public and agencies, the NPS determined that the Preferred Alternative is Alternative 3: Trail Resurfacing and Widening, with the Peirce Mill Trail Spur Option B: Eight-foot Paved Trail Spur, and Rose Park Trail Option B: Six-foot Resurfaced Trail. The NPS detailed their determination of the Preferred Alternative and options in a letter dated August 16, 2011 (Appendix A).*

*Alternative 3: Trail Resurfacing and Widening would enhance visitor use and experience, public safety, park operations and maintenance, and transportation in the project area better or equal to the other options. Also, soil and water quality would be improved through stabilization and drainage improvements under Alternative 3. This alternative is preferable to the No Action Alternative because resurfacing and widening of the trail would eliminate several adverse conditions associated with the existing trail.*

*This alternative improves the trail and fulfills the NPS's responsibility as trustee of the environment for succeeding generations. While Alternative 2 would result in similar impacts to those described in Alternative 3, the benefits to visitor use and safety resulting from spot improvements and trail widening associated with Alternative 3 would contribute the widest range of beneficial uses of the trail.*

*Alternative 3 assures for all generations safe, healthful, productive, and aesthetically and culturally pleasing surrounding and attains the widest range of beneficial uses. Other undesirable and unintended consequences are negligible under Alternative 3.*

*Peirce Mill Trail Spur Option B would enhance the use of Rock Creek Park by providing a new, paved trail surface to park visitors. Option B is preferable to Option A for the Peirce Mill trail spur because the No Action option would result in adverse impacts associated with the existing social trail on site.*

*Rose Park Trail Option B would enhance the use of Rose Park by providing a smooth, even trail surface at the standard width of a DDOT residential sidewalk. Option B is preferable to Option A for the trail in Rose Park because the No Action option would result in adverse impacts associated with the existing trail. When compared to Rose Park Trail Option C, Option B better addresses the nearby residents concerns with widening the trail and has less environmental effects because of less impervious surface.*

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# CHAPTER 1: PURPOSE AND NEED

## 1.1. INTRODUCTION

*The District Department of Transportation (DDOT) in conjunction with the Federal Highway Administration (FHWA), the National Park Service (NPS), and with the cooperation of the National Capital Planning Commission (NCPC) has prepared an Environmental Assessment (EA) to assess the potential effects of various alternatives for the rehabilitation of the Rock Creek Park multi-use trail in Washington, DC. Rock Creek Park is a 2,896 acre park under the jurisdiction of the NPS. The trail is in northwest Washington, DC and extends from **Wise Road, NW to Military Road, NW, then from Broad Branch Road south to the Lincoln Memorial Circle**. Implementation of the proposed action would be administered by DDOT and funded by FHWA.*

The proposed action includes the rehabilitation of a 3.7-mile section of the Rock Creek Park multi-use trail from Broad Branch Road to P Street, NW; a 4,300-foot (0.8 mile) section of the Piney Branch Parkway trail from Beach Drive to Arkansas Avenue, NW; **a 1,929-foot (0.4 mile) section of the Rose Park trail from P Street, NW to M Street, NW; a 363-foot ramp connecting the Rose Park trail to P Street, NW;** and a 1,247-foot section (0.2 mile) of social trail from Broad Branch Road to Peirce Mill (referred to as the Peirce Mill trail spur). The proposed action includes resurfacing, trail widening where environmentally feasible, modifications to the trail alignments and road crossings, directional and interpretive signage, and connections to and from the trails to other pedestrian and bicycle facilities. **Rock Creek Park and the Rock Creek and Potomac Parkway are under the jurisdiction of the NPS, but implementation of the proposed action will be administered by DDOT and funded by FHWA.** The majority of the proposed improvements are located on NPS land, with some improvements located within District of Columbia right-of-way. A section of the trail passes through National Zoological Park property. **The proposed action does not involve any transfer of ownership or change of jurisdiction of the trail or the land within the project area. Ownership of the trail and land within the project area will remain with the current owners.**

*DDOT in conjunction with the FHWA and NPS prepared an EA, which identified the agencies' Preferred Alternative and was released for agency and public review in November 2011. The public comment period ran from December 2, 2011 to January 13, 2012. A public hearing was held on December 14, 2011.* The EA evaluated the potential environmental impacts of the No Action Alternative and two Action Alternatives, in accordance with the National Environmental Policy Act of 1969 (NEPA), Section 106 of the National Historic Preservation Act (NHPA), NPS Director's Order #12: *Conservation Planning, Environmental Impacts Analysis and Decision-Making* (NPS 2001), FHWA *Technical Advisory* (T6640.8a), and other applicable laws, regulations, and policies. Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties. In accordance with the regulations implementing Section 106 of the NHPA, coordination has been initiated with the DC Historic Preservation Office (HPO) and Advisory Council on Historic Preservation (ACHP). **This Final EA has been prepared to address agency and public comments received.**

## **1.2. PURPOSE OF AND NEED FOR ACTION**

The NPS is in charge of preserving the natural and cultural resources of Rock Creek Park while providing a high quality visitor experience. The purpose of this action is to improve the overall condition and connectivity of the Rock Creek Park multi-use trail system in order to enhance visitor use and experience within Rock Creek Park. The proposed action would result in:

- improved visitor safety and experience and protection of park resources;
- improved access to the Rock Creek Park multi-use trail system from other pedestrian and bicycle facilities, as well as the surrounding neighborhoods; and
- more effective drainage and erosion control, thereby reducing trail maintenance.

The action is needed to improve safety caused by the continued deterioration of the trail, resulting in heaving or cracking of the pavement, exposed tree roots, and water ponding during and after storm events. Connectivity of the trail with surrounding neighborhoods, street crossings, existing sightlines, grade changes, curves and approaches may not meet current guidelines for multi-use trails. Additionally, narrow trail widths in some areas may impede the ability of trail users and groups (pedestrians, bicyclists, runners, those enjoying nature, etc.) to safely pass one another, generating a potential for user conflicts or accidents.

Another need for the action is to prevent soil compaction, vegetation damage, and soil erosion caused by social trails. In some areas, visitors leave the trails to take shortcuts, or maneuver around other users or trail sections in need of repair. The creation of social trails at these locations has resulted in areas of soil compaction and vegetation damage. Loss of vegetation may contribute to soil erosion.

The extensive Rock Creek Park trail system is enjoyed by a large number of visitors. However, currently there are connectivity gaps and/or unpaved areas of the existing park trail system. Furthermore, due to the popularity of the park and large number of visitors, there is currently a need for additional connectivity to and from the larger pedestrian and bicycle systems in the surrounding neighborhoods such as sidewalks, bicycle routes, and other trails.

Another need for the project is visitor use and experience, and the need for NPS to continue to support the diverse user groups who enjoy the trails. Heaving or cracked pavement, exposed tree roots, and water ponding issues can be both unsightly and challenging to circumvent. Additionally, potential conflicts may occur among trail user groups – bicyclists, runners, those enjoying nature, pedestrians, etc. – in areas that are difficult to navigate due to short sight lines, narrow widths, or alignment deviations. Additionally, there are currently unrealized opportunities for interpretive programs along the trail, such as signage and ranger walks, that could enhance visitor use and experience by further highlighting the many environmental and cultural resources within the park.

## **1.3. PROJECT OBJECTIVES**

Project objectives are defined in terms of “what must be achieved to a large degree for the action to be considered a success,” and represent more specific statements of purpose and need (NPS 2001). All alternatives selected for detailed analysis must meet all objectives to a large degree and must resolve the purpose of and need for action. The following objectives were identified by the planning team for this project:

1. Improve trail safety.
2. Provide improved access to the Rock Creek Park multi-use trail from surrounding communities and the larger bicycle and pedestrian network.
3. Preserve the integrity of Rock Creek Park and its resources.
4. Maximize the distance between the trail and Rock Creek to the extent feasible.
5. Minimize ground disturbance from new trail construction.
6. Minimize the loss of trees and vegetation.
7. Reuse and/or interpret historic trail alignments to the extent feasible.

## 1.4. PROJECT AREA

Rock Creek Park, located in northwest Washington, DC, is administered by NPS and extends from the Maryland state line south to the Beach Drive tunnel near the National Zoo. The Rock Creek and Potomac Parkway begins at the southern end of the tunnel and extends to the Potomac River. Activities available in the park include hiking, running, walking, bicycle riding on designated trails (bicycles are not permitted on unpaved horse or foot trails), exercise trails, rollerblading, picnicking, educational and interpretive programs, bird watching, horseback riding, golf, and tennis. **Figure 1** is a display of Rock Creek Park and its surroundings.



Figure 1. Rock Creek Park

The area of Rock Creek Park and the Rock Creek and Potomac Parkway under consideration in this EA consists of a 3.7-mile section of the Rock Creek Park multi-use trail and connecting pathways. **Figure 2** displays the project area.

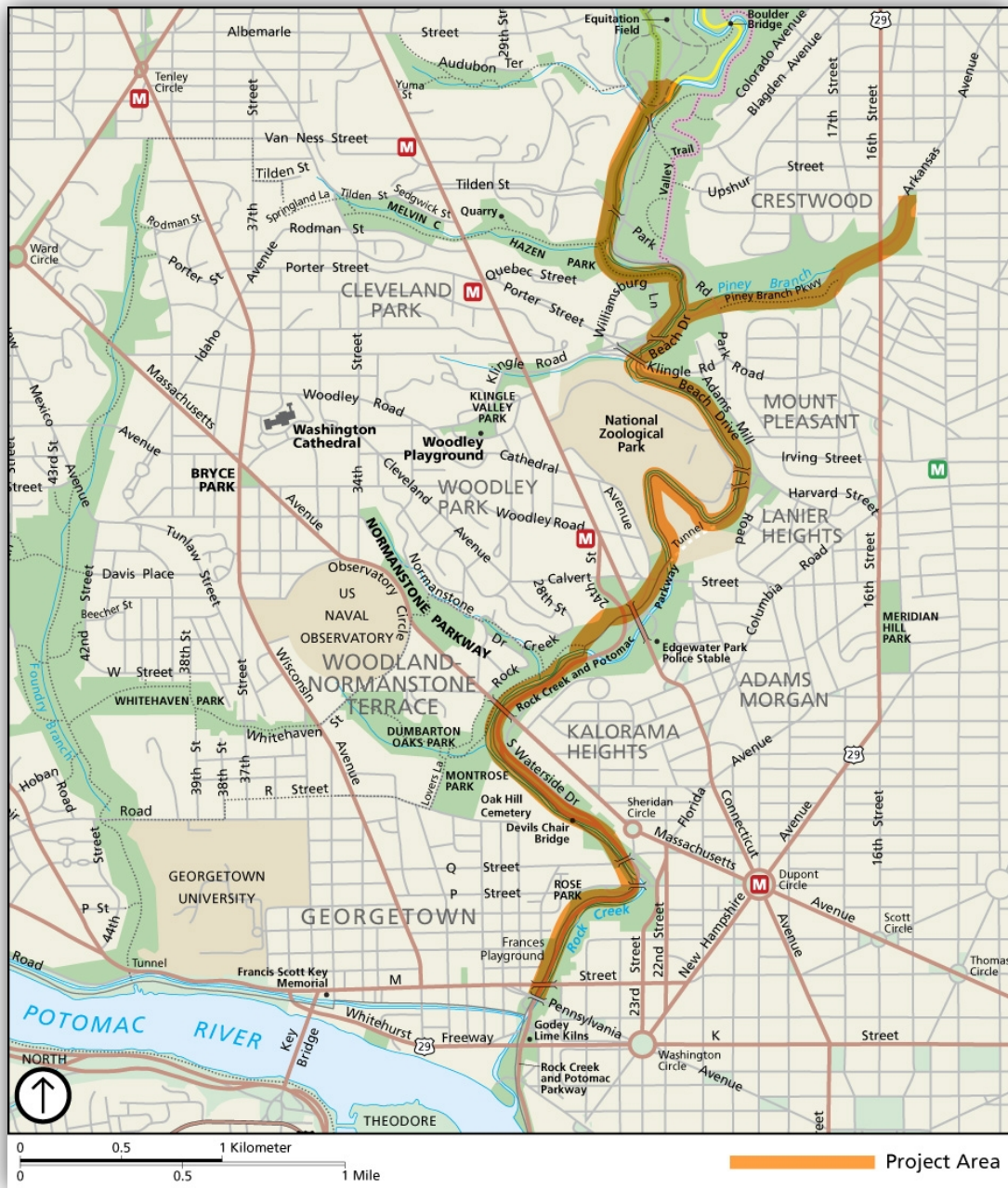


Figure 2. Project Area

The 3.7-mile section of the Rock Creek Park multi-use trail from the Broad Branch/Grove 2 North parking area to P Street, NW is currently paved with asphalt. From the Broad Branch/Grove 2 North parking area to Piney Branch, the trail is mainly 10 feet in width, with some narrower sections. From Piney Branch Parkway to P Street, NW, the trail is mainly eight feet wide, with some narrower sections. This 3.7-mile

section of the trail is over 20 years old and has shown deterioration such as erosion, pavement ruts, drainage issues, exposed tree roots and other wear that has made it less safe and less attractive for trail users (**Figure 3a and 3b**). In addition, current trail widths, sightlines at curves and approaches, and grade changes may not meet current guidelines for multi-use trails. (However, as discussed later in this document, there are instances where environmental constraints impact the ability to widen the trail.) Social trails have been created by users throughout the project area, resulting in areas of soil compaction and vegetation damage (**Figure 3c**).



**Figure 3. Existing Conditions: Rock Creek Park Multi-Use Trail and Piney Branch Parkway Trail**

The study area also includes *the following sections, directly adjacent to the Rock Creek Park multi-use trail*: a 4,300-foot (0.8 mile) section of the Piney Branch Parkway trail from Beach Drive to Arkansas Avenue, NW; a 1,929-foot (0.4 mile) section of the Rose Park trail from P Street, NW to M Street, NW; a 363-foot ramp connecting the Rose Park trail to P Street, NW; and a 1,247-foot (0.2 mile) social trail along Rock Creek from Broad Branch Road to Peirce Mill (*i.e., the Peirce Mill Spur*). *Trail users have created social trails in these process as means for direct connection to the Rock Creek Park multi-use trail from the surrounding community. Improvements to these sections will provide safe and improved connectivity and access to the Rock Creek Park multi-use trail.*

The majority of the Piney Branch Parkway trail in the project area is unpaved. Social trails from the Rock Creek Park multi-use trail and Porter Street, NW to the west, and from Arkansas Avenue, NW and 16<sup>th</sup> Street, NW to the east, connect to a short section of paved trail along Piney Branch Parkway, just east of Park Road, NW. The paved portion abuts Piney Branch Parkway and is not separated from vehicular traffic by any safety barriers (**Figure 3d**).

Rose Park is in the Georgetown neighborhood, and is bordered by P Street, NW to the north; M Street, NW to the south; 26<sup>th</sup> and 27<sup>th</sup> Streets to the west; and the Rock Creek and Potomac Parkway to the east. The park includes three tennis courts, a basketball court, a baseball diamond, and two playground areas, which are administered by the DC Department of Parks and Recreation, and a trail which is administered by NPS. The Rose Park trail parallels the Rock Creek and Potomac Parkway trail, located to the east and down an approximately 50-foot embankment. *The 1,929-foot (0.4 mile) section of the Rose Park trail and its connection to P Street included in this project runs from P Street, NW to M Street, NW.* The paved Rose Park trail is mainly five feet in width, with a short section that is currently six feet in width (**Figure 4a**).

At the north end of Rose Park, a social trail connects to the Rock Creek & Potomac Parkway trail along the entrance ramp that connects P Street, NW to the Rock Creek and Potomac Parkway. At the southern end of the park, a social trail breaks off the main trail and connects to M Street, NW (**Figure 4b**). A brick pathway meanders through sections of the park and also connects to M Street, NW.

Peirce Mill is a 19<sup>th</sup> century gristmill that is maintained by the NPS as a historical site. The site is located on Tilden Street, NW and is positioned along the west banks of Rock Creek. A ten-year project to restore the functionality of Peirce Mill was completed in 2011. From Broad Branch Road to Peirce Mill, there is a 1,247-foot social trail. The social trail lies between the Rock Creek Park multi-use trail and Rock Creek.



**Figure 4. Existing Conditions: Rose Park Trail and Social Trail to M Street, NW**

## 1.5. PROJECT BACKGROUND

Based on public comments received in 2006, a project to prepare an EA and Assessment of Effects was initiated by FHWA, NPS, and DDOT in 2009. The purpose and need for the project was identified by DDOT and the NPS. Implementation of the proposed action would be administered by DDOT, through FHWA funding. Public scoping for the proposed action was originally initiated by NPS in 2006, at which time a meeting was held to solicit feedback regarding the rehabilitation of the trail. During this time an agency and public scoping period was held to gather input on the scope of the EA and the proposed action. Prior to the release of the EA, the project was put on hold. Funding again became available in November 2010, at which time the Rock Creek Park Multi-Use Trail Rehabilitation was reinitiated and the planning process for this EA commenced.



### ***1.5.1. ROCK CREEK PARK AND THE ROCK CREEK AND POTOMAC PARKWAY***

Rock Creek Park was established on September 27, 1890 as one of the first national parks. It was set aside for the people of the United States as a unique area of natural beauty and to preserve significant *natural*, historic and archeological resources (Pub. L. 51-297, 26 Statute 482). Over the years, as the Washington metropolitan area has become more urban, the need for undeveloped green spaces like Rock Creek Park has increased. The Rock Creek Park multi-use trail has served as the major access link for visitors who wish to experience the natural and cultural beauty of the park. As noted in the Rock Creek Park and the Rock Creek and Potomac Parkway General Management Plan (NPS 2007), the significance of the park includes the following factors:

- Rock Creek Park is one of the oldest and largest naturally managed urban parks in the United States.
- ***The areas administered by Rock Creek Park, including Rock Creek and Potomac Parkway, contain nearly 3,000 acres and provide valuable plant and wildlife habitat in a heavily urbanized area.***
- Rock Creek Park encompasses a rugged stream valley of exceptional scenic beauty, including forested, natural landscapes and intimate natural details that provide a contrast to the surrounding cityscape of Washington, DC.
- Rock Creek Park's forests and open spaces help define the character of the nation's capital.
- Rock Creek valley was important in the early history of the region and in the development of the nation's capital, and the park's cultural resources are among the few tangible remains of the area's past.
- Rock Creek Park is a historic landscape, incorporating early 20th century picturesque and rustic features that were designed to enhance the visitors' experience in the naturalistic park scenery.
- Rock Creek Park serves as an oasis for urban dwellers, offering a respite from the bustle of the city.

The Rock Creek and Potomac Parkway was established in 1913 by the Public Buildings Act. The parkway was created to prevent pollution and obstruction of Rock Creek and to provide a connector between Potomac Park and the Smithsonian National Zoological Park and Rock Creek Park. The parkway was completed in 1936 and has served as a scenic roadway in and out of Washington, DC. Almost since its opening, the parkway has become a preferred commuter route for many residents of northwest Washington, DC and Montgomery County, Maryland.

The Rock Creek and Potomac Parkway is one of the earliest parkways in the nation, the oldest in the metropolitan region, and the first to be federally funded (Congressional legislation, 1913). It is representative of early parkway design in the United States. Although it was initially intended for carriages, horseback riders, pedestrians, and the occasional recreational automobile, early design changes reflected increased automobile traffic. Accordingly, the Rock Creek and Potomac Parkway reflects issues that affected the evolution of American Parkway design. The prolonged design process ensured that the parkway was a collaborative work of several landscape architects, yet the park reflects the guiding vision of Frederick Law Olmsted, Jr. (HABS, 1992). Initially, he proffered the concept as the landscape architect member of the Senate Park Commission.

## **1.6. APPLICABLE FEDERAL LAWS AND REGULATIONS**

The following are laws, regulations, and management plans applicable to the proposed action that govern the federal agencies involved in this NEPA analysis.

### **1.6.1. NATIONAL ENVIRONMENTAL POLICY ACT, 1969, AS AMENDED**

The NEPA was passed by Congress in 1969 and established the nation's environmental policies with the goal of achieving productive harmony between human beings and the physical environment for present and future generations. To implement this goal, NEPA required every federal agency to prepare an in-depth study of the impacts of "major federal actions having a significant effect on the environment" and alternatives to those actions. It also required that each agency make that information an integral part of its decisions. NEPA also requires that federal agencies make a diligent effort to involve the interested members of the public before they make decisions affecting the environment. NEPA is implemented through regulations of the Council on Environmental Quality (CEQ), effective 1978 (40 CFR 1500 – 1508). The NPS has adopted procedures to comply with NEPA and the CEQ regulations, as found in DO-12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* (NPS 2001), and its accompanying handbook.

### **1.6.2. ROCK CREEK PARK ENABLING LEGISLATION OF 1890**

The Rock Creek Park Authorization was signed into law on September 27, 1890 and states that regulations are to be established which "provide for the preservation from injury or spoliation of all timber, animals, or curiosities within said park, and their retention in their natural condition, as nearly as possible." This enabling legislation also directed the Engineering Commissioner of the District of Columbia and the Chief of Engineers of the United States Army to "to lay out and prepare roadways and bridle paths, to be used for driving and for horseback riding, respectively, and footways for pedestrians" (NPS 2010).

### **1.6.3. NATIONAL HISTORIC PRESERVATION ACT OF 1966, AS AMENDED – SECTION 106**

The NHPA of 1966, as amended through 2006, protects districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering, and culture (NHPA 2006). The Act established affirmative responsibilities of federal agencies to preserve historic and prehistoric resources. Effects on properties that are listed on or are eligible for the National Register of Historic Places (NRHP) must be taken into account in planning and operations.

Section 106 of the NHPA (16 U.S.C. 470 et seq.) requires federal agencies to take into account the effects of their undertakings on historic properties either listed on or eligible to be listed on the National Register. The historic preservation review process required by Section 106 is outlined in regulations (36 CFR Part 800, Protecting Historic Properties) issued by Advisory Council on Historic Preservation (ACHP), an independent federal agency established by the NHPA in 1966 to promote the preservation, enhancement, and productive use of our nation's historic resources. The goal of the Section 106 review process is to seek ways to avoid, minimize, or mitigate any adverse effects to historic properties (ACHP 2009).

**1.6.4. ENDANGERED SPECIES ACT OF 1973 (16 U.S.C. 1531-1544, 87 STAT. 884), AS AMENDED**

This act requires all federal agencies to consult with the Secretary of the Interior on all projects and proposals having potential impact on federally endangered and threatened plants and animals. NPS policy also requires examination of the impacts on federal candidate species, as well as state-listed threatened, endangered, candidate, rare, declining, and sensitive species. Section 7 of the Endangered Species Act requires federal agencies, through consultation with U.S. Fish & Wildlife Service, to insure that any action authorized, funded or carried out by them is not likely to jeopardize the continued existence of listed species or modify their critical habitat.

**1.6.5. HISTORIC SITES ACT OF 1935**

The Historic Sites Act of 1935 is the second major national historic preservation legislation and declares as national policy the preservation for public use of historic sites, buildings, objects, and properties of national significance. It authorizes the Secretaries of the Interior and NPS to restore, reconstruct, rehabilitate, preserve, and maintain historic or prehistoric sites, buildings, objects, and properties of national historical or archeological significance (PL 74-292).

**1.6.6. ORGANIC ACT OF 1916 (NPS)**

The Organic Act of 1916 (Organic Act) directs the U.S. Department of the Interior and the NPS to manage units in order “to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations” (16 USC § 1).

Although the NPS seeks to avoid or to minimize adverse impacts on park resources and values, the NPS has discretion to allow impacts on park resources and values when necessary and appropriate to fulfill the purposes of a park (NPS 2006). While some actions and activities cause impacts, the NPS cannot allow an adverse impact that would constitute impairment of the affected resources and values. The Organic Act prohibits actions that permanently impair park resources unless a law directly and specifically allows for the acts (16 USC 1a-1). An action constitutes an impairment when its impacts “harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values” (NPS 2006). To determine impairment, the NPS must evaluate “the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts” (NPS 2006).

**1.6.7. NATIONAL PARKS OMNIBUS MANAGEMENT ACT OF 1998**

The National Parks Omnibus Management Act (NPOMA) (16 USC 5901 et seq.) is fundamental to NPS park management decisions. The Omnibus Management Act provides direction for connecting resource management decisions to the analysis of impacts, using appropriate technical and scientific information. The Act also recognizes that such data may not be readily available; therefore, it provides options for resource impact analysis should this be the case. NPOMA directs the NPS to obtain scientific and technical information for analysis. The NPS handbook for DO-12 states that if “such information cannot be obtained due to excessive cost or technical impossibility, the proposed alternative for decision will be modified to eliminate the action causing the unknown or uncertain impact, or other alternatives will be selected” (NPS 2001).

### **1.6.8. AMERICANS WITH DISABILITIES AND ARCHITECTURAL BARRIERS ACT GUIDELINES**

Pursuant to the Americans with Disabilities Act of 1990 (ADA) and the Architectural Barriers Act of 1968 (ABA), all public buildings, structures, and facilities must comply with specific requirements related to architectural standards, policies, practices, and procedures that accommodate people with hearing, vision, or other disability; and other access requirements. Public facilities and places must remove barriers in existing buildings and landscapes, as necessary and where appropriate. The NPS must comply with the Architectural Barriers Act Accessibility Standard (ABAAS) as well as ADA standards for this project (NPS 2000).

### **1.6.9. REDWOOD NATIONAL PARK ACT OF 1978, AS AMENDED**

All national park system units are to be managed and protected as parks, whether established as a recreation area, historic site, or any other designation. The Redwood National Park Act of 1978 amended the NPS General Authorities Act of 1970 and states that the NPS must conduct its actions in a manner that will ensure no “derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress” (16 USC 1a).

### **1.6.10. THE CLEAN WATER ACT (1972, AS AMENDED IN 1977 AND 1987)**

The Clean Water Act (CWA) was enacted to provide the basic structure for regulating pollutant discharges and ensuring that surface waters meet standards that allow for recreational and sporting activities. As authorized by the CWA, the National Pollutant Discharge Elimination System (NPDES) permit program is organized within the Environmental Protection Agency (USEPA) and controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Any federal, industrial, or municipal facilities must obtain NPDES permits if their discharges go directly to surface waters (USEPA 2009).

## **1.7. EXECUTIVE ORDERS AND DIRECTOR’S ORDERS**

### **1.7.1. EXECUTIVE ORDER 11988 FLOODPLAIN MANAGEMENT**

Executive Order (EO) 11988 (Floodplain Management) requires federal agencies to avoid direct or indirect support of development within the 100-year floodplain whenever there is a practicable alternative. A floodplain is defined as the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, and including, at a minimum, that area subject to a one percent or greater chance of flooding in any given year (USEPA 2011b).

### **1.7.2. DIRECTOR’S ORDER 77-2: FLOODPLAIN MANAGEMENT**

Director’s Order 77-2 applies to all proposed NPS actions that could adversely affect the natural resources and functions of floodplains or increase flood risks. This includes those proposed actions that are functionally dependent upon locations in proximity to the water and for which non-floodplain sites are not practicable alternatives (NPS 2003).

### **1.7.3. DIRECTOR'S ORDER 28: CULTURAL RESOURCE MANAGEMENT**

DO-28 directs the NPS to protect and manage cultural resources in its custody through effective research, planning, and stewardship and in accordance with the policies and principles contained in NPS *Management Policies* (NPS 2006). This order also directs the NPS to comply with the substantive and procedural requirements described in the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation*, the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Treatment of Cultural Landscapes*; and the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Building* (NPS 1998).

The NPS will comply with the 2008 Service-wide Programmatic Agreement with the ACHP and the National Conference of State Historic Preservation Officers, the purpose of which was to establish a streamlined process for compliance with Section 106 of the NHPA (ACHP 2008).

## **1.8. NPS MANAGEMENT POLICIES**

The NPS *Management Policies* (NPS 2006) is the basic NPS-wide policy document, adherence to which is mandatory unless specifically waived or modified by the NPS director or certain departmental officials, including the U.S. Secretary of Interior. Actions under this EA are in part guided by these management policies.

- Section 4.1.3: Evaluating Impacts on Natural Resources
- Section 4.6.3: Water Quality
- Section 4.6.4: Floodplains
- Section 4.8.2.4: Soil Resource Management
- Section 5.3.1: Protection and Preservation of Cultural Resources
- Section 8.2.2: Recreational Activities
- Section 8.2.4: Accessibility for Persons with Disabilities
- Section 8.2.5.2: Visitor Safety and Emergency Response
- Section 8.2.5.5: Public Health Program
- Section 9.1.3.2: Revegetation and Landscaping
- Section 9.1.4: Maintenance
- Section 9.2.2: Trails and Walks

### **1.8.1. ROCK CREEK PARK AND THE ROCK CREEK AND POTOMAC PARKWAY GENERAL MANAGEMENT PLAN, 2007**

The NPS completed the Final Rock Creek Park and the Rock Creek and Potomac Parkway General Management Plan (Rock Creek Park GMP) in November 2005. The Rock Creek Park GMP was approved and a Record of Decision was executed in June of 2007. Four alternatives were presented in the FEIS and Alternative A was chosen as the preferred alternative. Alternative A called for improvement of visitor safety, better traffic volume and speed controls, enhanced interpretation and education opportunities, and improved use of park resources. The Rock Creek Park GMP is the first comprehensive management plan for Rock Creek Park and provides a basis for decision-making for more specific future plans for Rock Creek Park. This project is consistent with the Rock Creek Park GMP as Alternative A calls for the upgrade and rehabilitation of deteriorating sections of the Rock Creek Park multi-use trail (NPS 2007).

## **1.9. LOCAL PLANS AND POLICIES**

### **1.9.1. NATIONAL CAPITAL PLANNING ACT**

*The National Capital Planning Act (Act) establishes the National Capital Planning Commission (NCPC) as the central planning agency in the Washington, DC region. The purpose of the agency is to coordinate the developmental activities of the Federal and District governments so that the activities conform to general objectives. The Act outlines the functions of the NCPC, which include development of a Comprehensive Plan, review of Federal and District proposed projects, review of District zoning amendments, and review of Federal and District Capital Improvements Programs (40 USC §§8701 et seq.).*

### **1.9.2. THE 2006 COMPREHENSIVE PLAN FOR THE NATIONAL CAPITAL REGION: FEDERAL ELEMENTS**

*Section 4(a) of the National Capital Planning Act requires that NCPC develop and implement a “comprehensive, consistent, and coordinated plan for the National Capital.” (NCPC 2004) The Plan emphasizes three principles: accommodating Federal and National Capital activities, reinforcing “smart growth” and sustainable development planning principles, and supporting local and regional planning and development objectives.*

### **1.9.3. THE 2006 COMPREHENSIVE PLAN FOR THE NATIONAL CAPITAL REGION: DISTRICT ELEMENTS; PARKS, RECREATION, AND OPEN SPACES SECTION 1.1.2: CONSIDERATION OF FEDERAL PARKLAND**

The District of Columbia will work with federal agencies to evaluate the role that federal lands play in meeting the recreational needs of District residents, particularly for regional parks and sports complexes. These federal resources are used by city residents, and therefore should be considered when assessing the need for local park improvements (DCOP 2006).

### **1.9.4. DISTRICT OF COLUMBIA BICYCLE MASTER PLAN**

The DDOT 2005 Bicycle Master Plan includes several core goals and recommendations in order to establish a world-class bicycle transportation system in the District of Columbia. Several strategies are named to increase bicyclist safety and security while improving the connectivity and accessibility of destinations and activity centers within the District of Columbia.

Multi-use trails are specifically cited to provide a high quality walking and bicycling experience in an environment separated from traffic. These types of paths can be constructed within a roadway corridor right-of-way, in their own corridor (such as a greenway trail or rail-trail), or be a combination of both. Shared-use paths should not be used to preclude on-road bicycling but rather to supplement a system of on-road bicycle facilities for less experienced cyclists.

### **1.9.5. DISTRICT OF COLUMBIA PEDESTRIAN MASTER PLAN**

The District of Columbia Pedestrian Master Plan (Toole Design Group, 2009) seeks to reduce the number of pedestrian/motor vehicle crashes and increase pedestrian activity by making walking a comfortable and accessible mode of travel throughout all parts of the District. The Plan also encourages improved facilities and policies to promote the benefits of walking for transportation, recreation, and health.

## 1.10. SCOPING PROCESS AND PUBLIC PARTICIPATION

NEPA regulations require an “early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action.” To determine the scope of issues to be analyzed in depth in this plan, meetings were conducted with the lead agencies and the public.

Public scoping for the proposed action was originally initiated by NPS in 2006. A meeting was held on October 26, 2006 at Peirce Mill to give the public the opportunity to share ideas on the potential rehabilitation of the trail. Based on comments received during the 2006 scoping, a project to prepare an EA commenced in 2009. During this time, federal and local agencies, as well as community stakeholders, were invited to provide comments on the scope of the EA and the proposed action. Three letters were received from the public during the scoping period. A letter from Friends of Peirce Mill was received describing the restoration efforts underway at the Mill in 2009. The Friends of Rose Park and the Beall Court Condominium Association both submitted comments that the Rose Park trail should not be widened. The NCPC, DC HPO, Smithsonian Institution, and District of Columbia Office of Planning (DC OP) provided comments with recommendations for the EA. Prior to the release of the EA, the project was put on hold.

In November 2010, when funding again became available, the Rock Creek Park Multi-Use Trail Rehabilitation project was reinitiated. In addition to an agency scoping period, a public scoping period was opened January 28, 2011 through February 28, 2011. During this time, the public was invited to provide comments on the proposed action and scope of the EA, and issues and concerns regarding natural, socioeconomic, and cultural resources. Public notices were posted on the Planning, Environment and Public Comment website (PEPC), the DDOT website and Facebook pages, and advertised in *The Washington Post* and *The Current* newspapers. The project team also sent email notices or posted to listservs of Advisory Neighborhood Commissioners (ANCs), community groups, and potential stakeholders, including individuals and groups who previously expressed an interest in the project.

A public scoping meeting was held on February 23, 2011, at the National Zoo Visitor Center Auditorium, 3001 Connecticut Avenue, NW, Washington, DC. The purpose of this meeting was to solicit public input on the purpose, need, and objectives of the project, major issues, and alternatives. A total of fifty-four (54) people signed in to the meeting. The meeting was held in an open-house format, followed by an open microphone session in which attendees could sign up to speak at a microphone. Approximately six hundred (600) comments were received during the public scoping period, ***which took place from January 28, 2011 to February, 28, 2011.*** In general, the comments articulated support for the Action Alternatives. The majority of respondents favored Rock Creek Park Trail Alternative 3: Trail Resurfacing and Widening, Peirce Mill Trail Spur Option B: Eight-foot Paved Trail Spur, and Rose Park Trail Option C: Eight-foot Resurfaced Trail.

***In addition to public scoping, a meeting was held on April 13, 2011 for the Friends of Rose Park to discuss the proposed project and gather information from local residents and community groups as it pertains to the trail in Rose Park.***

***The EA was released on December 2, 2011 and formal comments on the proposed action and the EA were accepted through January 13, 2012. Prior to the release of the EA, a notice of availability and notice of public hearing was distributed through a variety of outlets including the DDOT and the NPS Planning, Environment and Public Comment (PEPC) websites; printed notices appeared in the Legal Notice sections of the Washington Post and Current newspapers; and electronic notices were sent to the ANC and neighborhood association listservs, as well as approximately 75 individuals who had requested***

*periodic updates via the project website. DDOT held a Public Hearing at the Columbia Heights Education Campus on December 14, 2011 from 6:00 p.m. to 8:00 p.m. The hearing was set up in an Open House format from 6:00 – 6:30, with public comments from 6:30 p.m. – 8:00 p.m. The purpose of the public hearing was to give interested parties the opportunity to provide formal comments on the Draft EA and Section 106 Evaluation by signing up to speak at the microphone, by speaking privately to a court reporter, or by providing written comments via comment forms, mail, or the project website. Fourteen (14) individuals attended the hearing, with five (5) providing verbal comments at the hearing. One (1) individual provided formal testimony, and three (3) individuals provided comment cards. Many commenters expressed concern regarding safety issues in Rose Park not being adequately addressed.*

## **1.11. ISSUES AND IMPACT TOPICS ANALYZED IN THIS EA**

Issues describe problems or concerns associated with current impacts from existing environmental conditions or current operations as well as problems that may arise from the implementation of any of the alternatives. The project team identified potential issues associated with the rehabilitation of the Rock Creek Park multi-use trail during internal scoping. The issues and concerns identified during scoping were grouped into impact topics that are discussed in “Chapter 3: Affected Environment” and are analyzed in “Chapter 4: Environmental Consequences.”

Impact topics are resources of concern that could be affected either beneficially or adversely by the range of alternatives. The impact topics were considered in accordance with all applicable federal and state environmental regulations, policies, and orders.

### **1.11.1. ISSUES**

#### ***Trail Condition and Width within the Parks***

***Rock Creek Park and Rose Park attract many visitors and trail users. NPS owns and administers the entire Rock Creek Park multi-use trail and the trail in Rose Park. The remaining portions of Rose Park, including playing fields, playgrounds, and open space, are administered by District of Columbia Parks and Recreation (DPR). In cooperation with DPR, NPS must strive to meet objectives for visitor use and experience as outlined in Management Policies (NPS 2006) and the Rock Creek Park GMP (NPS 2007), including achieving a balance for all types of park and trail users. NPS and DPR do not restrict the use of their paved trails by type of non-motorized users.***

***Comments received during the scoping period and during the EA review period indicate that the majority of trail users are interested in improving the condition of and widening both trails where possible. However, in Rose Park, community groups such as the Friends of Rose Park, the Advisory Neighborhood Commission (ANC 2E), and the Citizens Association of Georgetown voiced concern over widening the trail. These community groups see the trail as a pedestrian path through Rose Park, rather than a component of the larger multi-use trail network. According to the community groups, widening of the path would increase bicycle traffic in the Park, potentially increasing the risk of conflicts between trail user groups and other park users including children at play. Specifically, several group members were concerned with the proximity of children’s play areas to the trail. In addition, group members pointed out the importance of preserving a large oak tree adjacent to the trail at the Dumbarton Street playground area.***



*Originally constructed over 30 years ago, the Rock Creek Park multi-use trail is in poor condition. The trail in Rose Park is also currently in poor condition. The asphalt is rutted and eroded on both trails and both trails are too narrow in most sections for the current volume and variety of trail users. With over 134 trail users per hour in some sections of the Rock Creek Park multi-use trail and 145 users per hour on Rose Park trail (See Section 3.12.1 of this EA), sharing and passing are challenging, making it difficult to strike a balance. While physical and environmental constraints prevent widening of the trail to nationally-recognized AASHTO standards, any improvement to the trail's surface condition would benefit the parks' visitors.*

### **National Zoo Gate / Beach Drive Tunnel**

*During the public involvement process, the majority of the comments received expressed concern regarding the section of the Rock Creek Park multi-use trail that runs through National Zoo property. The National Zoo grounds are closed and this section of trail is gated from dusk to dawn, forcing trail users through the Beach Drive tunnel by way of a two-foot wide raised sidewalk. The sidewalk does not allow adequate room to safely pass other trail users, and there are no physical barriers separating trail users from vehicular traffic (Figure 5).*



**Figure 5. National Zoo Gate and Beach Drive Tunnel**

Many trail users commented that the portion of the Rock Creek Park multi-use trail on the National Zoo property should remain open 24 hours-a-day or improvements should be made to the trail as it runs through the Beach Drive tunnel detour.

### **Trail User / Motorized Vehicle Conflicts**

During the scoping period, a number of trail users expressed concerns regarding potential trail user/vehicular traffic conflicts. Based on public comments, the following locations are key areas of concern:

- **Beach Drive Bridge over Rock Creek.** Currently, trail users cross the bridge, located just south of the Beach Drive tunnel, on an approximate three-foot raised sidewalk separated from vehicular traffic by a curb. The trail is not wide enough for trail users to safely pass one another.
- **Shoreham Drive Crossing.** Sight distance is limited at the approaches to this intersection/crossing for both trail users and vehicular traffic.

- **Piney Branch Parkway.** The unpaved and paved sections of trail along Piney Branch are very narrow in some locations. Currently there is no defined separation between trail users and motorized vehicles.

### **Piney Branch Parkway Retaining Wall**

An approximately 1,075-foot long stone masonry retaining wall runs along Piney Branch Parkway between the trail and the Piney Branch stream channel. A 65-foot section of the wall is in various stages of collapse, undermining the existing infrastructure (**Figure 6**). The deteriorated condition of the trail in this area presents a safety issue and contributes to erosion of the stream bank. *During investigations for the EA, DDOT discovered abandoned utilities that would need to be considered in any future rehabilitation of the retaining wall. The rehabilitation of the retaining wall is outside the scope of this project, but DDOT will continue to work with the NPS and the FHWA to determine an acceptable plan.* The stone masonry wall is a contributing feature to the Rock Creek Park Historic District and, under the proposed action, any disturbance to the wall would be avoided to the extent possible.



**Figure 6. Collapsed Section of Retaining Wall along Piney Branch Parkway Trail**

### **1.11.2. IMPACT TOPICS**

#### **Soils**

The Rock Creek Park multi-use trail is a paved trail; however, due to deteriorating conditions of the trail, particularly along Piney Branch, soil erosion has become an issue. The accelerated loss of soil is a result of several factors. During storm events, soil is eroded from cracked and collapsed sections of the trail. Where users leave the pavement to take shortcuts or maneuver around others, soil is compacted. Compacted soils are unable to support vegetation, and are more easily eroded. The Action Alternatives seek to address these erosion issues. As a result potential impacts to soils would occur from both the No Action and Action Alternatives. This resource topic is addressed as an impact topic in the EA.

#### **Water Quality**

One of the needs of the project is to improve areas where deteriorating conditions along the trail have led to problems with soil erosion. Soil erosion results in sediment transport, which impacts water quality. Under the No Action Alternative, these conditions would continue to deteriorate. Measures proposed under the Action Alternatives will seek to improve these conditions. Therefore, this impact topic is addressed in the EA.

**Vegetation**

The visual quality of the park is defined in large part by heavy vegetation, including large specimen trees, which contrasts with the highly urbanized area surrounding the park. Rock Creek Park is a historic landscape and maintaining the existing vegetation in the park is of high concern to many, including the NPS. The No Action Alternative has the potential to impact vegetation as trail users continue to circumvent deteriorated trail sections. The Action Alternatives also have the potential to impact vegetation during construction. As a result, this resource topic is addressed as an impact topic in the EA.

**Wildlife**

Rock Creek Park remains the largest area within the highly urbanized District in which wildlife and its habitat remain largely protected from development (NPS 2010). The No Action Alternative has the potential to impact wildlife, particularly aquatic life, as uncontrolled erosion leads to sediment deposits in Rock Creek. Temporary construction noise associated with the Action Alternatives also has the potential to impact terrestrial wildlife. Therefore, this resource topic is addressed as an impact topic in the EA.

**Cultural Resources**

The National Historic Preservation Act (NHPA; 16 USC 470 et seq.), NEPA, Organic Act, NPS *Management Policies* (NPS 2006), DO-12 (Conservation Planning, Environmental Impact Analysis and Decision-making), and NPS-28 (Cultural Resources Management Guideline) require the consideration of impacts on any cultural resources that might be affected. The NHPA, in particular, requires the consideration of impacts on cultural resources either listed in, or eligible to be listed in, the NRHP. Cultural resources include historic structures and district cultural landscapes, archeological resources, ethnographic resources, and museum collections (prehistoric and historic objects, artifacts, works of art, archival documents, and natural history specimens). Impacts to historic structures and districts, cultural landscapes, and archeological resources, are the three cultural resource topics carried forward for analysis in this EA.

**Historic Structures and Districts**

The Rock Creek Park multi-use trail is within the Rock Creek Park and Rock Creek and Potomac Parkway historic districts, which are listed in the NRHP. The Rock Creek Park Historic District meets the National Eligibility Criteria A, B, and C and includes areas significant for architecture, community planning and development, conservation, entertainment and recreation, industry, landscape architecture, military and horticulture. The Rock Creek and Potomac Parkway is significant under Criteria A and C in the areas of community planning and development, landscape architecture, architecture, and recreation during the period 1791 to 1951 (NPS 2005b). Both the No Action and Action Alternatives have the potential to impact character-defining elements through possible modification of current circulation patterns and the potential removal of vegetation. Due to the potential of the No Action and Action Alternatives to impact character-defining elements of historic structures and districts, this impact topic is addressed in the EA.

**Cultural Landscapes**

According to The Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*, cultural landscapes are defined as "a geographic area associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values." As a result of a cultural landscape inventory completed by the NPS in 1997, Rock Creek Park was determined to meet the criteria for listing in the NRHP as a historic designed landscape. In addition, two component landscapes of the park, Linnaean Hill and the Peirce Mill, were found to be individually eligible elements and contribute to the significance of the Rock Creek Park cultural landscape. The National Park Service currently is developing a cultural landscape report for the historic trails in Rock Creek Park.

Under the No Action Alternative, trail users will continue to leave the existing trail in areas undermined by erosion and areas too narrow for safe passage. The new unpaved paths established by the users damage the surrounding grounds, circulation patterns, and views, all of which are character-defining elements of the historic districts and properties. The Action Alternatives also have the potential to impact character-defining elements through possible modification of current circulation patterns and removal of vegetation. Due to the potential of the No Action and Action Alternatives to impact character-defining elements of historic structures and districts, this impact topic is addressed in the EA.

### **Archeology**

While much of the proposed Rock Creek Park multi-use trail study area has not been surveyed for archeological resources in accordance with Section 106 of NHPA of 1966, as amended, numerous assessment analyses and pedestrian reconnaissance surveys have included portions of the proposed limit of disturbance (LOD). These assessment analyses and pedestrian reconnaissance surveys indicate that areas along Rock Creek and its tributary streams such as Piney Branch have a high potential for the presence of precontact Native American and to a lesser extent pre-20<sup>th</sup> century Historic period archeological sites, including several archeological sites that have been located either within or adjacent to the proposed LOD. Based on the findings of this review of previous assessment analyses and pedestrian reconnaissance surveys, archeology has been analyzed further in this EA.

### **Visitor Use and Experience**

Rock Creek Park is one of the most heavily utilized national parks in the United States and provides a number of natural, historical, and recreational activities for the general public. Because Rock Creek Park is surrounded by a highly developed urban area, it can provide its users a visual and sensory respite from the surrounding environment (NPS 2010).

Under the No Action Alternative, visitor use could be impacted as trail users may be deterred from using the trail due to continued deterioration of the trail surface and elements including sharp turns, narrow passages, and short sightlines that create potential opportunity for user conflicts. The Action Alternatives also have the potential to impact visitor use and experience as visitors may be rerouted or blocked from accessing sections of the trail during construction. Construction noise and activities may deter users from visiting the trail on a temporary basis. Therefore, visitor use and experience is addressed in the EA as an impact topic.

### **Human Health and Safety**

Improved visitor safety is identified as a need for this project. Safety improvements to the existing facility are necessary due to the continued deterioration (heaving and cracking) of the trail, creating potential safety issues. Access to the trail at numerous crossing points, the existing sightlines, grade changes, curves and approaches may not meet current guidelines for multi-use trails. Additionally, narrow trail widths in some sections impede the ability of trail users (pedestrians, bicyclists, runners, those enjoying nature, etc.) to safely pass one another, augmenting the potential for user conflicts or accidents. As a result of the potential of the No Action Alternative to impact visitor safety, this resource is addressed in the EA as an impact topic.

### **Park Operations and Management**

Due to the length of the trail and its deteriorating condition, maintenance costs and activities are high. Under the No Action Alternative, extensive maintenance of the trail due to heaving, cracking, and erosion would continue. Because the No Action Alternative and Action Alternatives have the potential to impact park operations and management, this resource topic is addressed in the EA.

**Traffic and Transportation**

The 3.7 mile section of the Rock Creek Park multi-use trail in the study area generally follows Beach Drive to the north and Rock Creek and Potomac Parkway to the south. East/west road crossings occur in several locations along the trail within the study area. Under the Action Alternatives, there is a potential for traffic to be disrupted during times of construction, possibly requiring temporary partial road closures. In addition, the proposed improvements include new connections between Rock Creek Park and the surrounding non-motorized transportation network, including pedestrian and bicycle facilities. Because the No Action and Action Alternatives have the potential to impact traffic and transportation, this topic is addressed in the EA.

**1.12. IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS****Geology and Topography**

The proposed Action Alternatives call for rehabilitation of the Rock Creek Park multi-use trail. While the Action Alternatives may require minor grading for construction, it is not expected that geology or topography will be disrupted because of the limited grading involved. Therefore, these topics were dismissed from further analysis.

**Geologic Hazards**

There are no known geologic hazards within the project area; therefore, this topic was dismissed from further analysis.

**Groundwater**

The proposed actions would not result in appreciable effects to water resources of the Rock Creek Park watershed. Groundwater resources are present within crystalline-rock aquifers of the region (USGS 1997). The addition of impervious surfaces would reduce groundwater recharge to a degree in the project area, but the reduction would be so small that there would be no measureable effect on groundwater resources. Therefore, this topic was dismissed from further analysis.

**Surface Waters**

There are two primary surface water resources in the project area: Rock Creek and Piney Branch. Both streams are “waters of the United States,” and are under the jurisdiction of the USEPA and the USACE (33 U.S.C. §1251 et seq.). However, no impacts to Rock Creek or Piney Branch would occur as a result of the Action Alternatives. Impacts to surface waters as a result of construction and hazard of erosion are addressed under Water Quality. Because there would be no noticeable effects on surface waters as a result of the proposed actions, surface waters were dismissed from further analysis.

**Wetlands**

NPS wetland management policy (DO 77-1) is to support “no net loss of wetlands” as directed by Executive Order 11990. To define wetlands, the NPS uses the Cowardin Classification System, as outlined in *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin 1979). Mapping of Cowardin classified wetlands is available for the project area from the USFWS National Wetlands Inventory (NWI). NWI mapping of the project area identifies Rock Creek and Piney Branch as riverine wetland systems, but no other wetlands are identified within the project area (USFWS 2011b). Therefore, because the proposed Action Alternatives would not require impacts to Rock Creek and Piney Branch, wetlands were dismissed from further consideration. In addition, a cursory field investigation took place during January 2011 to survey potential wetlands of the Rock Creek Park multi-use trail corridor. During the field investigation, there were no observations of wetland soils, vegetation, or hydrology other than Rock Creek and Piney Branch.

**Floodplains**

Due to its proximity to Rock Creek, most of the project area is within the 100-year floodplain as designated by the National Flood Insurance Program. However, impacts to the floodplain under the proposed Action Alternatives would not be noticeable, due to the existing condition of the project area. The proposed actions represent small modifications to the floodplain, which is already developed with the Rock Creek Park multi-use trail system. In general, new pavement is proposed in areas where soils are compacted and exposed. The effects of new pavement on infiltration and runoff would be similar to existing conditions.

In compliance with Executive Order 11988, NPS floodplain management policy (DO 77-2) is to preserve floodplain values, minimize potentially hazardous conditions associated with flooding, and comply with all federal laws pertaining to the management of floodplains. Based on the relatively small size of proposed modifications spread throughout the trail system, the value of the floodplain would generally be maintained as a result of the Action Alternatives. Potentially hazardous conditions associated with flooding would be reduced through the stabilization of eroded and exposed soils throughout the trail system. Therefore, because the proposed actions would represent a continuation of existing conditions in the floodplain, this topic was dismissed from further consideration.

In addition, DO 77-2 requires the preparation of a formal Statement of Findings for any proposed action which would result in impacts to flood-prone sites. Because the Rock Creek Park multi-use trail is already in place, and the Action Alternatives would not impact the existing flood hazard within the project area, a Statement of Findings was not required for the Rock Creek Park Multi-Use Trail Rehabilitation.

**Rare, Threatened, and Endangered Species**

The Endangered Species Act provides for the protection of ecosystems upon which threatened and endangered species of fish, wildlife, and plants depend. Section 7 of the Endangered Species Act requires federal agencies to insure that any action authorized, funded, or carried out by them is not likely to jeopardize the continued existence of listed species or modify their critical habitat (USFWS 2011).

The federally endangered Hay's Spring Amphipod (*Stygobromus hayi*) was discovered in five groundwater springs in Rock Creek Park in 1998. The Hay's Spring Amphipod ranges from one-half to one-inch long. It is colorless, eyeless, and has adaptive hairs for sensing currents and food. They have life spans of eight years or more and a low reproductive rate. Hay's Spring Amphipods spend the majority of their lives in groundwater below the surface, feeding on detritus. Amphipods are subject to a number of predators when they are at surface springs, such as stonefly larvae and salamanders, but probably have few if any predators below the surface. Threats to groundwater amphipods include alterations of groundwater flows, groundwater pollution, loss of detritus as a food source, and disturbance of spring sites. Common pollution problems for amphipods are nitrates in fertilizers (which can result in groundwater oxygen depletion), pesticides, and petroleum leaking from underground storage tanks.

Through desktop review, verification with NPS park staff, and field observation by consultant environmental scientists in January 2011, no suitable habitat for the Hay's Spring Amphipod was noted within or surrounding the project area. Additionally, correspondence from the U.S. Fish and Wildlife Service (USFWS) dated April 20, 2011 stated, "except for occasional transient individuals, no proposed or federally listed endangered or threatened species are known to exist within the project impact area. Therefore, no Biological Assessment or further Section 7 consultation with the U.S. Fish and Wildlife Service is required." Because there are no known threatened or endangered species or habitats within the vicinity of the project area, this topic is dismissed from further analysis.

**Scenic Resources (Aesthetics and Viewsheds)**

The visual and aesthetic quality of a place is affected by its overall visual character as well as the associated views and vistas within and around the area. Views and vistas capture the range of the eye and frame the visual character of a site. Views and vistas are composed of foreground and background elements and are taken from a certain point of view. View describes those unplanned views that result from the construction of other features. Vista defines views of primary importance that were specifically planned, designed, and implemented. Current NPS management practices in Rock Creek Park include maintenance of open spaces through selective vegetation management. However, there are no planned vistas located along the project area. Therefore, this impact topic has been dismissed from detailed study.

**Museum Collections**

The proposed alternatives would not have any direct effects upon recognized museum collections (historic artifacts, natural specimens, and archival and manuscript material); therefore, this impact topic is dismissed from further analysis.

**Ethnography**

Ethnographic resources are defined by the NPS as any “site, structure, object, landscape, or natural resource feature assigned traditional, legendary, religious, subsistence or other significance in the cultural system of a group traditionally associated with it” (NPS 1998). There are no known ethnographic resources within the Area of Potential Effect (APE); therefore, ethnographic resources are dismissed from further analysis.

**Land Use**

*Based on a review of geographic data compiled by the DC Office of Planning, land use in the area of the proposed actions is categorized under Parks and Open Spaces and Roads. No changes in land use are expected to result from the proposed actions. Purposes of the project include enhancing the visitor experience and improving access to the trail system from other trails and neighborhoods. These purposes are consistent with current land use.*

*The proposed actions were also reviewed for consistency with comprehensive planning goals established by the NCPC and described in the Comprehensive Plan for the National Capital Region. Based on the project purpose of enhancing pedestrian and bicycle access to Rock Creek and the Rock Creek and Potomac Parkway, the proposed actions would be compatible with the NCPC principle of reinforcing smarter, coordinated growth. Also, rehabilitation of the trail would address sediment and erosion concerns in the Park, which is compatible with the NCPC principle of sustainable development. Based on these considerations, land use was dismissed from further analysis.*

**Socioeconomics**

The NEPA requires an analysis of impact to the human environment including an analysis of social, economic, and demographic elements in the project area. Construction of Action Alternatives may provide a temporary benefit to the local economy with the hiring of construction workers and an increase in local revenue generated from the construction workers and activities. However, this beneficial effect is expected to be minimal and temporary. The No Action and Action Alternatives are not expected to have any appreciable impact on socioeconomics of the surrounding area; therefore, this topic is dismissed from further analysis.

**Environmental Justice**

On February 11, 1994, President Clinton issued Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.” This order directs federal agencies to identify and address disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority or low-income populations.

The minority and low-income populations directly outside of the project area are consistent along the length of the project area. According to 2010 U.S. Census data for Washington DC, the average African American population is 50.7 percent, the Hispanic population is 9.1 percent, and the Asian population is 3.5 percent (U.S Census 2010). According to the most recent U.S. Census studies of poverty in Washington DC (an estimate between the years 2005-2009), 18.3 percent of the population lives below the poverty level. While minority and low-income populations exist outside of the project area, these populations would not be particularly or disproportionately affected by the alternatives. Therefore, this impact topic is dismissed from further analysis.



## CHAPTER 2: ALTERNATIVES

### 2.1. INTRODUCTION

NEPA requires that federal agencies explore a range of reasonable alternatives. The alternatives under consideration must include the “No Action” Alternative as prescribed by 40 CFR 1502.14. Any alternative analyzed must meet the management objectives of the park, either wholly or partially, while also meeting the purpose of and need for the project.

The alternatives analyzed in this document are the result of public scoping, agency consultation, and extensive collaboration between the lead agencies and the consultant team. The project team explored and objectively evaluated a range of alternatives. After consideration of agency, stakeholder, and public comments, the alternatives, including the No Action Alternative, and a number of Options were carried forward for detailed analysis. A number of alternatives and options were also considered and dismissed from further study for the reasons described below.

In addition to the objectives and laws, regulations, and policies discussed in Chapter 1, development of the alternatives and options for the Rock Creek Park Multi-Use Trail Rehabilitation considered the following design guidance and manuals: DDOT *Standard Specifications for Highways and Structures* (2009), DDOT *Standard Drawings* (2009), DDOT *Design and Engineering Manual* (2009), AASHTO *Geometric Design of Highways and Streets* (2004), FHWA *Manual on Uniform Traffic Control Devices* (2003), District Department of the Environment (DDOE) *Stormwater Management Guidebook* (2003), DDOE *Standards and Specifications for Soil Erosion and Sediment Control* (2003), and DC Water and Sewer Authority (DC Water) design manuals and construction standard details and specifications.

### 2.2. ALTERNATIVE 1: NO ACTION

The No Action Alternative describes the action of continuing the present management operations and conditions. It does not imply or direct discontinuing the present action or removing existing uses, development, or facilities. If the No Action Alternative were to be selected, the NPS would respond to future needs and conditions without substantial action or policy change. Under the No Action Alternative (Alternative 1), the Rock Creek Park multi-use trail from the Broad Branch/Grove 2 North parking area to P Street, NW would continue to be maintained by the NPS. Neither the Rock Creek Park multi-use trail nor the Piney Branch Parkway trail would be rehabilitated, although basic maintenance such as spot repairs and debris removal would continue (**Figure 7**). ***While the No Action Alternative does not meet the purpose and need of the project, it provides a basis for comparing the management direction and environmental consequences of the proposed Action Alternative.***



Figure 7. No Action Alternative

## 2.3. ACTION ALTERNATIVES

This EA analyzes the No Action Alternative along with two Action Alternatives for the Rock Creek Park Multi-Use Trail Rehabilitation. The project includes spot improvements for safety and visitor experience, as well as new connections to Rock Creek Park from the surrounding neighborhoods. In addition to the Action Alternatives, two Options for the visitor-made social trail from Broad Branch Road to Peirce Mill, and three Options for the Rose Park trail were analyzed *as part of this EA. The work being proposed for the Peirce Mill trail spur and the Rose Park trail options are included in this EA to improve the surrounding communities' access and connectivity to the Rock Creek Park multi-use trail. Although the Peirce Mill and Rose Park options would be selected in conjunction with the action alternatives, the selection of no action for these options would not affect the implementation of the work proposed for the Rock Creek Park Multi-Use Trail Rehabilitation.* Construction of the project would be phased in such a way as to, when possible, provide logical detours around the trail sections and road areas under construction.

### 2.3.1. ALTERNATIVE 2: TRAIL RESURFACING

Under Alternative 2, the Rock Creek Park multi-use trail would be resurfaced at its existing variable (six-foot to 10-foot) widths. Trail material selection would be considered during the detailed design phase of the project. The unpaved social trail connecting the Rock Creek Park multi-use trail to the Piney Branch Parkway trail would be resurfaced to a six-foot width, and the Piney Branch Parkway trail would be resurfaced to a varying six-foot to eight-foot width, depending on physical and environmental constraints.

Alternative 2 would cost approximately **\$4,459,000** to design and construct (**Table 1**) *without the Peirce Mill and Rose Park options: however, depending on which option for the Peirce Mill trail spur or the Rose Park trail is selected, the cost of Alternative 2 would range from \$5,095,383 to \$5,254,285. The duration of construction is anticipated to be 12 to 18 months.* A map of Alternative 2 is presented in **Figure 8**. Detailed cost estimates are presented in **Appendix C**.

### 2.3.2. ALTERNATIVE 3: TRAIL RESURFACING AND WIDENING

Under Alternative 3, the Rock Creek Park multi-use trail would be resurfaced and widened to a minimum six-foot width and a maximum 10-foot width, depending on environmental and physical constraints. Out of approximately 5.2 miles of trail resurfacing under Alternative 3, 2.6 miles would be 10 feet in width. A short section from just north of Piney Branch Parkway to the National Zoo entrance would be eight feet in width. Sections ranging from four to six feet wide would be located for a short section along Piney Branch Parkway, through the Beach Drive tunnel, and along the connections to P Street, NW. Further details about the Beach Drive tunnel and P Street connections follow in the Elements Common to Action Alternatives section. Trail material selection would be considered during the detailed design phase of the project. Minor trail realignments would improve sight distance and approaches to transitions in trail width. The unpaved social trail connecting the Rock Creek Park multi-use trail to the Piney Branch Parkway trail would be resurfaced to an eight-foot width, and the Piney Branch Parkway trail would be resurfaced to a varying six-foot to eight-foot width, also depending on physical and environmental constraints. *Alternative 3 is the Preferred Alternative for the proposed action.* Alternative 3 would cost approximately **\$8,432,000** to design and construct (**Table 1**) *without the Peirce Mill and Rose Park options: however, depending on which option for the Peirce Mill trail spur or the Rose Park trail is selected, the cost of Alternative 3 would range from \$9,068,802 to \$9,227,704. The duration of construction is anticipated to be 12 to 18 months.* A map of Alternative 3 is presented in **Figure 9**. Detailed cost estimates are presented in **Appendix C**.



Figure 8. Alternative 2



Figure 9. Alternative 3

**2.3.3. ELEMENTS COMMON TO ACTION ALTERNATIVES**

The following sections provide descriptions of elements that would be included with the implementation of either Action Alternative (i.e., Alternative 2: Trail Resurfacing or Alternative 3: Trail Resurfacing and Widening). The discussions include cross sections of the trail as well as detailed mapping. These show proposed spot improvements that are designed more effectively to separate trail users from vehicular traffic and to improve safety at roadway crossings, to improve sight distance at approaches and curves, to improve user accessibility, and to improve drainage and erosion control. In addition, a number of new connections to Rock Creek Park from the surrounding pedestrian and bicycle systems are proposed, as well as connections to and from the Piney Branch Parkway trail, within Rock Creek Park.

**General**

As part of the proposed action, tree protection measures, erosion and sediment control measures, and other best management practices (BMPs) would be installed prior to any land disturbing activities. Further details of BMPs proposed for this project are discussed later in this chapter under Mitigation Measures of the Action Alternatives and Options.

**Trail User and Vehicular Traffic Separation Improvements**

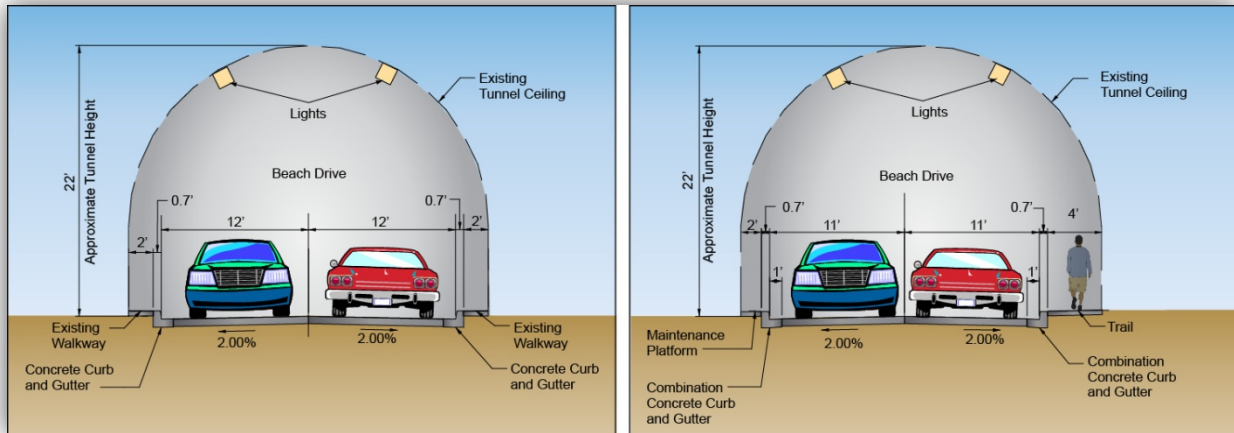
Piney Branch Parkway Trail Widening. A short section of the existing paved portion of the Piney Branch Parkway Trail, approximately 50 feet in length, is currently 4.5 feet wide. Parkway travel lanes are currently 12 feet wide. By restriping a short section of the Parkway to 11-foot lanes, a six-foot trail can be achieved without creating a larger footprint. Existing drainage features along the 50-foot section such as curbs would be shifted a maximum of two feet inward in order to accommodate the new six-foot trail.

Broad Branch/Grove 2 North Parking Area. A new trail section, which would separate trail users from vehicular traffic in the parking area, would be constructed. The new trail would replace an existing social trail to the east of the Broad Branch/Grove 2 North parking area (**Figure 10**). The new trail section would tie into the existing Rock Creek Park multi-use trail immediately to the south of the parking area.



**Figure 10. Existing Social Trail along the Broad Branch/Grove 2 North Parking Area**

**Beach Drive Tunnel.** The existing two-foot wide raised sidewalk along the west wall of the tunnel would be widened to approximately four feet. Vehicular travel lanes would be reduced from 12 feet in width to approximately 11 feet. In developed areas, where there are stringent controls on design, the use of 10-foot lanes is the minimum acceptable practice, according to the American Association of State Highway and Transportation Officials (AASHTO 2001). Signage at the tunnel approaches would alert drivers to the trail users ahead. Additionally, a barrier such as a *low-profile guardrail* would further alert drivers of the trail within the tunnel. **(Figure 11) Future NPS plans include replacement of the tunnel's existing lighting with LED lights. Light replacement is expected to be complete in Fiscal Year 2014.**



**Figure 11. Beach Drive Tunnel Existing Conditions and Proposed Conditions**

**Beach Drive Bridge over Rock Creek (south of National Zoo).** The existing Beach Drive Bridge over Rock Creek is a 200-foot single span concrete slab arch bridge, supporting two lanes of traffic and a sidewalk on both sides of the bridge. Currently, the Rock Creek Park multi-use trail crosses the bridge by way of a 3.5-foot raised sidewalk along the upstream (west) side of the bridge. Under the proposed conditions, the multi-use trail would tie into a new bridge to be constructed immediately adjacent to the west side of the existing bridge. The proposed structure would be equal in length and style as the existing bridge, and would be constructed within *five feet* of the current bridge abutment. **The five foot distance would allow for maintenance and future replacement of the existing bridge.** The bridge materials would match the current concrete and stone aesthetics of the existing structure. The total width of the proposed bridge would be 12 feet, allowing for a 10-foot trail clearance (Figure 12).

**Striping at Porter Street Bridge Underpass.** Currently, sight distance at this underpass is limited. However, physical and environmental constraints prevent realignment of the trail at this location. Under the proposed action, centerline striping would be included at the approaches to this underpass to reduce potential user conflicts.

### Roadway Crossing Safety Improvements

**Broad Branch Road.** A new crosswalk is proposed at Broad Branch Road to the north of the parking area entrance (Figure 13).

**Jewett Street.** The existing at-grade crosswalk would be improved for trail user safety.

National Zoo Entrance. The alignment of the crosswalk and approaches would be modified to create a shorter roadway crossing distance, as well as sight distance improvements for both trail users and vehicular traffic.

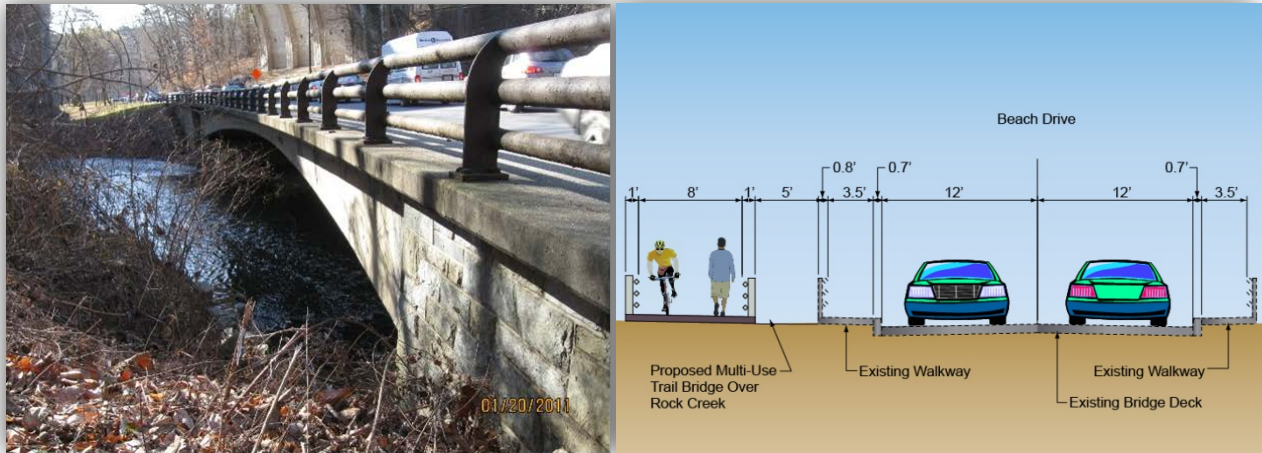


Figure 12. Beach Drive Bridge Existing Conditions and Proposed Conditions

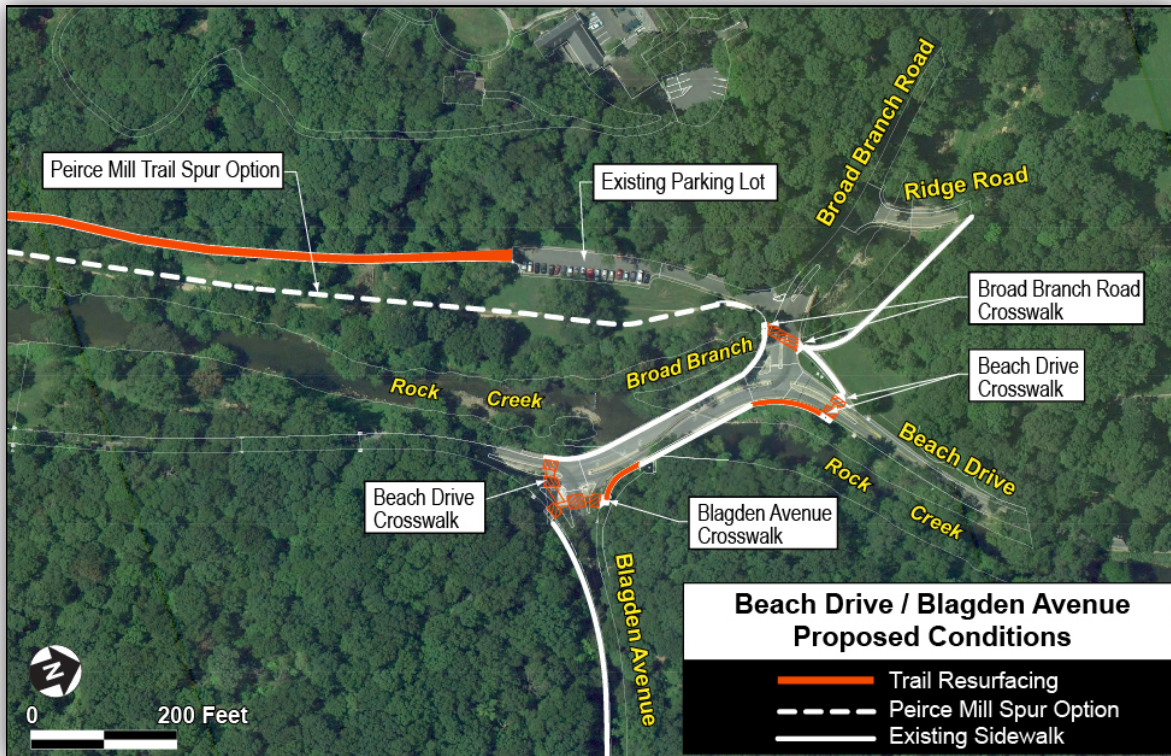


Figure 13. Proposed Crossings at Beach Drive and Blagden Avenue



Shoreham Drive. The existing at-grade crosswalks would be consolidated and realigned to improve sight distance for both trail users and vehicular traffic approaching the intersection. *Since the Draft EA, crossing improvements were constructed at Shoreham Drive as part of the Beach Drive Road Reconstruction Project.*

P Street, NW. A new at-grade crosswalk would be constructed to connect the existing sidewalks along the west end of the P Street ramp (**Figure 14**).

### **New Connections**

Beach Drive north of Blagden Avenue. The existing sidewalk along the east side of the bridge would be extended north to a new at-grade crossing to the existing trail to the north of Beach Drive. Another means of access to the trail network on Blagden Avenue is a sidewalk on the west side of Beach Drive. To connect sidewalks, a cross walk is proposed on Beach Drive south of Bladgen Avenue. This sidewalk would give users an alternative way to gain access to Blagden Avenue and eliminate the need to transverse multiple roadway crossing on the east side of Beach Drive (**Figure 13**).

Piney Branch Parkway Trail. The social trail that currently connects the Rock Creek Park multi-use trail to the Piney Branch Parkway trail would be paved.

Arkansas Avenue. At the east end of the Piney Branch Parkway trail, the social trail along Arkansas Avenue would be resurfaced, and new ADA sidewalk ramps would tie into the existing sidewalks at 16<sup>th</sup> Street, NW and Taylor Street.

Porter Street Ramp. A new trail section would be constructed to connect the Rock Creek Park multi-use trail to the existing sidewalk along the Porter Street, NW ramp.

Proposed Trail within Klingle Valley. *The proposed construction of a multi-use Klingle Valley trail, as described in the Finding of No Significant Impact for Klingle Valley, would include a multi-use trail along the barricaded portion of Klingle Road, and a connection to the Rock Creek Park multi-use trail (DDOT 2011b). No construction of the proposed trail along Klingle Road and the proposed connection to Rock Creek Park multi-use trail will be conducted under the Rock Creek Park Multi-Use Trail Rehabilitation project.* Final designs for *the* Rock Creek Park multi-use trail *improvements would be compatible with* the proposed trailhead at Klingle Valley.

P Street, NW / Rock Creek and Potomac Parkway Trail / Rose Park. New trail sections along both sides of the P Street ramp and a new crosswalk would connect the existing P Street sidewalk, Rock Creek and Potomac Parkway trail, and Rose Park trail (**Figure 14**).

### **Minor Trail Realignments and Grading**

Trail Realignments. Minor trail realignments would improve sight distance and approaches along the trail to the south of Peirce Mill, to the south of Shoreham Drive, and at the approach to the Devil's Chair Bridge.

Trail Grading. Minor grading is proposed for an approximate 180-foot section of the multi-use trail, south of Calvert Street, to decrease the existing slope from approximately 12 percent to eight percent and improve user accessibility.

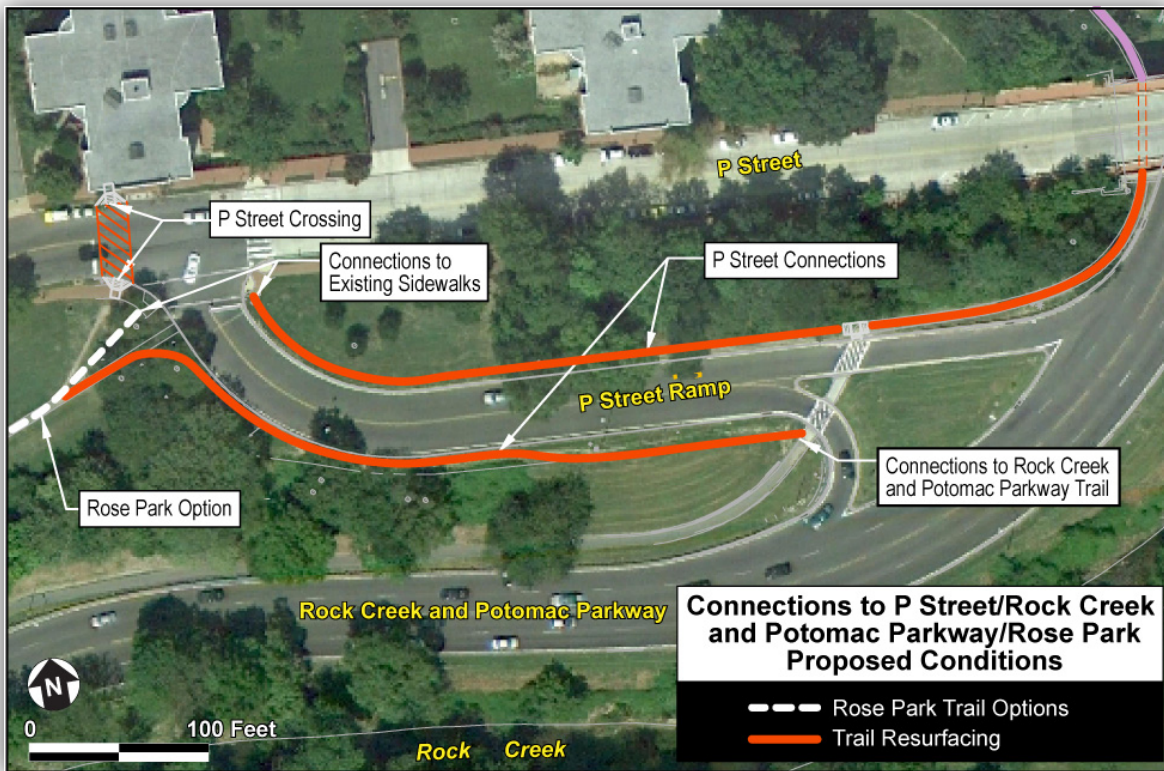


Figure 14. Proposed P Street, NW / Rock Creek and Potomac Parkway Trail / Rose Park Connections

**Other Improvements**

Drainage and Soil Erosion Improvements. Soil erosion and ponding conditions occur along an approximately 1,100-foot section of the Rock Creek Park multi-use trail south of Peirce Mill. The Action Alternatives would include raising the vertical profile of the trail to eliminate ponding, and stabilizing the slope between Beach Drive and the trail to improve soil erosion conditions.

Additionally, restoration is proposed for a 45-foot timber retaining wall immediately adjacent to the trail. The wall is located approximately 100 feet northwest of the southern end of the Beach Drive tunnel. Deterioration of the wall is contributing to soil erosion conditions between the trail and Rock Creek. Under the proposed action, the timber retaining wall would be reconstructed to mitigate soil erosion.

Piney Branch Parkway Retaining Wall. Under the proposed action, a 65-foot failed section of the approximate 1,100-foot historic stone wall along Piney Branch Parkway would be *temporarily stabilized as necessary*. *Since the draft EA, site constraints were identified which preclude rehabilitation of the retaining wall as part of this project.*

Stormwater Management. In order to more effectively manage stormwater along the multi-use trail, and to meet DDOE requirements, stormwater management is proposed as part the project. Bioretention areas could potentially be included at some of the connections to DDOT right-of-ways. These consist of small-scale facilities that promote infiltration of stormwater in order to reduce its volume, improve its quality, and increase groundwater recharge. Proposed stormwater management techniques also include bioswales which are

conveyance systems for stormwater runoff. A bioswale consists of a gently sloping, vegetated ditch that slows the flow of runoff into stormdrains or open waters. Bioswales are proposed at the following locations:

- adjacent to the Broad Branch/Grove 2 North parking area at the north end of the project area;
- adjacent to the trail between the Beach Drive tunnel and Tilden Street, including the trail along Piney Branch Parkway;
- adjacent to the trail between Klinge Road and Shoreham Drive, including the parking areas; and
- adjacent to the trail between the P Street, NW bridge and Oak Hill Cemetery.

## 2.4. PEIRCE MILL TRAIL SPUR OPTIONS

*DDOT included this option in the Rock Creek Park Multi-Use Trail Rehabilitation project because of the need for connectivity between Peirce Mill Trail and Rock Creek Trail.* Users have created a social trail along Rock Creek between the Broad Branch/Grove 2 North parking area to the north and Peirce Mill to the south (Figure 15).

### 2.4.1. OPTION A: NO ACTION

Under Option A, the unpaved social trail south of the Broad Branch/Grove 2 North parking area to Peirce Mill would remain unchanged. No new construction would occur.

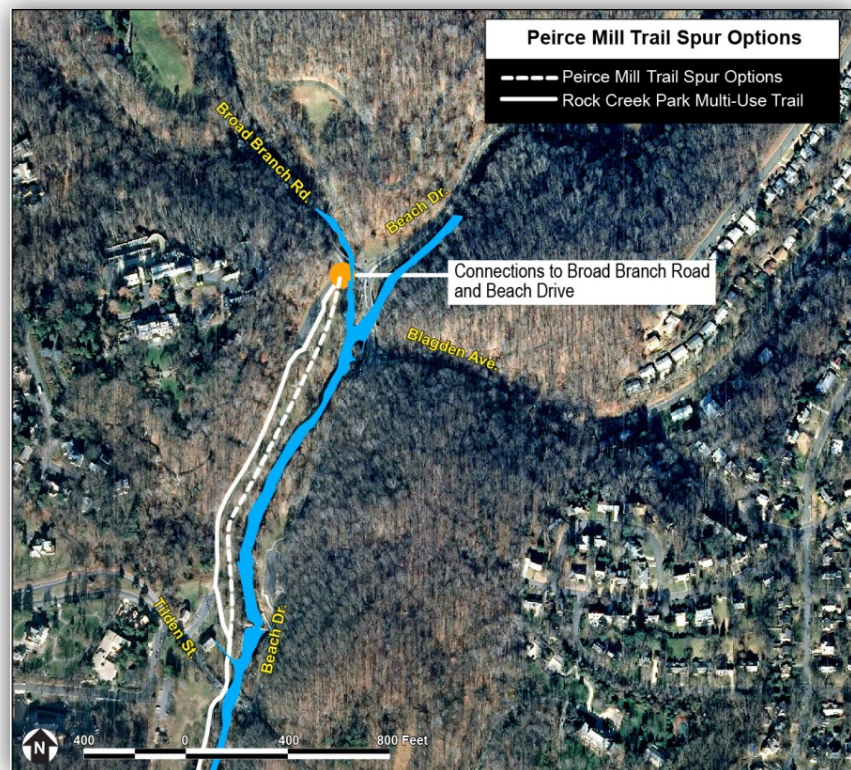


Figure 15. Peirce Mill Trail Spur Options

### 2.4.2. OPTION B: EIGHT-FOOT PAVED TRAIL SPUR

Under this option, the existing unpaved social trail from south of the Broad Branch/Grove 2 North parking area to the Peirce Mill parking area would be resurfaced to a standard eight-foot width. Trail material selection would be considered during the detailed design phase of the project. Prior to any land disturbing activities, tree protection measures, erosion and sediment control measures, and other best management practices (BMPs) would be installed. If necessary, archeology testing also would be performed. *Option B is the preferred option selected to be implemented for the Peirce Mill Trail in conjunction with the Preferred Alternative.*

Peirce Mill Trail Spur Option B would cost approximately \$414,000 to design and construct, in addition to the cost of either Action Alternative (Table 1). Detailed cost estimates are presented in Appendix C.

## 2.5. ROSE PARK TRAIL OPTIONS

*The trail in Rose Park is used by a variety of users, including walkers, families with strollers, runners, and bicyclists. During a field visit, the project team observed that users were leaving the currently five-foot to six-foot paved trail to pass and maneuver around other users, resulting in a one-foot to two-foot wide unpaved social trail on both sides, along some sections of the paved trail. In*

*consideration of comments received during the public scoping periods, as well as those received on the EA regarding the width and condition of the trail, the project team developed separate options for the section of the trail in Rose Park between P Street, NW and M Street, NW and DDOT has included this option as part of the Rock Creek Park Multi-Use Trail Rehabilitation project. In addition DDOT held a public meeting with the Friends of Rose Park, a volunteer non-profit organization, on April 13, 2011 to address their concerns regarding the Rose Park portion of the project. Comments from the meeting were considered in developing options for the trail in Rose Park. Any of the options described below may be selected in conjunction with the Action Alternatives.*

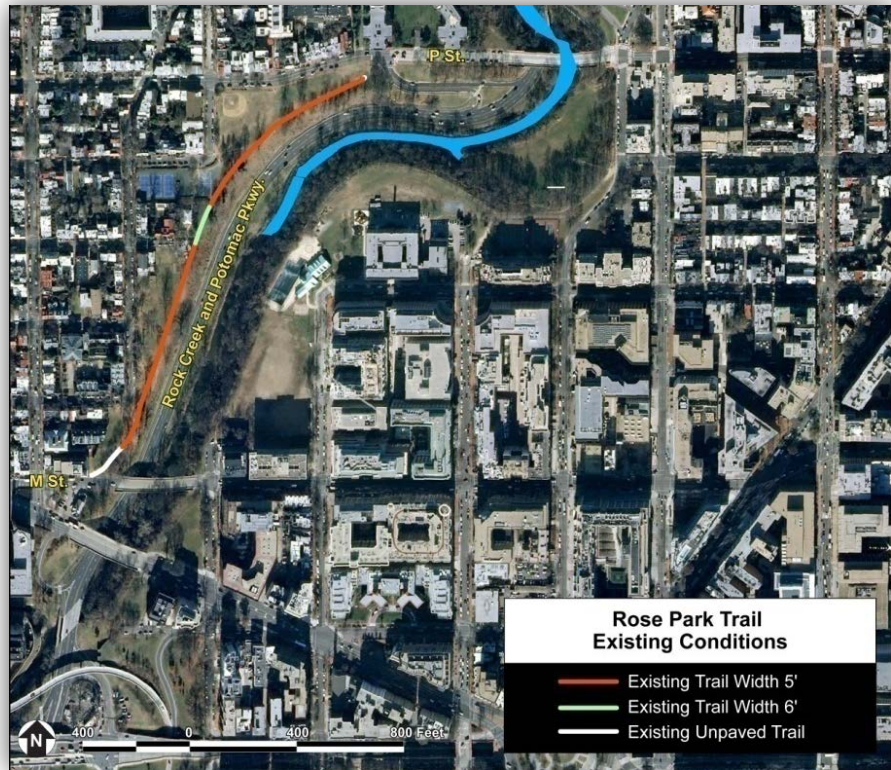


Figure 16. Rose Park Trail Option A: No Action

### 2.5.1. OPTION A: NO ACTION

Under Option A, no new construction *or resurfacing* would occur along the five-foot to six-foot wide section of the Rose Park trail between P Street, NW and M Street, NW. NPS would continue to maintain the trail in its existing state (Figure 16).

### 2.5.2. OPTION B: SIX-FOOT RESURFACED TRAIL

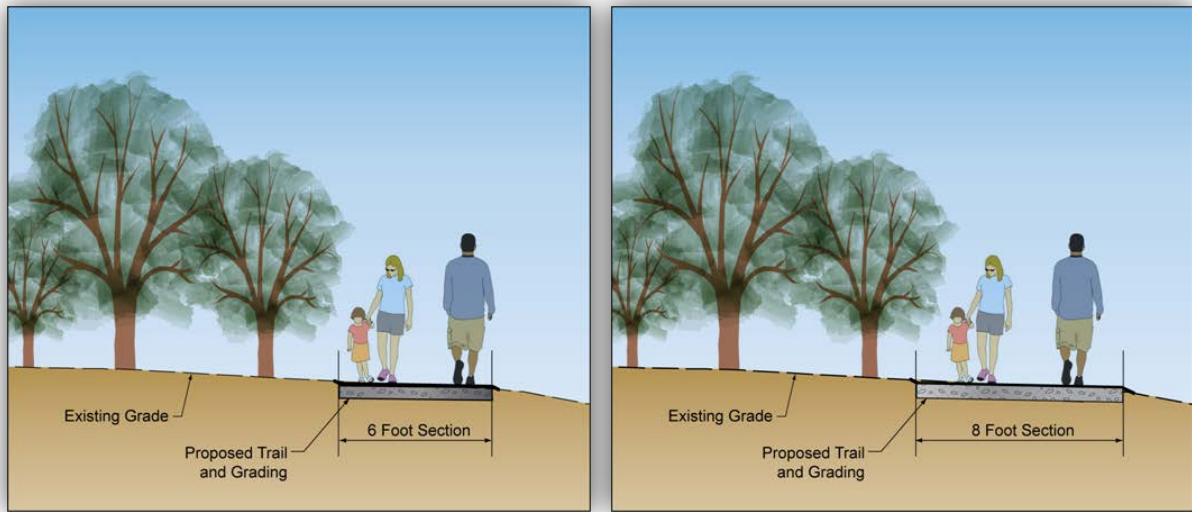
Under this option, the Rose Park trail, from P Street to M Street, NW, would be resurfaced along its current alignment to a six-foot width. *A six-foot width is the standard width of a DDOT residential sidewalk and would be a zero to two-foot width increase along the length of the trail.* The connection to the M Street sidewalk would follow the current alignment of the unpaved social trail as it deviates from the paved section. *Under Option B, a new safety railing would be constructed along the Rose Park Trail to provide protection from a steep embankment to the east. The existing chain link fencing in Rose Park would be removed to construct the railing, which would be comprised of timber posts and rails. Design of the new railing would match the character of other safety rails on the Rock Creek Park multi-use trail and would be consistent with AASHTO guidelines for shared use paths.* The existing brick pathway connection to the M Street sidewalk would remain unchanged. *Yield signs or speed limit signs could be installed in and around the park to calm traffic, and raise safety awareness on the trail. Special provisions would be considered to preserve the large oak tree at the Dumbarton Street playground area such as alternative trail materials and/or modifying the trail width to accommodate the tree.* Prior to any land disturbing activities, tree protection measures, erosion and sediment control measures, and other best management practices (BMPs) would be installed. If necessary, archeology testing also would be performed. Trail material selection would be considered during the detailed design phase of the project. **Figure 17** depicts a cross section of Rose Park Trail Option B. *Option B is the preferred option selected to be implemented for the Rose Park Trail in conjunction with the Preferred Alternative.*

Rose Park Trail Option B would cost approximately \$223,000 to design and construct, in addition to the cost of either Action Alternative (**Table 1**). Detailed cost estimates are presented in **Appendix C**.

### 2.5.3. OPTION C: EIGHT-FOOT RESURFACED TRAIL

The Rose Park trail, from P Street to M Street, NW, would be resurfaced along its current alignment to an eight-foot width. *An eight-foot width is the minimum multi-use trail width recommended by AASHTO for short distances under physical constraints and would be a two to four-foot width increase along the length of the trail* (FHWA 2001). The connection to the M Street sidewalk would follow the current alignment of the unpaved social trail as it deviates from the paved section. *Under Option C, a new safety railing would be constructed along the Rose Park Trail to provide protection from a steep embankment to the east. The existing chain link fencing in Rose Park would be removed to construct the railing, which would be comprised of timber posts and rails. Design of the new railing would match the character of other safety rails on the Rock Creek Park multi-use trail and would be consistent with AASHTO guidelines for shared use paths.* The existing brick pathway connection to the M Street sidewalk would remain unchanged. *Yield signs or speed limit signs could be installed in and around the park to calm traffic, and raise safety awareness on the trail. Special provisions would be considered to preserve the large oak tree at the Dumbarton Street playground area such as alternative trail materials and/or modifying the trail to accommodate the tree.* Prior to any land disturbing activities, tree protection measures, erosion and sediment control measures, and other best management practices (BMPs) would be installed. If necessary, archeology testing also would be performed. Trail material selection would be considered during the detailed design phase of the project. **Figure 17** depicts a cross section of Rose Park Trail Option C.

Rose Park Trail Option C would cost approximately \$382,000 to design and construct, in addition to the cost of either Action Alternative (**Table 1**). Detailed cost estimates are presented in **Appendix C**.



**Figure 17. Rose Park Trail Options B and C Typical Sections**

Table 1. Cost Estimates of the Action Alternatives and Options

CATEGORY	ALTERNATIVE 2 (RESURFACING ONLY)	ALTERNATIVE 3 RESURFACING AND WIDENING
<b>ROCK CREEK PARK TRAIL REHABILITATION</b>		
Trail Improvements	\$999,814	\$2,990,006
Maintenance of Traffic	\$100,000	\$100,000
Stormwater Management Improvements	\$198,981	\$398,001
Utility Improvements	\$43,000	\$43,000
Structural Improvements	\$990,000	\$990,000
Landscaping	\$218,880	\$437,801
<b>Subtotal</b>	<b>\$2,550,675</b>	<b>\$4,958,808</b>
Contingency (40 percent)	<b>\$1,020,270</b>	<b>\$1,983,523</b>
<b>Direct Cost Subtotal</b>	<b>\$3,570,945</b>	<b>\$6,492,331</b>
Design and Construction Services	\$887,669	\$1,489,702
<b>Total</b>	<b><u>\$4,458,614</u></b>	<b><u>\$8,432,033</u></b>
<b>PEIRCE MILL TRAIL SPUR OPTION*</b>		
• Peirce Mill Trail Spur Option B: Eight-foot Paved Trail	\$195,514	\$195,514
Stormwater Management Improvements	\$19,551	\$19,551
Landscaping	\$21,507	\$21,507
<b>Subtotal</b>	<b>\$236,572</b>	<b>\$236,572</b>
Contingency (40 percent)	\$94,629	\$94,629
<b>Total Direct Cost Subtotal</b>	<b>\$331,201</b>	<b>\$331,201</b>
Design and Construction Services	\$82,800	\$82,800
<b>Total Cost</b>	<b><u>\$414,001</u></b>	<b><u>\$414,001</u></b>
<b>ROSE PARK TRAIL OPTIONS*</b>		
• Rose Park Trail Option B: Six-foot Trail	\$105,204	\$105,204
Stormwater Management Improvements	\$10,520	\$10,520
Landscaping	\$11,572	\$11,572
<b>Subtotal</b>	<b>\$127,296</b>	<b>\$127,296</b>
Contingency (40 percent)	<b>\$50,918</b>	<b>\$50,918</b>
<b>Total Direct Cost Subtotal</b>	<b>\$178,214</b>	<b>\$178,214</b>
Design and Construction Services	\$44,554	\$44,554
<b>Total Cost: Rose Park Trail Option B</b>	<b><u>\$222,768</u></b>	<b><u>\$222,768</u></b>
• Rose Park Trail Option C: Eight-foot Trail	\$180,245	\$180,245
Stormwater Management Improvements	\$18,025	\$18,025
Landscaping	\$19,827	\$19,827
<b>Subtotal</b>	<b>\$218,097</b>	<b>\$218,097</b>
Contingency (40 percent)	\$87,239	\$87,239
<b>Total Direct Cost Subtotal</b>	<b>\$305,336</b>	<b>\$305,336</b>
Design and Project Construction Services	\$76,334	\$76,334
<b>Total Cost: Rose Park Trail Option C</b>	<b><u>\$381,670</u></b>	<b><u>\$381,670</u></b>
<b>TOTAL COST WITH OPTIONS</b>	<b><u>\$5,095,383-\$5,254,285</u></b>	<b><u>\$9,068,802-\$9,227,704</u></b>

\*One Peirce Mill Trail Spur Action Option and one Rose Park Trail Action Option would be selected in conjunction with Alternative 2 or 3.

\*\*A 40 percent contingency represents unforeseen project expenses. These could include soil amendments archeological preservation measures or other.

## 2.6. CONSTRUCTION AND STAGING

For the Action Alternatives and Options, construction staging areas would be identified in the later design phases. The staging areas would be selected to protect park resources, to meet the needs of the contractor based on the construction phasing plan, and to minimize disruptions to visitor use and experience.

Construction would be phased in such a way as to, when possible, provide logical detours around the trail sections and road areas under construction, and would be sequenced so that no two adjacent sections would be under construction simultaneously. Each construction phase would be approximately 0.25 mile to 0.5 mile in length. Trail users and drivers would be notified in advance of any closures or detours required for construction. Notifications could include electronic signage, postings to the Rock Creek Park and DDOT websites and social network pages, and email blasts to interested parties identified during the planning process.

It is recommended that work on the Beach Drive tunnel be done at night during off-peak traffic hours to minimize disruptions to traffic. Construction would take approximately six to nine weeks, during which time trail users would be unable to pass this area when the Zoo gate is closed. ***Users would be notified in advance of the anticipated closure dates.***

Under Rose Park Trail Options B or C, the Rose Park trail would be rehabilitated as the last stage of construction. This section of trail would need to be closed entirely during construction, however the rest of the park would remain open; therefore, the trail closure would have a minimal effect on the overall usage of the park. Users would be notified in advance of the anticipated closure dates. Rose Park Trail Options B or C would take approximately six to eight weeks to construct.

Construction of all sections of trail would take approximately 12 months to complete. Some phases of construction may be constructed concurrently, in which case the total construction duration could be shorter than the sum of all phases.

## 2.7. MITIGATION MEASURES OF THE ACTION ALTERNATIVES AND OPTIONS

The NPS places a strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. To help ensure the protection of natural and cultural resources and the quality of the visitor experience, the following protective measures would be implemented as part of the selected Action Alternative and Options. The NPS would implement an appropriate level of monitoring throughout the construction process to help ensure that protective measures are being properly implemented and are achieving their intended results.

### **Soils**

During the design phase of the project, erosion and sediment control plans would be prepared in accordance with the DDOE current *Standards and Specifications for Soil Erosion and Sediment Control*. These plans would include specific measures and BMPs to avoid and/or minimize soil erosion and transport due to ground-disturbing activities such as grading. Such measures may include, but would not be limited to, stabilized construction entrances, silt fences, temporary sediment traps and filtering devices and earth dikes. Once approved, these plans would be implemented during construction.



### **Water Quality**

Implementation of erosion and sediment control practices, such as installation of silt fence, sediment trapping or filtering, and other BMPs, would also help to avoid temporary impacts to water quality during construction. Stormwater management plans would be prepared and implemented onsite to address long-term stormwater runoff.

### **Vegetation**

Protection measures and BMPs would be implemented to avoid impacts to all types of park vegetation to the extent possible. Vegetation protection measures would be detailed in the design phase of the project and may include, but would not be limited to: evaluation of large trees (*such as the large oak tree at the Dumbarton Street playground area on the Rose Park Trail section*) and development of a tree save plan by an arborist or licensed tree expert; installation of tree protection fencing, root pruning for trees whose critical root zones (CRZs) lie within the existing trail alignment or proposed construction area; and staging construction equipment to avoid damage to park vegetation. All revegetation would fulfill NPS functional and aesthetic requirements. Landscape plans would be developed in coordination with the NPS and DDOT's Urban Forestry Administration. Areas replanted following construction would be monitored to ensure successful establishment.

### **Wildlife**

Best management practices would be utilized to minimize impacts to terrestrial and aquatic habitats. Detailed tree save plans would be developed and implemented during construction to protect surrounding trees that form forest habitat for park wildlife. Erosion and sediment control plans would also be prepared and implemented to avoid and minimize potential impacts to aquatic habitat within Rock Creek and Piney Branch that could be caused by soil erosion and sediment transport.

### **Archeology**

Mitigation for impacts to archeological resources may include, but would not be limited to the following: Conducting a Phase IB survey within areas of the LOD not previously surveyed; hand removal of vegetation to minimize impacts to identified archeological resources within the LOD, retain current trail widths within identified archeological resources. Testing areas will include but not limited to the location of the potential remnants of the historic headrace *near Peirce Mill* and other areas near Piney Branch. In locations where measures to avoid and minimize impacts to archeological resources cannot be instituted, mitigation through excavation within identified sites may be implemented. NPS, DDOT, and FHWA will continue to consult with the DC HPO throughout this project *to avoid impacts to potential archeological resources. Should unanticipated archaeological discoveries be encountered during any activity associated with this undertaking, DDOT will work with DC SHPO to determine the best mitigation measures..*

### **Historic Structures and Districts / Cultural Landscapes**

All work proposed under Action Alternatives would be completed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* in order to avoid and/or minimize any adverse impacts to cultural resources. Efforts to minimize impacts to cultural resources through design *will include the following principles*: trail improvements would retain the curvilinear design of the trail; proposed trail connections would be the minimum span needed to achieve the stated goals and laid directly on the existing topography; new trail connectors will be consistent in material and design features with the existing trails and would not introduce new elements inconsistent with the park and parkway's other features *found in Rock Creek Park and Rock Creek and Potomac Parkway*; minimal new paving would be used in areas of the trail that follow historic alignments; *and* spot improvements and trail widening would avoid damage to, and loss of, existing vegetation.

### **Cultural Landscapes**

Plans for construction staging of equipment and materials would be developed in order to least impact views within the cultural landscape. Landscape plans would be developed considering the cultural landscape, and in accordance with NPS policies. The NPS currently is developing a cultural landscape report for the historic trails in the park. This documentation and planning effort will be completed in *Fiscal Year 2014*.

### **Visitor Use and Experience**

To notify trail users, park visitors, and motorized commuters of temporary closures or changes in traffic patterns, public notifications may include electronic notification and detour signage, postings to the Rock Creek Park website and other social media, and email and listserv notices for stakeholders and interested parties. Additionally, plans for construction equipment and materials staging areas would be developed to cause the least practicable disruption to park visitors.

### **Human Health and Safety**

The trail and road sections under construction would be closed to users with signage, fences *and detours identified*. After construction, NPS would follow established maintenance practices such as removal of debris and snow, and repairs to potholes and cracks to ensure trail safety for park visitors. *DDOT and NPS would further evaluate site specific needs for trail calming measures such as signage or no ride zones at certain areas of the trail in close proximity to other uses (e.g., the playground at Rose Park) and those areas that lack adequate roadside protection or trail width due to physical or environmental constraints (e.g., the trail through the Beach Drive Tunnel and the embankment east of Rose Park) during the design phase.*

### **Park Operations and Management**

*DDOT will continue coordination and communications with NPS staff to ensure impacts are minimal.*

### **Traffic and Transportation**

Plans to maintain traffic during construction would be developed to minimize impacts to trail users and motorized commuters. Advance notifications of temporary closures or changes in traffic patterns would be implemented and may include electronic notification and detour signage, postings to the Rock Creek Park website and other social media, and email and listserv notices for stakeholders and interested parties. At some locations, such as the Beach Drive tunnel, work would be scheduled to avoid times of peak traffic volumes.

## **2.8. ALTERNATIVES AND OPTIONS CONSIDERED BUT DISMISSED**

### **2.8.1. CONTINUOUS 10-FOOT WIDE MULTI-USE TRAIL**

An alternative was considered to resurface and widen the Rock Creek Park multi-use trail from the Broad Branch/Grove 2 North parking area to P Street, NW to a standard 10-foot width, which is recommended by AASHTO for multi-use trails. However, this alternative would cause adverse impacts to sensitive park resources, particularly from the section north of Piney Branch Parkway to north of the National Zoo. The impacts to park resources would not meet the project objective to preserve the integrity of Rock Creek Park and its resources; therefore, this alternative was dismissed from further study.

### **2.8.2. CONTINUOUS EIGHT-FOOT PAVED TRAIL WITH TWO-FOOT SOFT SHOULDERS**

An alternative was also considered to resurface and widen the Rock Creek Park multi-use trail from the Broad Branch/Grove 2 North parking area to P Street, NW to a standard eight-foot width with two-foot shoulders on both sides. The shoulders would be surfaced with a soft or porous material, such as sod or woodchips. This alternative would have a larger footprint than a 10-foot wide trail, and would also cause adverse impacts to

sensitive park resources. Additionally, the soft shoulders would require additional maintenance beyond the regular maintenance of the paved trail. The impacts to park resources would not meet the project objectives to preserve the integrity of Rock Creek Park and its resources. The added maintenance requirements would not be compatible with one of the purposes of the project, to reduce trail maintenance needs, or Section 9.1.4 of NPS *Management Policies* (NPS 2006), which requires the promotion of cost savings and prevention of resource degradation in carrying out maintenance responsibilities. Therefore, this alternative was dismissed from further study.

### 2.8.3. REHABILITATING THE ROSE PARK TRAIL AT ITS CURRENT WIDTH

*Based on comments received throughout the public involvement process*, the project team considered rehabilitation options for the Rose Park trail which included paving the trail at its current width. ***This option was dismissed because at its current width, the trail in Rose Park does not allow for two directions of travel and passing without causing trail users to step off the paved surface on to the vegetated areas.*** Trail users routinely leave the paved trail surface in order to walk side by side or pass other users. The migration of users from the trail has caused trampling of vegetation (**Figure 18**). As shown in Figure 18, in several locations, the trampled area beside the trail is one or two feet wider than the paved trail surface. ***The trampled area results in a permanent loss of vegetation, which in turn creates ponding, erosion of the soil, and potential hazard conditions.*** While feasible, it would not be practical to rehabilitate the trail at its existing width because users would continue to migrate from the trail, and replanting would not be successful.

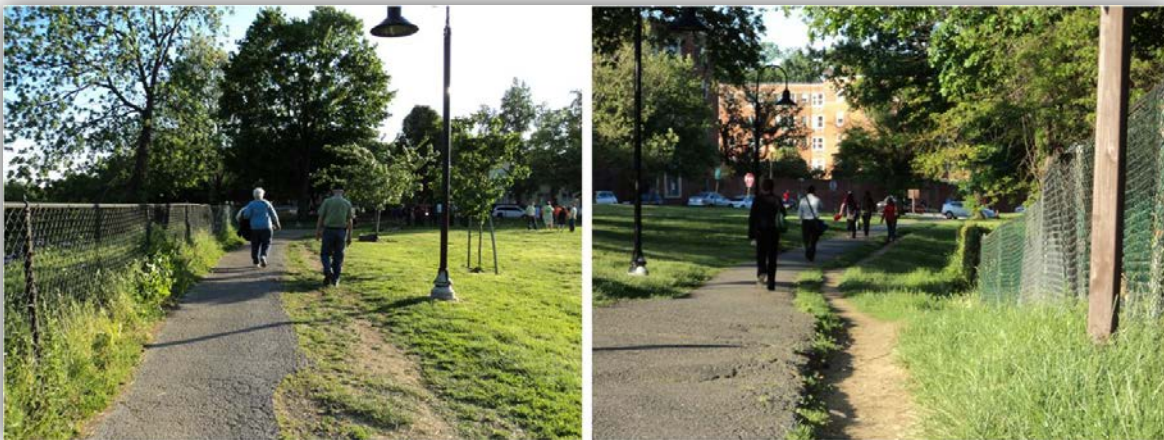


Figure 18. Existing Conditions at the Rose Park Trail

### 2.8.4. LEAVING THE NATIONAL ZOO GATE OPEN AT ALL TIMES

During the scoping period, a number of trail users commented on the gate allowing access to the portion of the trail located on National Zoo property. National Zoo security requires this gate to be closed from dusk to dawn, and on days when the National Zoo holds special events. When the gate is closed this section of the trail is impassable and trail users are forced to use the Beach Drive tunnel by way of the existing two-foot sidewalk. The respondents called for the National Zoo gate to remain open at all times. However, based on a June 2011 meeting between the project team and the National Zoo senior management, the gate and its scheduled closure is required in order for the National Zoo to maintain its accreditation ***by the Association of Zoos and Aquariums (AZA). This accreditation is a program that sets standards to assure a high level of animal care. The AZA standards specify a requirement for a perimeter fence. The fence must be constructed***

*so that it protects the animals in the facility by restricting animals outside the facility and unauthorized persons from going through it or under it and having contact with the animals in the facility, and so that it can function as a secondary containment system for the animals in the facility (AZA 2013).* Therefore, leaving the National Zoo gate open at all times is not feasible and was dismissed from detailed study.

### **2.8.5. BEACH DRIVE BRIDGE OVER ROCK CREEK**

An alternative was considered to widen the sidewalk on the upstream (west) side of the Beach Drive Bridge over Rock Creek using a cantilevered deck. Visual inspection of the bridge in 2011 found that the bridge was in overall good condition (G&O 2011). However, construction of a cantilevered structure would require drilling and anchoring bolts into existing concrete. This would potentially introduce cracks and spalls into the concrete, and in addition, the cantilevered structure would reduce the load carrying capacity of the bridge. A separate structure for pedestrians and bicycles was recommended as a result of the inspection. Therefore, a cantilevered structure on the Beach Drive Bridge was dismissed from further study.

### **2.8.6. NEW CONNECTION AT HARVARD STREET**

Based on public comments, the project team considered a connection between the Rock Creek Park multi-use trail and Harvard Street between Beach Drive and Adams Mill Road. However, due to short sight lines and other safety concerns, this option was dismissed from detailed study.

### **2.8.7. LIGHTING**

*During the public involvement process*, several trail users called for lighting to be installed along the trail. Rock Creek Park is closed from dusk to dawn. Furthermore, according to NPS *Management Policies* (NPS 2006), the NPS seeks to preserve, to the greatest extent possible, the natural lightscapes of parks. Therefore, this option was eliminated from detailed study.

### **2.8.8. BICYCLE PARKING**

*During the public involvement process*, several trail users called for an evaluation of potential bicycle parking areas throughout the project area. Incorporation of bicycle parking areas into the trail, as implemented by DDOT, would occur at relatively low cost and low impact. Potential areas are to be investigated in the design phase of the trail rehabilitation. Therefore, this option was dismissed from detailed study.

### **2.8.9. EXCLUDING BICYCLES FROM ROSE PARK**

*During the public involvement process* some park visitors *and community group members* called for the exclusion of bicycles from the Rose Park trails. One of the needs of the project is to maintain support of the diverse trail users and groups including pedestrians, bicyclists, runners, those enjoying nature, etc. *DPR's policies do not restrict bicycles from Rose Park.* Furthermore, NPS *Management Policies* (NPS 2006), Section 9.2.2 Trails and Walks, recognizes trails and walks as an integral part of each park's transportation system. Section 9.2.2 also calls for trails and walks to be situated, designed, and managed to allow for a satisfying park experience and allow accessibility by the greatest number of people; and protect park resources. Excluding bicycles from Rose Park would not be compatible with the needs of the proposed action, nor with NPS policies. Therefore, this option was dismissed from detailed study.

## 2.9. ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The environmentally preferable alternative is defined by CEQ as the alternative that would promote the national environmental policy as expressed in NEPA Section 101. This includes:

1. Fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations;
2. Assuring for all generations safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
3. Attaining the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
4. Preserving important historic, cultural and natural aspects of our national heritage and maintaining, wherever possible, an environment that supports diversity and variety of individual choice;
5. Achieving a balance between population and resource use that would permit high standards of living and a wide sharing of life's amenities; and
6. Enhancing the quality of renewable resources and approaching the maximum attainable recycling of depletable resources (NEPA, Section 101).

The NPS is required to identify the environmentally preferable alternative in its NEPA documents for public review and comment. The NPS, in accordance with the Department of the Interior policies contained in the Departmental Manual (516 DM 4.10) and the CEQ's *NEPA's Forty Most Asked Questions*, defines the environmentally preferable alternative (or alternatives) as the alternative that best promotes the national environmental policy expressed in NEPA (Section 101(b)) (516 DM 4.10). In their *Forty Most Asked Questions*, CEQ further clarifies the identification of the environmentally preferable alternative, stating "Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources" (Q6a).

***Based on the analysis of environmental consequences for each alternative, and comments received from the public and other agencies, Alternative 3: Trail Resurfacing and Widening is the environmentally preferable alternative for the Rock Creek Park Multi-Use Trail Rehabilitation project. For the Peirce Mill Trail Spur Option, NPS determined the environmentally preferable option to be Option B: Eight-foot Paved Trail Spur. For the Rose Park Trail Option, NPS determined that the environmentally preferable option is Option B: Six-foot Resurfaced Trail.***

***Alternative 3: Trail Resurfacing and Widening*** would enhance visitor use and experience, public safety, park operations and maintenance, and transportation in the project area better or equal to the other options. Also, soil and water quality would be improved through stabilization and drainage improvements under Alternative 3. This alternative is preferable to the No Action alternative because resurfacing and widening of the trail would eliminate several adverse impacts associated with the existing trail. This alternative improves the trail and fulfills the NPS's responsibility as trustee of the environment for succeeding generations. While Alternative 2 would result in similar impacts to those described in Alternative 3, the benefits to visitor use and safety resulting from spot improvements and trail widening ***associated with Alternative 3*** would contribute the widest range of beneficial uses of the trail. Alternative 3 assures for all generations safe, healthful, productive, and aesthetically and culturally pleasing surrounding and attains the widest range of beneficial uses while achieving negligible other undesirable and unintended consequences.

Peirce Mill Trail Spur Option B would enhance the use of Rock Creek Park by providing a new, paved trail surface to park visitors. Option B is preferable to the Option A for the Peirce Mill trail spur because the No Action option would result in adverse impacts associated with the existing social trail on site.

Rose Park Trail Option B would enhance the use of Rose Park by providing a smooth, even trail surface at the standard width of a DDOT residential sidewalk. Option B is preferable to Option A for Rose Park because the No Action option would result in adverse impacts associated with the existing trail. When compared to Rose Park Trail Option C, Option B better addresses the nearby residents concerns with widening the trail and has less environmental effects because of less impervious surface.

**Rock Creek Park Multi-Use Trail Rehabilitation  
Summary of Environmental Consequences**

**2.10. SUMMARY OF IMPACTS**

None of the action alternatives would result in adverse effects to historic structures and districts, cultural landscapes, or archeological resources in the project area. A summary of the environmental consequences of each alternative and option is presented in **Table 2**.

**Table 2. Summary of Environmental Consequences**

IMPACTED RESOURCE	NO ACTION ALTERNATIVE AND OPTIONS	ACTION ALTERNATIVES AND OPTIONS
<b>Soils</b>	<b>Rock Creek Park Multi-Use Trail Alternatives</b>	
	<b>Alternative 1: No Action</b> - Long-term minor adverse impacts to soil resources would occur, due to soil compaction and erosion.	<b>Alternative 2: Trail Resurfacing and Alternative 3: Trail Resurfacing and Widening</b> - Long-term beneficial impacts from soil stabilization measures.
	<b>Peirce Mill Trail Spur Options</b>	
	<b>Option A: No Action</b> - Option A would result in long-term minor adverse impacts to soils.	<b>Option B: Eight-foot Paved Trail Spur</b> - Under Option B, long-term beneficial impacts would occur due to soil stabilization.
	<b>Rose Park Trail Options</b>	
	<b>Option A: No Action</b> - Option A would result in long-term minor adverse impacts to soils as a result of no actions.	<b>Options B: Six-foot Resurfaced Trail and Option C: Eight-foot Resurfaced Trail</b> - Options B and C would result in long-term beneficial impacts due to soil stabilization.
<b>Water Quality</b>	<b>Rock Creek Park Multi-Use Trail Alternative</b>	
	<b>Alternative 1: No Action</b> - Long-term minor adverse impacts to water quality would occur, due to erosion associated with the Rock Creek Park multi-use trail.	<b>Alternative 2: Trail Resurfacing and Alternative 3: Trail Resurfacing and Widening</b> - Short-term negligible adverse impacts from the use of erosion and sediment controls during construction. Long-term beneficial impacts due to improvements to drainage infrastructure.
	<b>Peirce Mill Trail Spur Options</b>	
	<b>Option A: No Action</b> - Option A would result in no impacts to water quality	<b>Option B: Eight-foot Paved Trail Spur</b> - Under Option B, long-term negligible adverse impacts would occur due to paving of the trail.
	<b>Rose Park Trail Options</b>	
	<b>Option A: No Action</b> - Option A would result in long-term negligible adverse impacts to water quality.	<b>Options B: Six-foot Resurfaced Trail and Option C: Eight-foot Resurfaced Trail</b> - Both Option B and C would result in long-term negligible adverse impacts due to paving of the trail.

IMPACTED RESOURCE	NO ACTION ALTERNATIVE AND OPTIONS	ACTION ALTERNATIVES AND OPTIONS
<b>Vegetation</b>	<b>Rock Creek Park Multi-Use Trail Alternatives</b>	
	<p><b>Alternative 1: No Action</b> - Long-term minor adverse impacts due to continuing social trail usage.</p>	<p><b>Alternative 2: Trail Resurfacing</b> - Short-term minor adverse impacts in small localized areas during construction.</p> <p>Long-term negligible to minor adverse impacts due to removal of invasive non-native species in small, localized areas, and potential impacts to large trees.</p> <p><b>Alternative 3: Trail Resurfacing and Widening</b> - Short-term minor adverse impacts in small localized areas during construction. Long-term minor adverse impacts would result from trail widening and potential impacts to large trees.</p>
	<b>Peirce Mill Trail Spur Options</b>	
	<p><b>Option A: No Action</b> - Option A would result in long-term minor adverse impacts due to social trail usage</p>	<p><b>Option B: Eight-foot Paved Trail Spur</b> - Under Option B, long-term minor adverse impacts would occur due to loss of vegetation and potential impacts to large trees.</p>
	<b>Rose Park Trail Options</b>	
	<p><b>Option A: No Action</b> - Option A would result in long-term negligible adverse impacts due to social trail usage.</p>	<p><b>Options B: Six-foot Resurfaced Trail and Option C: Eight-foot Resurfaced Trail</b> - Both Option B and C would result in long-term negligible to minor adverse impacts due to potential impacts to large trees.</p>



IMPACTED RESOURCE	NO ACTION ALTERNATIVE AND OPTIONS	ACTION ALTERNATIVES AND OPTIONS
<b>Wildlife</b>	<b>Rock Creek Park Multi-Use Trail Alternatives</b>	
	<p><b>Alternative 1: No Action</b> - Aquatic wildlife would experience long-term negligible adverse impacts caused by erosive conditions. Terrestrial wildlife would experience long-term negligible adverse impacts associated with disturbances caused by trail users.</p>	<p><b>Alternative 2: Trail Resurfacing - Alternative 3: Trail Resurfacing and Widening</b> - Short-term negligible adverse impacts to aquatic resources from soil disturbance. Long-term beneficial impacts to aquatic resources from soil stabilization. Long-term negligible adverse impacts to terrestrial wildlife because of vegetation removal.</p>
	<b>Peirce Mill Trail Spur Options</b>	
	<p><b>Option A: No Action</b> - Option A would result in no impacts to aquatic wildlife. Terrestrial wildlife would experience long-term negligible adverse impacts due to disturbances caused by trail users.</p>	<p><b>Option B: Eight-foot Paved Trail Spur</b> - Under Option B, ground disturbance would have a short-term negligible impact on aquatic species due to the potential increase in sediment transport. Short- and long-term negligible adverse impacts to terrestrial wildlife would result from construction activities due to loss of terrestrial wildlife habitat.</p>
	<b>Rose Park Trail Options</b>	
	<p><b>Option A: No Action</b> - Option A would result in no impacts to aquatic wildlife. Terrestrial wildlife would experience long-term negligible adverse impacts due to disturbances caused by trail users.</p>	<p><b>Options B: Six-foot Resurfaced Trail and Option C: Eight-foot Resurfaced Trail</b> - Options B and C would result in short-term negligible adverse impacts to aquatic species due to the increased risk of sediment transport during construction. Terrestrial wildlife would experience short-term negligible adverse impacts due to disturbance during construction. The loss of vegetation would result in long-term negligible adverse impacts to terrestrial wildlife.</p>

IMPACTED RESOURCE	NO ACTION ALTERNATIVE AND OPTIONS	ACTION ALTERNATIVES AND OPTIONS
<b>Historic Structures and Districts</b>	<b>Rock Creek Park Multi-Use Trail Alternatives</b>	
	<p><b>Alternative 1: No Action</b> - Under the No Action Alternative, problems of deterioration would persist, resulting in local direct and indirect long-term minor adverse impacts to the contributing circulation resources, green space, and views within the APE. However, these impacts would not be sufficient to diminish the overall park integrity. For purposes of Section 106, the determination of effect would be <i>no adverse effect</i></p>	<p><b>Alternative 2: Trail Resurfacing</b> – With the exception of the new trail along Piney Branch Parkway, all new trails will be introduced in short spans and would not significantly diminish the overall integrity of the historic resources or cultural landscapes within the APE. The determination of effect for purposes of Section 106 would be <i>no adverse effects</i>.</p> <p><b>Alternative 3: Trail Resurfacing and Widening</b> - Alternative 3 would introduce additional paving within the APE, adding to the adverse impacts on the historic resources. The adverse impacts would remain local direct long-term and minor. The determination of effect for purposes of Section 106 would be <i>no adverse effects</i>.</p>
	<b>Peirce Mill Trail Spur Options</b>	
	<p><b>Option A: No Action</b> - Determination of <i>no adverse effects</i> under Option A.</p>	<p><b>Option B: Eight-foot Paved Trail Spur</b> - Under Option B, there would be a long-term beneficial impact due to the improvement of the deteriorated grounds, and utilization of the historic millrace alignment. Adverse impacts would remain local direct long-term and minor. The determination of effect for purposes of Section 106 would be <i>no adverse effects</i>.</p>
	<b>Rose Park Trail Options</b>	
	<p><b>Option A: No Action</b> - Determination of <i>no adverse effects</i> under Option A.</p>	<p><b>Options B: Six-foot Resurfaced Trail and Option C: Eight-foot Resurfaced Trail</b> - The action alternatives would introduce additional paving within the APE; however, due to the limited extent of the additional impacts, and the local direct long-term beneficial impact of replacing social trails with permanent trails, the work would not substantially raise the intensity of Option B or C's overall impact. The adverse impacts would therefore remain local direct long-term and minor. The determination of effect for purposes of Section 106 would be <i>no adverse effects</i>.</p>

IMPACTED RESOURCE	NO ACTION ALTERNATIVE AND OPTIONS	ACTION ALTERNATIVES AND OPTIONS
Cultural Landscapes	<b>Rock Creek Park Multi-Use Trail Alternatives</b>	
	<p><b>Alternative 1: No Action</b> - Local direct and indirect long-term minor adverse impacts to the contributing circulation resources, green space, and views within the APE from persistent deterioration. For purposes of Section 106, the determination of effect would be <i>no adverse effect</i>.</p>	<p><b>Alternative 2: Trail Resurfacing - Alternative 3: Trail Resurfacing and Widening</b> - The impacts of the Alternatives 2 and 3 would be modest, and the historic alignments and characteristics of the trails and their cultural landscape setting would be appropriately treated to respect character-defining features (in addition to the descriptions provided in this report, the character-defining features will also be identified by the forthcoming Cultural Landscape Report being produced by the NPS). With the exception of the new trail along Piney Branch Parkway, all new trails will be introduced in short spans and would not significantly diminish the overall integrity of the historic resources or cultural landscapes within the APE. For purposes of Section 106, the determination of effect would be <i>no adverse effect</i>.</p>
	<b>Peirce Mill Trail Spur Options</b>	
	<p><b>Option A: No Action</b> - Determination of <i>no adverse effects</i> under Option A.</p>	<p><b>Option B: Eight-foot Paved Trail Spur</b> - Under Option B, there would be a long-term beneficial impact due to the improvement of the deteriorated grounds where social trails exist. There would be additional long-term beneficial impacts created by utilizing the historic millrace alignment, which would help engage the public with the historic landscape patterns. For purposes of Section 106, the determination of effect would be <i>no adverse effect</i>.</p>
	<b>Rose Park Trail Options</b>	
<p>Rose Park Trail Options would not have an effect on the cultural landscape because it is not a component of Rock Creek Park's cultural landscape.</p>		

IMPACTED RESOURCE	NO ACTION ALTERNATIVE AND OPTIONS	ACTION ALTERNATIVES AND OPTIONS
Archeology	<b>Rock Creek Park Multi-Use Trail Alternatives</b>	
	<p><b>Alternative 1: No Action</b> - As no ground disturbing actions are anticipated, selection of this alternative would have <i>no adverse effects</i> to archeological resources.</p>	<p><b>Alternative 2: Trail Resurfacing</b> – Spot improvements would result in limited and localized ground disturbance activities. Avoidance, minimization, and mitigation within as yet unidentified archeological resources, would result in <i>no adverse effects</i>.</p> <p><b>Alternative 3: Trail Resurfacing and Widening</b> - Trail widening and spot improvements would result in limited and localized ground disturbance activities. Avoidance, minimization, and mitigation within as yet unidentified archeological resources, would result in <i>no adverse effects</i>.</p>
	<b>Peirce Mill Trail Spur Options</b>	
	<p><b>Option A: No Action</b> - There would be no impact under Option A.</p>	<p><b>Option B: Eight-foot Paved Trail Spur</b> - Option B would result in the paving of an existing social trail within a known resource (51NW154) that has not been evaluated for listing in the NRHP. Ground disturbance would be limited and localized. Avoidance, minimization, and mitigation within known resource 51NW154, as well as yet unidentified archeological resources, would result in a determination of <i>no adverse effects</i>.</p>
<b>Rose Park Trail Options</b>		
<p><b>Option A: No Action</b> - There would be no impact under Option A.</p>	<p><b>Options B: Six-foot Resurfaced Trail and Option C: Eight-foot Resurfaced Trail</b> - Options B and C would result in widening and repaving in areas that have not been surveyed for the presence of archeological resources. Ground disturbance would be limited and localized. Avoidance, minimization, and mitigation within as yet unidentified archeological resources, would result in <i>no adverse effects</i>.</p>	

IMPACTED RESOURCE	NO ACTION ALTERNATIVE AND OPTIONS	ACTION ALTERNATIVES AND OPTIONS
<b>Visitor Use and Experience</b>	<b>Rock Creek Park Multi-Use Trail Alternatives</b>	
	<p><b>Alternative 1: No Action</b> - Long-term moderate adverse impact due to the potential for accidents on narrow and overcrowded sections of the trail.</p>	<p><b>Alternative 2: Trail Resurfacing</b> – Short-term moderate adverse impact because construction would temporarily impede trail use. Long-term beneficial impact based on overall improvements; The trail would be smoother and more aesthetically pleasing.</p> <p><b>Alternative 3: Trail Resurfacing and Widening</b> - Short-term moderate adverse impact because construction would temporarily impede trail use. Long-term beneficial impact based on overall improvements. The trail would be smoother and more aesthetically pleasing, and widening would reduce the potential for user conflicts.</p>
	<b>Peirce Mill Trail Spur Options</b>	
	<p><b>Option A: No Action</b> - No impact would result from Option A.</p>	<p><b>Option B: Eight-foot Paved Trail Spur</b> - Option B would have a long-term beneficial impact as trail users of multiple types would be given another trail option to experience the park’s resources.</p>
	<b>Rose Park Trail Options</b>	
<p><b>Option A: No Action</b> - Option A would have a long-term minor adverse impact due of user conflicts resulting from the narrow trail width.</p>	<p><b>Options B: Six-foot Resurfaced Trail and Option C: Eight-foot Resurfaced Trail</b> - Options B and C would have a long-term beneficial impact since safety issues would be mitigated by the trail resurfacing, widening, and access provided by new connections.</p>	
<b>Human Health and Safety</b>	<b>Rock Creek Park Multi-Use Trail Alternatives</b>	
	<p><b>Alternative 1: No Action</b> - Negligible adverse impact due to uneven and cracked trail surfaces.</p>	<p><b>Alternative 2: Trail Resurfacing</b> – Short-term negligible adverse impact during construction. Long-term beneficial impacts from improved separation of trail users from vehicular traffic, improved roadway crossings, trail resurfacing, and minor realignments.</p> <p><b>Alternative 3: Trail Resurfacing and Widening</b> - Short-term negligible adverse impact during construction. Long-term beneficial impacts from improved separation of trail users from vehicular traffic, improved roadway crossings, trail resurfacing, minor realignments, and trail widening.</p>

IMPACTED RESOURCE	NO ACTION ALTERNATIVE AND OPTIONS	ACTION ALTERNATIVES AND OPTIONS
<b>Human Health and Safety (continued)</b>	<b>Peirce Mill Trail Spur Options</b>	
	<b>Option A: No Action</b> - Option A would have no impacts because current conditions are not appreciably unsafe.	<b>Option B: Eight-foot Paved Trail Spur</b> - Option B would have long-term beneficial impacts to human health and safety because resurfacing the social trail would provide safe access to a wider variety of users including wheelchair users.
	<b>Rose Park Trail Options</b>	
	<b>Option A: No Action</b> - Option A would have negligible adverse impacts due to narrow, uneven and cracked trail surfaces.	<b>Options B: Six-foot Resurfaced Trail</b> - Option B would have long-term beneficial impact from the addition of paved connections and resurfacing. <b>Option C: Eight-foot Resurfaced Trail</b> - Option C would have a long-term beneficial impact from the additional paved connections resurfacing, and trail widening.
<b>Park Operations</b>	<b>Rock Creek Park Multi-Use Trail Alternatives</b>	
	<b>Alternative 1: No Action</b> - Long-term minor adverse impact due to the required maintenance of the trail.	<b>Alternative 2: Trail Resurfacing</b> – Short-term, minor impacts will occur during construction. Long-term beneficial impacts by reducing the maintenance needs of the trail. <b>Alternative 3: Trail Resurfacing and Widening</b> - Short-term, minor impacts will occur during construction. Long-term beneficial impacts by reducing the maintenance needs of the trail.
	<b>Peirce Mill Trail Spur Options</b>	
	<b>Option A: No Action</b> - Option A would have no impact because there would be no change in maintenance activities.	<b>Option B: Eight-foot Paved Trail Spur</b> - Option B would have a long-term minor adverse impact from the additional maintenance required for the newly paved trail spur.
	<b>Rose Park Trail Options</b>	
<b>Option A: No Action</b> - Option A would have long-term minor adverse impacts due to required maintenance.	<b>Options B: Six-foot Resurfaced Trail and Option C: Eight-foot Resurfaced Trail</b> - Options B and C would have a long-term beneficial impact due to the reduction in maintenance needs of the trail.	

IMPACTED RESOURCE	NO ACTION ALTERNATIVE AND OPTIONS	ACTION ALTERNATIVES AND OPTIONS
<b>Traffic and Transportation</b>	<b>Rock Creek Park Multi-Use Trail Alternatives</b>	
	<p><b>Alternative 1: No Action</b> - A long-term moderate adverse impact would occur due to gaps in the trail, user conflicts, lack of trail separation from the road, and poor connectivity with surrounding trails.</p>	<p><b>Alternative 2: Trail Resurfacing</b> – Short-term moderate adverse impacts based on detours and closings. Long-term beneficial impacts due to reductions in user conflicts and enhanced connectivity.</p> <p><b>Alternative 3: Trail Resurfacing and Widening</b> - Short-term moderate adverse impacts based on detours and closings. Long-term beneficial impacts due to reductions in user conflicts and enhanced connectivity.</p>
	<b>Peirce Mill Trail Spur Options</b>	
	<p><b>Option A: No Action</b> - No impacts under Option A.</p>	<p><b>Option B: Eight-foot Paved Trail Spur</b> - Option B would have long-term beneficial impacts by providing trail users with additional access to Rock Creek.</p>
	<b>Rose Park Trail Options</b>	
<p><b>Option A: No Action</b> - Under Option A, there would be a long-term minor adverse impact based on lack of connectivity</p>	<p><b>Options B: Six-foot Resurfaced Trail and Option C: Eight-foot Resurfaced Trail</b> - Options B and C would result in short-term moderate adverse impacts due to construction and long-term beneficial impacts with additional access to M Street.</p>	
<b>Cost</b>	<b>Rock Creek Park Multi-Use Trail Alternatives</b>	
	<p><b>Alternative 1: No Action</b> - \$0</p>	<p><b>Alternative 2: Trail Resurfacing</b> – \$4,439,000  <b>Alternative 3: Trail Resurfacing and Widening</b> - \$7,449,000</p>
	<b>Peirce Mill Trail Spur Options</b>	
	<p><b>Option A: No Action</b> - \$0</p>	<p><b>Option B: Eight-foot Paved Trail Spur</b> - \$414,000</p>
	<b>Rose Park Trail Options</b>	
<p><b>Option A: No Action</b> - \$0</p>	<p><b>Options B: Six-foot Resurfaced Trail</b> - \$223,000  <b>Option C: Eight-foot Resurfaced Trail</b> - \$382,000</p>	

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## CHAPTER 3: AFFECTED ENVIRONMENT

This “Affected Environment” chapter of the EA describes existing environmental conditions in the proposed project area. These conditions serve as a baseline for understanding the resources that could be impacted by implementation of the proposed action. The resource topics presented in this chapter, and the organization of these topics, correspond to the resources discussions discussed in “Chapter 4: Environmental Consequences.”

### 3.1. SOILS

Geomorphic processes shape the landscape of Rock Creek Park, which consists of a steep, rugged stream valley and rolling hills. The park straddles the boundary of two physiographic provinces: the Piedmont and the Atlantic Coastal Plain. The transitional zone between the two provinces is known as the Fall Line.

The Piedmont is composed of hard, crystalline igneous and metamorphic rocks, extending to the west of Rock Creek Park. Rolling hills of the region were formed through folding, faulting, metamorphism, uplifting and erosion. Piedmont soils are highly weathered and generally well-drained. The Atlantic Coastal Plain is a generally flat region composed of sediment deposits from the past 100 million years, extending to the east of Rock Creek Park. The sediment deposits have been continually reworked by fluctuating sea levels and erosive forces. As a result, typical soils of the region are well drained sands or sandy loams (NPS 2009).

The United States Department of Agriculture Natural Resources Conservation Service (NRCS) has compiled an inventory of District of Columbia soils, in order to deliver science based soil information. The locations, descriptions, recommended uses and limitations of soils are identified in The Soil Survey of the District of Columbia (USDA 1976). Soils within and adjacent to the Rock Creek Park multi-use trail consist of gently and moderately sloping soils of the Rock Creek valley bottom and steeply sloping soils along the hillsides of the valley. In general, soils at the valley bottom range from well-drained to moderately well-drained soils which have little to no hazard of erosion. Soils of the hillsides are described as somewhat excessively drained. Due to steep slopes and rapid runoff, the soils have a high potential for erosion. Locally, soils of both the valley bottom and the hillsides are intermingled with soils that have been graded, cut, filled, or otherwise disturbed during urbanization.

Current soil conditions in and around the Rock Creek Park multi-use trail are diminished. Soils are compacted throughout the trail area, where users leave the paved trail surface to take shortcuts or maneuver around others. Soil compaction affects water movement through the soil. Particularly on sloping soils, the reduction of water movement contributes to surface runoff and erosion. In flat areas, water cannot infiltrate and water ponds on the soil surface creating a drainage issue. In addition, changes in soil density due to soil compaction prevent plant growth. Where soil conditions can no longer support plants, soils become exposed.

### 3.2. WATER QUALITY

Rock Creek is the primary surface water feature within the project area (**Figure 19**). Rock Creek flows in a generally south direction for 33 miles from its headwaters near Laytonsville, Maryland to its confluence with the Potomac River at Georgetown. Piney Branch is another waterway within the project area. Piney Branch enters Rock Creek from the northeast at Piney Branch Parkway.

The Rock Creek watershed encompasses 77 square miles and land uses consist of a mixture of urban, suburban, residential, parkland, and agriculture. Approximately 70 percent of the Rock Creek watershed is developed. These developed areas occur mostly upstream of Rock Creek Park and consist of impervious surfaces such as buildings and roadways. The section of Rock Creek within the park has degraded due to increased flooding from rapid runoff, abnormal stream bed scouring in some places and sedimentation in others, bank erosion, organic and chemical pollution, and accumulation of litter and other solid waste (DDOE 2010).



Figure 19. Rock Creek

Within the park, Rock Creek is surrounded by a mature riparian buffer. The buffer provides water quality protection by slowing floodwaters, cooling water temperatures, and by trapping sediment and nutrients before they wash into the stream. Water quality effects of the riparian buffer are slightly degraded due to impervious surfaces such as the Rock Creek Park multi-use trail and Beach Drive NW. **Table 3** lists existing impervious surface areas within the limits of proposed trail rehabilitation activities.

Table 3. Existing Impervious Areas

Surface Area	Alternative 1	Peirce Mill Trail Spur Option A	Rose Park Trail Option A
Existing Impervious Area	3.43 ac.	0 ac.	0.20 ac.

Rock Creek and Piney Branch are designated as “Special Waters of the District of Columbia” (SWDC) according to the Water Quality Standards, 21 DC Municipal Regulations (DCMR) Section 1102.5, as amended (DCOS 2011). The water quality in SWDC waters shall be maintained at or above the current level by implementing the following:

- Existing nonpoint source discharges, storm water discharges and storm sewer discharges to SWDC sections shall be controlled through implementation of BMPs and regulatory programs;
- Construction or development projects, such as roads, bridges, and bank stabilization of the streams in which a SWDC designated section is located, which may lead to pollution of the water, shall be permitted on a case-by-case basis to ensure that there are no long-term adverse water quality effects and that no impairment of the designated uses of the section occurs; or
- Short-term degradation of water quality in a SWDC section due to construction projects may be permitted provided that prior notice is given to the public and other local and federal government

agencies, and provided that the builder of the construction project submits a report to the Department which summarizes the views, major comments, criticisms and suggestions of the public and other local and federal government agencies; and sets forth the specific responses in terms of modifications of the proposed action or an explanation for rejection of proposals made by the public and other local and federal government agencies.

Point and nonpoint sources of water pollutants in Rock Creek were identified by the District of Columbia Department of the Environment (DDOE 2008). The types of contaminants entering Rock Creek surface waters include the following:

- Sediment is transported from unvegetated soils, such as construction sites and agricultural fields;
- Storm water runoff from transportation corridors and parking lots within the watershed carries sediments, oil and grease, and metals, such as cadmium, iron, lead, and zinc; and
- Runoff from lawns, stables, and leaking sewerlines are sources of nutrients, including nitrogen and phosphorus, and contributes to high coliform bacteria counts.

Pollution has adversely affected the ability of Rock Creek and its tributaries to support aquatic life. The 2008 *District of Columbia Water Quality Assessment* indicated that the lower and upper reaches of Rock Creek continue to partially support its aquatic life stream use designation (DDOE 2008). Additionally, the 2008 *District of Columbia Water Quality Assessment* determined that Rock Creek does not support its Class A (Primary Contact Recreation), Class B (Secondary Contact Recreation and Aesthetic Enjoyment), Class C (Protection and Propagation of Fish, Shellfish and Wildlife), or its Class D (Protection of Human Health related to Consumption of Fish and Shellfish) stream use designations (DDOE 2008).

Section 303(d) of the Federal Clean Water Act and regulations developed by the USEPA require States, and the District, to prepare a list of waterbodies or waterbody sections that do not meet water quality standards. Rock Creek and Piney Branch have been designated by the USEPA as impaired waters as they appear on the Section 303(d) list. As specified by the Clean Water Act, waters on the list are those that do not meet water quality standards even with pollution controls in place. For these waterbodies, states are responsible for developing Total Maximum Daily Loads (TMDLs). TMDLs describe the maximum amount of a pollutant that a water body can receive while still meeting water quality standards. In the Rock Creek watershed, TMDLs have been developed for lead and mercury (DDOH 2004a), fecal coliform bacteria (DDOH, 2004b), and manufactured pesticides and chemicals (DDOH 2004c). Additionally, a TMDL was established for Rock Creek requiring an 85 percent reduction of all stormwater (both piped and direct runoff) in order to avoid water quality violations.

### **3.2.1. SEWERS AND OUTFALLS**

Precipitation events cause major contamination of Rock Creek and its tributaries. Numerous stormwater outfalls are located along the streams, which transport pollutant laden waters from roads and parking lots. Also, sections of the City's network of sanitary pipelines are located in Rock Creek Park. When leaks develop in the sanitary lines, wastewater is carried directly to streams (NPS 2007).

In addition to these sources of pollution, Washington DC utilizes a combined sanitary and storm sewer system. Under normal conditions, wastewaters in the combined system are directed to treatment at the Blue Plains wastewater facility across the Potomac from Alexandria. However, during storm events exceeding 0.3 inches per hour, untreated sewage overflows and discharges directly to Rock Creek and its tributaries (NPS 2007).

DC Water currently lists 28 combined sanitary and storm sewer overflow structures along Rock Creek (DC Water 2011). Reconstruction to reduce overflow discharges is underway, and includes separation of several combined outfalls in the project area (DC Water 2011b). Long term plans to solve the problem of sewer overflow include construction of concrete lined tunnels to collect and store runoff during substantial rainfall events (NPS 2007).

### 3.3. VEGETATION

Vegetation occurring in the project area has been characterized in the National Biological Survey (NBS)/NPS Vegetation Mapping Program's *Vegetation Classification of Rock Creek Park* (TNC 1998). The NBS study shows that the portion of Rock Creek Park within the study area is comprised of Beech-White Oak/Mayapple Forest Association and Managed Grass/Lawns with Trees. Additionally, during the January 2011 field investigation, the overall forest composition was identified using the National Vegetation Classification System developed by The Nature Conservancy. Based on this classification system, the forest cover of the site was classified as mixed oak/beech variant of the Beech-White Oak/Mayapple Forest Association on the upper slopes, and Sycamore-Green Ash Association in the floodplain. These associations are further described below.

The Beech-White Oak/Mayapple Forest Association occurs on moderately dry slopes or gentle gradients on well-drained acidic sandy loam soils. The canopy is dominated by white oak (*Quercus alba*), beech (*Fagus grandifolia*), and tulip poplar (*Liriodendron tulipifera*), and subcanopy and shrub layer species include American holly (*Ilex opaca*), flowering dogwood (*Cornus florida*), and mapleleaf viburnum (*Viburnum acerifolium*), which often forms a well-defined shrub layer. Two variants of the Beech-White Oak/Mayapple Forest Association are recognized: the beech-tulip poplar variant and the mixed oak/beech variant. The beech-tulip poplar variant occurs on more mesic (moderately moist) sites and is characterized by a dominance of tulip poplar and beech in the canopy and subcanopy. Hornbeam (*Carpinus caroliniana*) occurs frequently and spicebush (*Lindera benzoin*) and viburnums (*Viburnum* spp.) are common in the shrub layer. The mixed oak-beech variant is characterized by a greater percent cover of oaks and less dominance by tulip poplar. The canopy is codominated by a mix of red oak (*Quercus rubra*), black oak (*Quercus velutina*), white oak, and chestnut oak (*Quercus prinus*). Beech usually occurs in the subcanopy and mapleleaf viburnum is common, but spicebush, hornbeam, and jack-in-the-pulpit (*Arisaema triphyllum*) are conspicuously lacking or sparse, which distinguishes this from the classic Beech-White Oak/Mayapple Association (TNC 1998).

The Sycamore-Green Ash Association is a floodplain forest, found along stream banks, low terraces, and other areas subject to temporary or irregular flooding. The canopy is characterized by sycamore (*Platanus occidentalis*) and box elder (*Acer negundo*), with red maple (*Acer rubrum*) and tulip poplar often co-dominant with the sycamore. Green ash (*Fraxinus pennsylvanica*), white ash (*Fraxinus americana*), and hickory (*Carya* spp.) species are frequent associates. The shrub layer may be dominated by spicebush, with black haw (*Viburnum prunifolium*) occurring less frequently (TNC 1998).

Field investigations conducted in January 2011 included an inventory of project area vegetation. The inventory took place within the approximate limit of disturbance of the Rock Creek Park Multi-Use Trail Rehabilitation, including the proposed areas of the Piney Branch Parkway trail, Rose Park trail, and Peirce Mill trail spur. Within the approximate limits of disturbance, the location of large trees was recorded using a Trimble GPS receiver capable of sub-meter accuracy. Large trees were defined as trees with a diameter at breast height (dbh) greater than or equal to 24 inches. A forestry diameter tape was used to measure the diameter of trees at breast

height. A total of 61 large trees were surveyed within the approximate limits of disturbance of the proposed actions.

The survey also identified large trees outside of the approximate limits of disturbance that could potentially be impacted by the proposed actions, based on the critical root zone (CRZ). The CRZ is the area in which most roots live, supplying nutrients and water to a tree. Most of these essential roots are found just below the soil surface. When the roots are damaged, the structural integrity of the tree is jeopardized, creating a potential hazard. The CRZ is defined as a concentric circle around the trunk of a tree with a radius of one foot for every one inch of the tree's dbh. Generally, considerable damage occurs when there are impacts to 30 percent or more of the CRZ (Carroll County Maryland 2007). Based on the field investigation, there were 60 trees outside of the approximate limits of disturbance that could potentially be impacted by the proposed actions. For each of these trees, 30 percent or more of the CRZ is within the approximate limits of disturbance.

***During the public comment period for the Rock Creek Park Multi-Use Trail Rehabilitation, multiple comments were received regarding an old oak tree adjacent to the Rose Park trail at the Rose Park Dumbarton Street playground area. Public comments pointed out the importance of the tree to Rose Park based on its considerable size. Also, public comments provided that the tree is in excellent health, based on previous professional assessments.***

### 3.4. WILDLIFE

Wildlife found within Rock Creek Park consists of species that have adapted to disturbed environments. Forested areas of the park provide suitable habitat for mammals such as white-tailed deer (*Odocoileus virginianus*), red fox (*Vulpes vulpes*), opossum (*Didelphis virginiana*), gray squirrel (*Sciurus carolinensis*), beaver (*Castor Canadensis*), southern flying squirrel (*Glaucomys volans*) and eastern chipmunk (*Tamias striatus*). Reports of coyotes (*Canis latrans*) in Rock Creek Park were confirmed by park staff in September 2004, and sightings continue (NPS 2009b). The variety and number of reptiles and amphibian species in Rock Creek Park has decreased over the 20<sup>th</sup> century. Current inhabitants include spring peeper (*Psuedacris crucifer*), wood frog (*Rana sylvatica*), spotted salamander (*Ambystoma maculatum*), and red-backed salamander (*Plethodon cinereus*). Other amphibians have disappeared from the park such as the gray treefrog (*Hyla versicolor*) and the chorus frog (*Psuedacris triseriata*). Reptiles such as box turtles (*Terrapene carolina*) and rat snakes (*Elaphe obsoleta*) are present, but are decreasing in numbers due to loss of suitable habitat (NPS 2009b).

According to the NPS, 181 species of birds have been documented in the park. Bird species include neotropical migrants, who breed in the U.S. and Canada, and migrate to Mexico, Central America, South America, or the Caribbean Islands during the winter. Neotropical migrants recorded in the park include red-eyed vireo (*Vireo olivaceus*), Acadian flycatcher (*Empidonax vireescens*), eastern wood-pewee (*Contopus virens*), wood thrush (*Hylocichlea mustelina*), and scarlet tanager (*Piranga olivacea*). Example year-round residents are the great horned owl (*Bubo virginianus*), red-shouldered hawk (*Buteo lineatus*), pileated woodpecker (*Dryocopus pileatus*), American crow (*Corvus brachyrhynchos*), American robin (*Turdus migratorius*), northern cardinal (*Cardinalis cardinalis*), and song sparrow (*Melospiza melodia*). Many of these species depend on the ground and shrub layers of the forest for nesting and concealment, and are adversely affected by removal of these vegetative layers (NPS 2009b).

Based on information in the Rock Creek Park GMP there are 35 species of fish in Rock Creek (NPS 2007). Native species found in the Creek and its tributaries include shiners (*Notropis* spp.), bullheads (*Ictalurus* spp.),

sunfish (*Lepomis* spp.) and blacknose dace (*Rhinichthys atratulus*). These species are common throughout the region. One catadromous fish species is found in Rock Creek, the American eel (*Anguilla rostrata*). Two anadromous fish species are found in the Creek, which are the blueback herring (*Alosa aestivalis*) and the alewife (*Alosa pseudoharengus*). In order to enhance spawning conditions for these migratory species, a fish ladder was installed at the Peirce Mill dam in 2007 (NPS 2007).

Contamination of Rock Creek and its tributaries has adversely impacted the variety and number of fish. Due to flooding and scouring during storms, pollution from runoff, and periodic low flows, there has been an overall reduction in the fish population. A 1993 study conducted by the NPS revealed that no fish were found in nearly half of Rock Creek's tributaries (NPS 2007).

### **3.5. CULTURAL RESOURCES**

#### **3.5.1. GUIDING REGULATIONS AND POLICIES**

The National Historic Preservation Act (NHPA) of 1966 governs federal agencies in their handling of historic properties. Section 106 of the Act requires that federal agencies take into account the effects of their actions on cultural resources. Under this provision, the NPS must evaluate impacts to any district, site, building, structure, or object listed on or eligible for listing on the National Register of Historic Places (NRHP). Cultural resources are characterized as archeological resources, historic structures, and cultural landscapes. "Historic properties" as defined by the implementing regulations of the NHPA (36 CFR 800), are any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP. This term includes artifacts, records, and the remains that are related to and located within such properties, as well as traditional and culturally significant Native American sites and historic landscapes. Agencies must consult with the SHPO and the ACHP as required, and other interested parties in an effort to avoid, minimize, or mitigate adverse effects. There are no federally recognized Indian tribes present in the District of Columbia; therefore consultation with the THPO is not required for this project.

In addition to the NHPA, protection and management of cultural resources held by the NPS is governed by *Directors Order #28: Cultural Resources Management Guidelines* (NPS 1988), *NPS Management Policies* (NPS 2006), and the 2008 NPS-wide Programmatic Agreement with the ACHP and the National Conference of State Historic Preservation Officers. These documents require that NPS managers avoid or minimize adverse impacts on park resources to the greatest extent possible.

#### **3.5.2. AREA OF POTENTIAL EFFECTS**

According to the Section 106 Regulations (36 CFR 800), an APE is defined as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking." An APE for this undertaking was delineated by the NPS and DDOT after consultation with the DC HPO and Consulting Parties invited under the NHPA Section 106 consultation process. In compliance with the Advisory Council on Historic Preservation's regulation implementing Section 106, the APE for historic properties was determined to be a 200-foot band flanking the trail, expanded as appropriate to capture key adjacent historic properties. Due to the dense vegetation and topography of the project area, as well as the minimal visual qualities of the proposed improvements, impacts to historic views and vistas will be limited. For the purposes of evaluation, the

proposed APE for historic resources includes the area from which the project site is readily visible, as well as resources that could be impacted due to changes in the character of the area.

The APE for archeological resources comprises the Limit of Disturbance (LOD) as identified by project planners for the various proposed construction-related activities that will result in ground disturbance.

**Figure 20** displays the APE and associated historical resources.

### **3.6. HISTORIC STRUCTURES AND DISTRICTS**

This section addresses historic properties present that have been included in or have been determined eligible for the NRHP as buildings, sites, objects, or historic districts. The Rock Creek Park multi-use trail, which echoes the path of Rock Creek, is within the Rock Creek Park, Rock Creek and Potomac Parkway, and the Georgetown historic districts, listed in the NRHP.

#### **3.6.1. HISTORIC DISTRICTS WITHIN THE APE**

##### **The Rock Creek Park Historic District**

The Rock Creek Park Historic District, defined as U.S. Reservation 339, was established by Congress in September 1890 for the scenic and recreational enjoyment of the people of the United States (NPS 1991). The historic district's boundaries are roughly defined as 16th Street, NW on the east, Oregon Avenue and Branch Road, NW on the west, Klinge Road, NW to the south, and the District of Columbia line and Parkside Drive, NW on the north. The district comprises approximately 1,754 acres of predominantly picturesque forested valley with sloping hills and meadows. The park meets National Register Criteria A, B, and C as possessing areas of significance for architecture, community planning and development, conservation, entertainment and recreation, industry, landscape architecture, military and horticulture. Important persons associated with the history of the park include Joshua Peirce (nationally renowned horticulturalist and occupant of the Peirce-Klinge mansion) and landscape architects Frederick Law Olmsted, Jr., and John C. Olmsted who established methods of landscape practice and a general development plan for the park in the 1918 Olmsted report. According to the NRHP nomination, the park exhibits a high degree of integrity of design, workmanship, location, feeling, association, and setting, which continues to reflect its development as a public landscape between 1831 and 1941.

An inventory of above-ground resources within the Rock Creek Park Historic District boundaries identified 31 contributing resources and 59 noncontributing resources. A contributing resource represents a building, structure, site, or object that is associated with one or more of the themes under which the district is significant and that retains a high degree of integrity. The Rock Creek Park trail system is a contributing resource to the historic district. The undertaking also has the potential to affect the Piney Branch Parkway and the adjacent retaining wall, which are also contributing resources to the historic district. The Piney Branch Parkway and retaining wall were completed in 1935 and 1936 respectively, as Public Works Administration construction projects. The Piney Branch Parkway retaining wall utilizes a native stone material intended to be informal and inconspicuous. According to the Historic Resource Study, the wall is illustrative of the modern rustic aesthetic advanced by Albert H. Good in his 1935 design source book, *Park Structures and Facilities* (NPS 1990).

The Rock Creek Park Historic District was listed in the DC Inventory of Historic Sites on November 8, 1964, and in the NRHP on October 23, 1991 (NPS 1991). **Table 4** identifies the contributing resources of the Rock Creek Park Historic District within the APE.

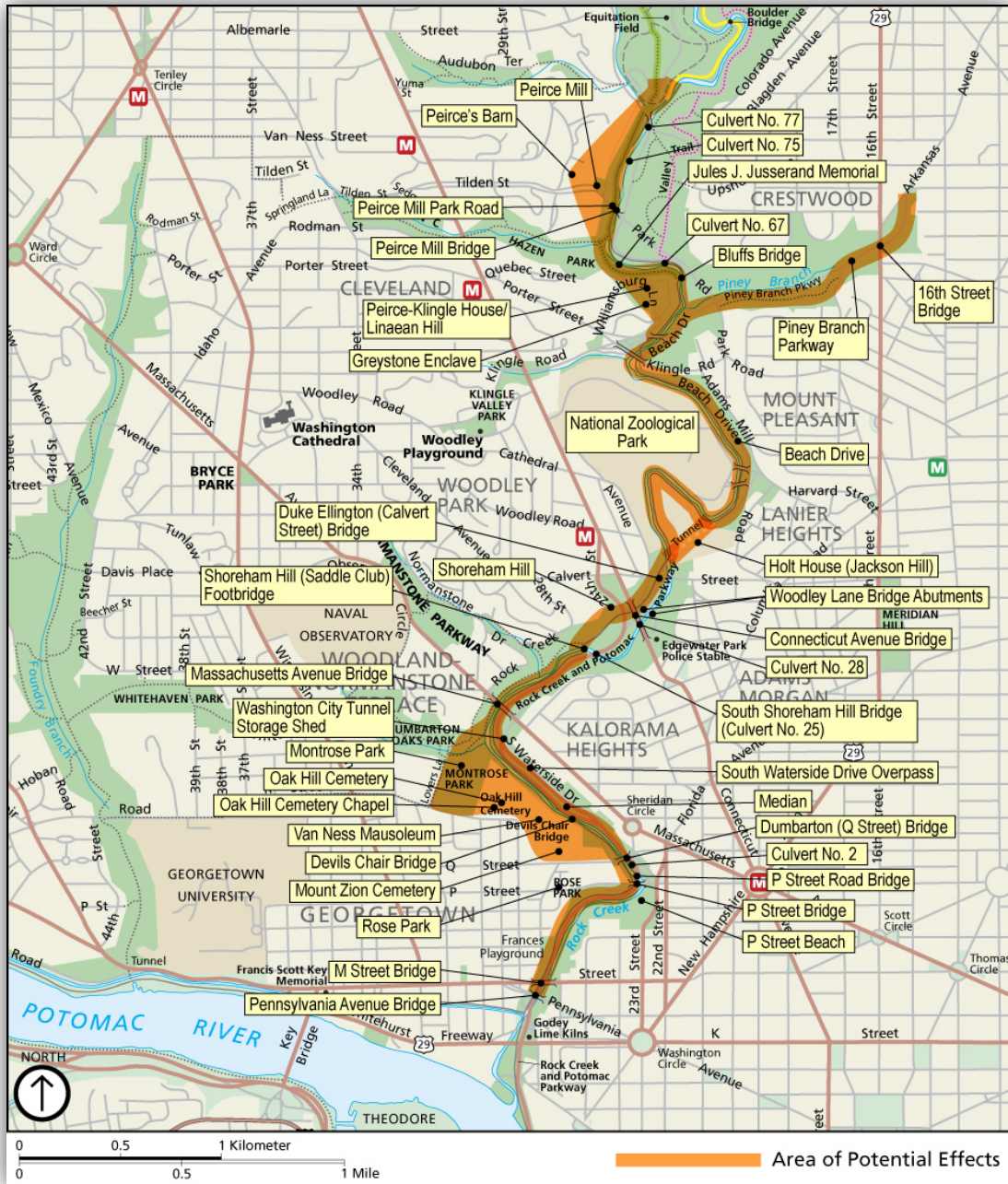


Figure 20. Area of Potential Effect and Historic Resources

### The Rock Creek and Potomac Parkway Historic District

Rock Creek and Potomac Parkway Historic District, U.S. Reservation 360, occupies the gorge and rim of the lower Rock Creek Valley and a stretch of land along the Potomac River waterfront. The district comprises approximately 173 acres in the northwest quadrant of Washington, DC. Plans for the parkway were initiated as early as 1867, but did not gain momentum until the Senate Park Commission included the reservation in its 1901 plans for the National Mall and surrounding environs (NPS 2005b). In 1913, the parkway was officially authorized to provide a landscaped connection between the Mall and Potomac Park (later renamed East and



West Potomac Parks) and the already established Rock Creek Park and National Zoo. The parkway comprises a major component of the District's comprehensive park system developed following City Beautiful ideals during the early twentieth century. Originally built for horse-drawn carriages, horseback riders, pedestrians, and the occasional automobile, the Rock Creek and Potomac Parkway was one of the earliest parkways in the nation and the first federally funded road. The parkway experienced numerous design changes to facilitate growing automobile use during the early 1900s; however, bridle paths continued to be an integral part of the original trail network design and equestrians used the park through the 1950s. The Rock Creek and Potomac Parkway is listed in the NRHP as a historic district under the multiple property listing "Parkways of the National Capital Region, 1913-1965." The parkway is significant under Criteria A and C in the areas of community planning and development, landscape architecture, architecture, and recreation during the period 1791 to 1951.

The circulation network, comprising the historic roads and trails built between 1831 and 1951, is a contributing resource to both the Rock Creek Park Historic District and the Rock Creek and Potomac Parkway Historic District. Although the NRHP documentation cites the trail network as significant, it does not specifically determine which trails are contributing resources. According to the historic district nomination, the spine of the circulation system, the multiuse trail, extends along the western side of the Rock Creek and Potomac Parkway, following the path of the primary historic bridle trail. In addition to the existing alignment, the historic district nomination has identified at least eleven other known footpaths and bridle paths that traverse this area. The NPS National Capital Region is developing a cultural landscape report for the historic trails in Rock Creek Park. The historical alignment of trails has undergone preliminary evaluation by Robinson & Associates, Inc., in coordination with the NPS, as part of this Section 106 undertaking. Using the park's archival resources and historic mapping, as well as evaluating other key maps at local archival repositories, a composite map was created to illustrate the evolution of the historic alignments throughout the project area and to better define the historic resource (see **Figure 21**).

The Rock Creek Park and Potomac Parkway Historic District was listed in the DC Inventory of Historic Sites on November 8, 1964, and in the NRHP on May 4, 2005 (NPS 2005b). **Table 4** identifies the contributing resources of the Rock Creek and Potomac Parkway Historic District within the APE.

### **The Historic Trail Network within the Rock Creek Park Historic District and the Rock Creek and Potomac Parkway Historic District**

The trail network is identified by the National Register documentation for the Rock Creek Park and Rock Creek and Potomac Parkway Historic Districts as a contributing resource, but with no specific evaluation of the network or identification of historic sections. As the principle historic resource potentially affected by the proposed undertaking, this study evaluates the historic characteristics of the trail network located in the project area. As discussed above, the NPS currently is developing a cultural landscape report for the historic trails in the park. Most of the lower Rock Creek Valley (the area south of the National Zoo) remained in its natural state throughout the eighteenth century and the first half of the nineteenth century. The southern part of the valley served as the northwestern border of Washington City as described by Pierre L'Enfant, as well as a natural barrier between Georgetown and Washington County (NPS 2005b). Starting in 1831, a system of trails and roads began to develop throughout the area that became the park, which would continue to evolve and be improved upon until 1941 (NPS 1990).

The park and its network of trails and roads, is a product of the predominant social philosophies of the era – city planning, democratic ideals, sanitary reform, and nature conservation – promulgated by reformers such as Frederick Law Olmsted Sr. (NPS 1990). In the second half of the nineteenth century, parks were advocated as a refuge from the maladies of urban living. The designation of Rock Creek Park in 1890 (ultimately as a national park) provided a place of refuge within Washington, DC.

When Rock Creek Park was established, existing recreational features included carriage drives, horseback riding trails, walking paths, and fields for organized sports (NPS 1990). A large stable, established by 1888 and operated by the Washington Riding Academy, was situated on the east side of the Rock Creek Valley at P Street (Goode 2003). The stable served affluent citizens of Washington who were eager to enjoy the informal bridle trails that followed the creek and meandered through the area of mixed farms and woodlands. Most of Washington society belonged to the Washington Riding Academy through the turn of the twentieth century until its popularity waned with the arrival of the Great Depression. In addition to the Washington Riding Academy multiple other riding clubs existed throughout Washington, including two located within the lower Rock Creek Valley – one near the Shoreham Hotel, started by Harry Wardman, and the second by Rock Creek Parkway, which was converted into the Watergate Inn in 1940. The Washington Riding Academy was razed in 1936 and replaced with the present Embassy Service station.

By the turn of the century, interest in the development of the district’s entire park system resulted in the 1901-02 Senate Park Commission, known as the McMillan Commission. Landscape architect and urban reformer, Frederick Law Olmsted, Jr., a member of the commission, addressed the importance of preserving Rock Creek Park in the report, writing “it is true that the value of the park scenery depends absolutely upon making it conveniently accessible to the people, but nothing can be gained if the means of access destroys the scenery which it is meant to exhibit” (NPS 1990). The McMillan report ultimately led to the Olmsted Plan in 1918, the first comprehensive plan for Rock Creek Park.

The expansion and modification of the circulation network in the early twentieth century, financed mainly by congressional appropriations from 1899-1918, provided Washingtonians increased access to the park. A building program, initiated by Army engineer Captain Lansing J. Beach in 1897, was responsible for four miles of macadam and three miles of dirt road as well as maintenance on the existing trails and roads (NPS 1990). Construction or improvement of twenty-two miles of bridle paths and six miles of foot paths was authorized by the Board of Control in 1918. (The Army was responsible initially for Rock Creek Park, just as it was with Yellowstone and Yosemite, the two other national parks that were established in 1890.)

The circulation network also benefited from New Deal-era programs. The first Public Works Administration (PWA) project in the park replaced bridle path bridges, repaired three highway bridges, and replaced picnic tables and benches (NPS 1990). PWA funds also supported construction of five new bridle foot bridges from 1934-35 and resurfacing 7,516 yards of roadway during the 1930s. While the 1930s brought needed improvements and infrastructure to Rock Creek Park, it also witnessed increased automobile use and suburban development responsible for the demise of the surrounding stables, and consequently, the paving of the equestrian trails for bicycle use.

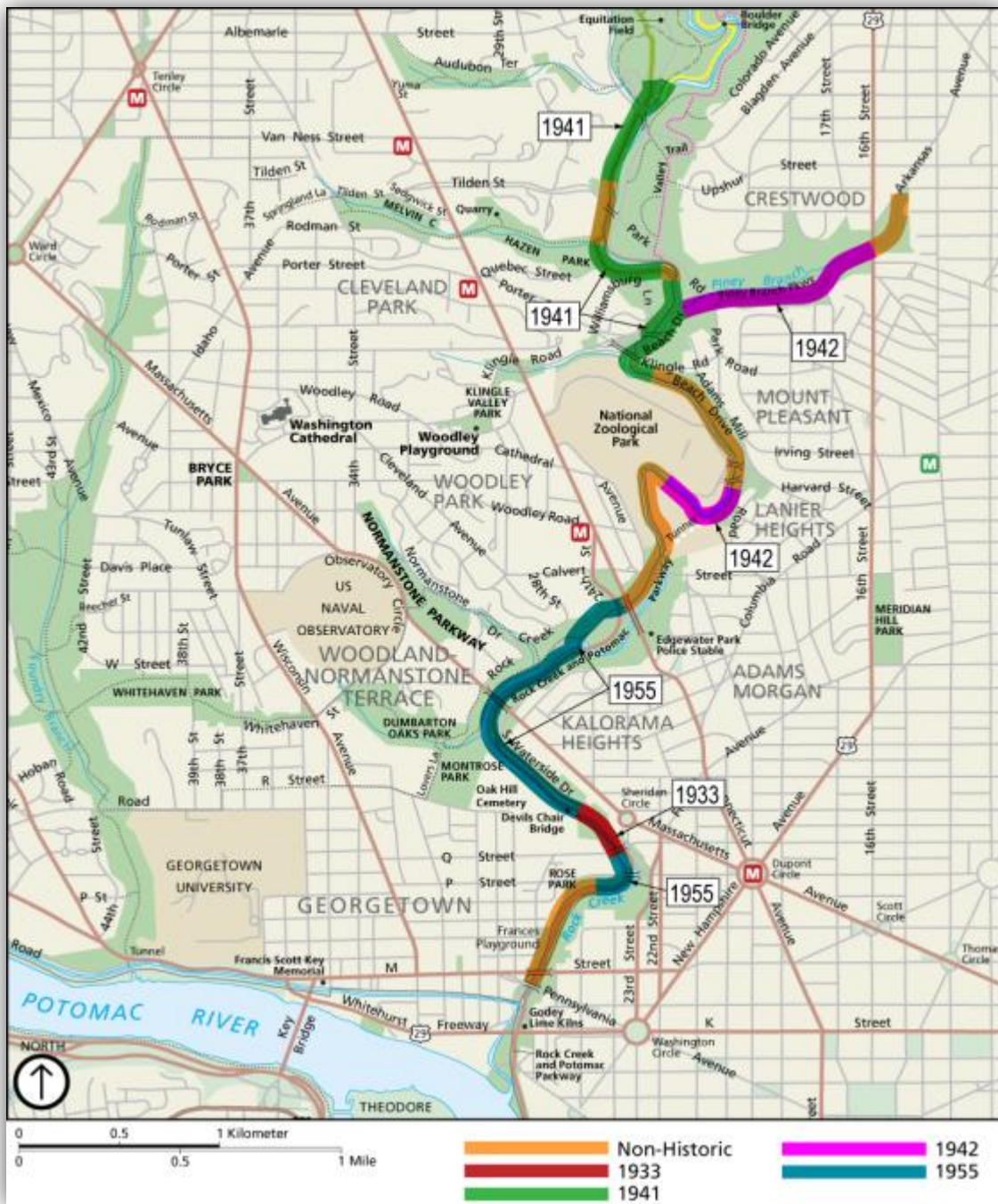


Figure 21. Historic and Non-Historic Trail Alignments within the APE

During the twentieth century, the park and its circulation system adapted to the changing pastimes of its recreational users, as evidenced by the insertion of additional sports facilities such as tennis courts, playing fields, and trail additions for bicycle paths in the 1960s and 70s. Despite some modern intrusions, historian William Bushong notes “paths which were extant before 1941, have been maintained and incorporated into the modern trail system. These sections document the long historic tradition of these recreational activities in the

park” (NPS 1990). The trail networks’ greatest consequence has been facilitating the transition of the park from a remote, rural landscape to a public landscape. Current historic and non-historic trail alignments within the Rock Creek Park Multi-Use Trail Rehabilitation APE are presented in **Table 4**.

### **The Georgetown Historic District**

Georgetown was founded by an Act of the Maryland Assembly in 1751, and incorporated with an elected government in 1789 (DC HPO 1967). It became part of the District of Columbia upon the District’s establishment in 1791, remaining a separate jurisdictional entity within the city until Congress revoked its independent charter in 1871. Congress abolished Georgetown as a legal entity in 1895. The Georgetown district is a remarkably intact example of a complete historic town with a rich variety of residential, commercial, institutional, and industrial buildings spanning several centuries. The building inventory includes a wide range of houses from simple frame dwellings to spaciouly landscaped mansions recording all social levels of the community. Architectural styles are also varied and include Federal, Greek Revival, Italianate, Queen Anne, Romanesque, and Classical Revival examples, as well as numerous vernacular structures. Georgetown includes many of city’s oldest buildings and its narrow-grid streets establish intimate scale in contrast to the L’Enfant’ Plan for the City of Washington.

The Georgetown Historic District was listed in the DC Inventory of Historic Places on November 8, 1964, and in the NRHP as a National Historic Landmark on May 28, 1967; the nomination was amended on February 27, 2003 to present the period of significance of 1751 to 1950 (NPS 2003b). **Table 4** identifies the contributing resources of the Georgetown Historic District within the APE. Rose Park is located in the Georgetown Historic District. It is located between P Street, NW and M Street, NW bounded on the west by 26th and 27th streets and bounded on the east by Rock Creek Parkway. Although the Georgetown Historic District nomination does not include an inventory of contributing resources, the State Historic Preservation Office considers Rose Park to be a contributing resource to the Historic District (D.C. HPO, Kim Williams, National Register Coordinator, telephone conversation with Judith Robinson, Principal, Robinson & Associates, Inc., June 2, 2009).

### **3.6.2. INDIVIDUALLY LISTED HISTORIC SITES WITHIN THE APE**

#### **Greystone Enclave**

This property is comprised of four dwellings and their associated outbuildings, as well as the setting in which they are located. Greystone Enclave includes Linnaean Hill, built 1823; Greystone, built 1913 and designed by architect Waddy B. Wood; Gearing Bungalow, built 1914 and designed by architect Nicholas R. Grimm; and Pine Crest Manor, built 1929 and designed by architect Gordon B. MacNeil. Greystone Enclave was listed in the D.C. Inventory of Historic Sites on June 21, 1989 (DC HPO 1989).

#### **Montrose Park**

Montrose Park, established in 1911, is located on R Street between 30<sup>th</sup> and 31<sup>st</sup> streets. This 16-acre public park is found in the northern section of Georgetown, adjacent to Dumbarton Oaks, Dumbarton Oaks Park, and the Oak Hill Cemetery. The historic character of Montrose Park is largely the work of two skilled landscape architects for the DC Office of Public Buildings and Grounds, George E. Burnap and Horace W. Peaslee. The park is also important as an early-twentieth-century example of the adaption of a country estate to a community park. Montrose Park was listed in the DC Inventory of Historic Sites on March 3, 1979, and in the NRHP on May 28, 1967 (NPS 1967b).

**Table 4. Rock Creek Park, Rock Creek and Potomac Parkway, and Georgetown Historic Districts**

SITES/DESIGNED LANDSCAPES	BUILDINGS	STRUCTURES
<b>Rock Creek Park Historic District Resources within the APE</b>		
Linnaean Hill	Peirce Barn Peirce Mill Klingle Mansion	<ul style="list-style-type: none"> <li>• Beach Drive</li> <li>• Bluffs Bridge</li> <li>• Culverts</li> <li>• Jules J. Jusserand Memorial</li> <li>• Outdoor Fireplace</li> <li>• Peirce Mill Bridge</li> <li>• Park Road</li> <li>• Piney Branch Parkway</li> <li>• Retaining Walls</li> <li>• 16<sup>th</sup> Street Bridge</li> <li>• Trail Network</li> </ul>
<b>Rock Creek and Potomac Parkway Historic District Resources within the APE</b>		
Median Parkway Ending / Road Trace Rock Creek Shoreham Hill Woodley Lane Bridge Abutments	Washington City Tunnel Storage Shed	<ul style="list-style-type: none"> <li>• Connecticut Avenue Bridge (William H. Taft Memorial Bridge)</li> <li>• Culverts</li> <li>• Duke Ellington Bridge (Calvert Street Bridge)</li> <li>• Dumbarton Bridge (Buffalo Bridge)</li> <li>• Lyons Mill Footbridge (Devil’s Chair Bridge)</li> <li>• M Street Bridge</li> <li>• Massachusetts Avenue Bridge (Charles C. Glover Memorial Bridge)</li> <li>• P Street Bridge</li> <li>• P Street Road Bridge Rock Creek and Potomac Parkway</li> <li>• Saddle Club Footbridge (Shoreham Hill Footbridge)</li> <li>• South Waterside Drive Overpass</li> <li>• Shoreham Hill Road Bridge</li> <li>• Trail Network</li> </ul>
<b>Georgetown Historic District Resources within the APE</b>		
Rose Park*		

\*Although the Georgetown Historic District nomination does not include an inventory of contributing resources, the State Historic Preservation Office considers Rose Park to be a contributing resource to the Historic District.

**Mount Zion Cemetery**

Established in 1809, the cemetery comprises the Old Methodist Burying Ground and the Female Union Band Society Graveyard. In 1842, the cemetery was established as a benevolent association to provide burial for free blacks. The property connotes the association between black Americans and the development of Georgetown. The Mount Zion Cemetery was listed in the D.C. Inventory of Historic Sites on April 19, 1975, and in the NRHP on August 6, 1975 (NPS 1975).

**National Zoological Park**

Established in 1889 and expanded in 1921 and 1923, the National Zoo is a major achievement of the late-nineteenth century conservation movement, created for the preservation of endangered animals indigenous to the United States. The property is a major component of the park system in the Rock Creek valley and is also significant as an important work of noted landscape architect Frederick Law Olmsted, with alterations by F.L.

Olmsted, Jr. Major scientific investigations including experiments in zoology, anatomy, and aerodynamics were conducted on the site. The National Zoo's spacious and picturesque location was a significant innovation in zoo design that also influenced the layout of the curvilinear street pattern in the surrounding area. The National Zoological Park was listed in the DC Inventory of Historic Sites on November 8, 1964, and in the NRHP on April 11, 1973 (NPS 1973b).

### **Oak Hill Cemetery**

W.W. Corcoran, a banker and founder of what was Riggs National Bank, established the Oak Hill Cemetery in 1848 as a garden park cemetery. The site, located at 30<sup>th</sup> and R streets, is bound by Rock Creek Park to the north and to the east. Designs within the site are an example of the nineteenth century Romantic Movement, which emphasized natural landscapes. Oak Hill Cemetery was listed in the DC Inventory of Historic Sites on November 8, 1964 (DC HPO 1964b).

## **3.6.3. INDIVIDUALLY LISTED HISTORIC BUILDINGS WITHIN THE APE**

### **Jackson Hill (Holt House)**

Holt House is located on the grounds of the National Zoological Park grounds, to the east of the main zoo. Constructed by 1827, the dwelling is one of the few remaining examples of a five-part Georgian plan in the District. Alterations were made to the house by Glenn Brown, W.R. Emerson, and Hornblower and Marshall from 1890-1901, when the building became the administrative offices for the zoo. The Jackson Hill (Holt House) was listed in the D.C. Inventory of Historic Sites on November 8, 1964, and in the NRHP on April 24, 1973 (NPS 1973).

### **Oak Hill Cemetery Chapel**

The chapel was designed by James Renwick in 1850 and sits on the highest ridge of the cemetery. The chapel is the only known example of Renwick's Gothic Revival church design in the District. The Oak Hill Cemetery Chapel was listed in the D.C. Inventory of Historic Sites on November 8, 1964, and in the NRHP on March 16, 1972 (NPS 1972).

### **Peirce Barn**

Built by Isaac Peirce circa 1810, the building is a two-and-one-half-story vernacular stone barn with a rectangular ground plan. The barn was restored in 1935-1936, and in 1971 was modernized for use as an art barn/gallery. The Peirce Barn was listed in the NRHP on October 25, 1973 (NPS 1973).

### **Peirce-Klinge House (Linnaean Hill)**

This property comprises the Peirce-Klinge House, Peirce-Klinge Utility House and Potting Shed, Peirce-Klinge Stable/Garage. The dwelling is a three-story, ten-room farmhouse constructed of blue and grey granite in 1823 by Joshua Peirce, a nurseryman who supplied the first ornamental plantings for the White House, the Capitol and other government buildings. In its time, Linnaean Hill was a gathering place for Washington society. The Peirce-Klinge House (Linnaean Hill) was listed in the D.C. Inventory of Historic Sites on November 8, 1964, and in the NRHP on October 10, 1973 (NPS 1973).

### **Peirce Mill**

Peirce Mill is located at Tilden Street and Beach Drive. The mill was built by Isaac Peirce in either 1820 or 1829 and is the last known extant grist mill in the District. Peirce Mill is the principle relic of the Peirce plantation and a unique symbol of the milling industry that once flourished along Rock Creek. The site was listed in the DC Inventory of Historic Sites on November 8, 1964, and in the NRHP on March 24, 1969 (NPS 1969).

### 3.6.4. INDIVIDUALLY LISTED HISTORIC STRUCTURES WITHIN THE APE

#### **Connecticut Avenue Bridge (William H. Taft Memorial Bridge)**

The bridge, designed by George S. Morison, was built between 1897 and 1906. When it was completed, it was the largest bridge in the world. It is also significant for its method of construction, consisting of unreinforced concrete poured inside a frame of precast concrete panels. In 1931 it was renamed after the former president and Supreme Court chief justice William Howard Taft. The Connecticut Avenue Bridge was listed in the DC Inventory of Historic Sites on November 8, 1964, and in the NRHP on July 3, 2003 (NPS 2003c).

#### **Duke Ellington Bridge (Calvert Street Bridge)**

Designed by Paul Cret, the bridge was constructed between 1933 and 1935. The existing bridge replaced an 1891 iron trestle bridge which was designed to accommodate streetcars. The Duke Ellington Bridge was listed in the DC Inventory of Historic Sites on November 8, 1964 (DC HPO 1964).

#### **Dumbarton Bridge (Buffalo Bridge)**

The Dumbarton Bridge, located on Q Street, was designed by the father and son architectural team of Glenn and Bedford Brown. The structure was inspired by Roman aqueducts, and was erected from 1912-1915 before the Rock Creek and Potomac Parkway legislation was enacted. The creek, the road, and the trail pass through separate arches. The four corners of the bridge are marked by monumental, bronze bison designed by sculptor Alexander Phimister Proctor, giving the bridge its name. The Dumbarton Bridge was listed in the DC Inventory of Historic Sites on November 8, 1964, and in the NRHP on July 16, 1973 (NPS 1973).

#### **Van Ness Mausoleum**

Designed by George Hadfield and constructed from 1823-24, the mausoleum stands on a high knoll in the Oak Hill Cemetery. Hadfield's design for the circular temple combined classical Greek and Roman elements. The mausoleum was moved from H Street, N.W. to its present location in 1872-73. The Van Ness Mausoleum was listed in the D.C. Inventory of Historic Sites on November 8, 1964, and in the NRHP on December 17, 1982 (NPS 1982).

## 3.7. CULTURAL LANDSCAPES

Cultural landscapes, as defined by The Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*, consist of "a geographic area (including both cultural and natural resources and the wildlife or domestic animals therein) associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values." Created by an act of Congress in 1890, Rock Creek Park encompasses the last major natural landscape in the District. Since its inception, the park has balanced the preservation and maintenance of the valley's natural and cultural resources with the recreational and transportation requirements of modern Washington while incorporating the highest cultural and aesthetic values. As such, Rock Creek Park is considered an important cultural and historic landscape. The National Park Service is currently developing a cultural landscape report for the historic trails in Rock Creek Park.

In 1997, the NPS began a cultural landscape inventory of Rock Creek Park in order to more effectively document and manage the qualities and attributes of the park's component landscapes and cultural features that make it significant and worthy of preservation (NPS 1998c). The results of that inventory concluded that Rock Creek Park met the criteria for listing in the NRHP as a historic designed landscape. In addition, the inventory determined that two component landscapes of the park, Linnaean Hill (including the Peirce-Kingle Mansion) and the Peirce Mill contribute to the significance of the Rock Creek Park cultural landscape, and thus comprise individually eligible landscape elements.

### **3.8. ARCHEOLOGY**

The identification of archeological resources within or adjacent to the Rock Creek Park Multi-Use Trail Rehabilitation APE included a review of existing databases maintained by the DC HPO, a literature review, and the review of a series of historic maps and aerial photographs. Background research included a review of previously conducted archeological surveys, the level of effort undertaken during those studies, and the characteristics of the archeological resources identified as a result of the previous archeological investigations. For the purposes of this review, an area of 100 feet on either side of the trail centerline was examined for the presence of known archeological resources and previously conducted archeological surveys. The project data request was processed by the DC HPO during February 2011.

#### **3.8.1. OVERVIEW OF CULTURE HISTORY**

Given the unique nature of Washington, DC (a relatively small but highly urbanized area), the prehistoric context relies on evidence from the archeological record of nearby Mid-Atlantic states, an early overview by Humphrey and Chambers (1985), and more recent overviews included in Fiedel et al. (2008) and Knepper et al. (2006). These overviews, and other studies, form the basis for the sequence of regional prehistory that is presented below (**Figure 22**).

##### **Paleoindian Period (12,000 – 9000 BC)**

The Paleoindian period exhibits a pattern of cultural adaptation based on environmental conditions that marked the shift from the Late Pleistocene to the Early Holocene epoch. Paleoindian settlements consisted of small hunting camps that often were associated with sources of high-quality lithic raw materials. Gardner (1983, 1989) has identified six different functional categories for Paleoindian sites in the nearby Shenandoah Valley: lithic quarries, reduction stations, quarry-related base camps, base-camp maintenance stations, hunting stations, and isolated point find spots. Acquisition of high-quality lithics served as a focal point for this system with hunting as its subsistence base, which focused on large game such as moose, elk, and deer (Kavanagh 1982). In the archeological record, early Paleoindian sites are usually characterized by the presence of large, fluted, lanceolate-shaped projectile points such as Clovis, while later Paleoindian components are identified with projectile point types such as Dalton and Hardaway (Justice 1987). Preferred lithic materials for these projectile points were high-quality cryptocrystalline stones such as jasper and chert.

##### **Early Archaic Period (9000 – 6500 BC)**

The Pre-Boreal/Boreal climatic episode, dating from 8500 to 6700 BC, for the most part corresponds to the Early Archaic period. Glacial recession continued and deciduous forests expanded, possibly leading to a greater proliferation of game species during this period. Researchers have emphasized that the Early Archaic period in the Mid-Atlantic region evidences continuity in lifeways from the Paleoindian period, with the exception of changes in projectile point styles. The most distinctive cultural characteristic of the Early Archaic period was the appearance of notched projectile points, most notably the Kirk varieties (Justice 1987). Other



point types associated with the initial portion of the Early Archaic period include Kessel, Taylor, and Big Sandy, all side-notched types, although the Palmer Side-Notched type may be more common in the District (Fiedel et al. 2008).

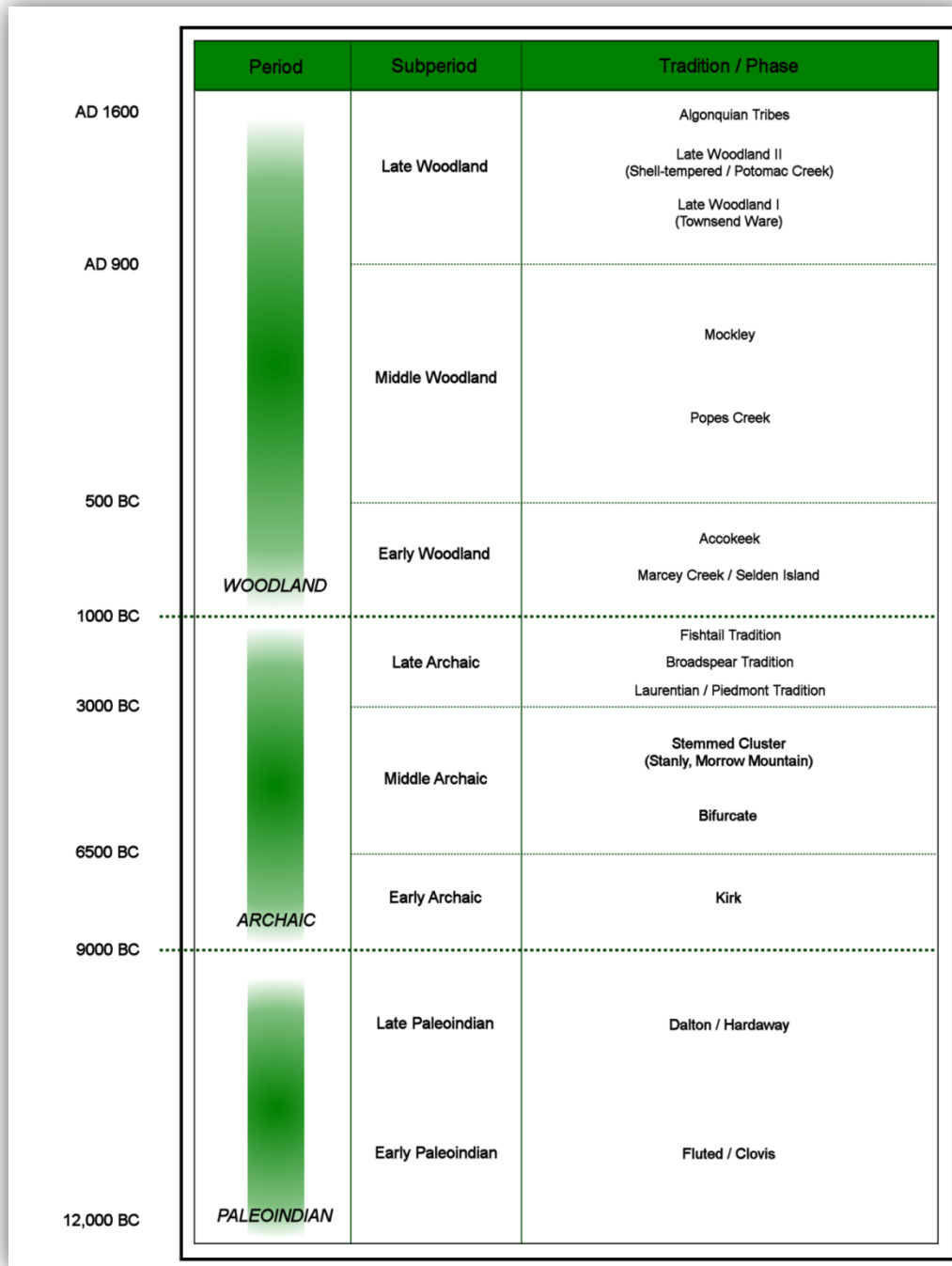


Figure 22. Regional Prehistoric Chronology of the District of Columbia Area

The expansion of projectile point styles may be associated with the diversification of the Early Archaic period subsistence base. There was also a continuation in the use of high-quality lithic materials until the end of this period when quartz and quartzite began to be more frequently used. Several archeological sites near Rock Creek have yielded Early Archaic projectile points, although intact deposits dating to this period have not been found. McNett (1972) and Barse (2002) both identify Kirk Corner-Notched projectile points at the Potomac Avenue site (51NW22) and Fletcher's Boathouse site (51NW13), respectively. Both sites are located on floodplain formations of the Potomac River. Fiedel et al. (2008) also suggest that some of the projectile points illustrated by Holmes (1897) date to the Early Archaic period.

### **Middle Archaic Period (6500 – 3000 BC)**

The beginning of the Middle Archaic period coincides with the Atlantic climatic episode, a warm, humid period associated with a gradual rise in sea level that led to the development of inland swamps (Barse and Beauregard 1994). It was a time marked by increased summer droughts, sea level rise, grassland expansion into the Eastern Woodlands, and the appearance of new plant species (Carbone 1976; Hantman 1990). The greater variety of plant resources allowed for an increase in general foraging as a supplement to hunting (Kavanagh 1982). Middle Archaic sites in Maryland tend to be clustered along tributaries of rivers and not in the estuarine sections of drainages (Steponaitis 1980). Settlements consisted of small base camps located in or near inland swamps that were convenient to seasonally available subsistence resources, as well as smaller temporary upland hunting camps.

Tool types which were common in Paleoindian and Early Archaic lithic assemblages, including unifacial tools and formal end scrapers, decreased in number during the Middle Archaic period (Egloff and McAvoy 1990). The bifurcate tradition of projectile points, including the LeCroy, St. Albans, and Kanawha types, began at this time, and ground-stone tools (axes, adzes, mauls, grinding stones, and nutting stones) also became widely utilized as subsistence and settlement patterns changed. Other projectile points dating to this period include the Stanly Stemmed/Neville, Morrow Mountain I and II, Guilford, and Piscataway types (Justice 1987). The Piscataway type is found late in this time period and at its earliest dates to the transition from the Middle Archaic to the Late Archaic period (Kavanagh 1982). The use of high-quality lithic material for tools was not as common during this period as it was during the preceding periods (Fiedel et al. 2008). A few sites near Rock Creek have yielded diagnostic projectile points dating to the Middle Archaic period, but similar to the Early Archaic period, intact deposits are rare. McNett (1972) identifies several projectile points dating to this period from Site 51NW22, including a LeCroy Bifurcate Base point and an unidentified serrated point found at the site by a local collector. Inashima (1985) reports several projectile points from Site 51NW80 as dating to the Early Archaic and Late Archaic periods, although Fiedel et al. (2008) suggest that these points are better classified as Middle Archaic types. Fiedel et al. (2008) also suggest that the bifurcate base points illustrated by Holmes (1897) date to this period and that other illustrated points are examples of the Morrow Mountain and Guilford types.

### **Late Archaic Period (3000 – 1000 BC)**

The environment during the Late Archaic period is characterized by a warmer and drier climate, a continued rise in sea level, the expansion of oak-hickory forests onto valley floors and hillsides, and the reappearance of grasslands (Carbone 1976). Several settlement trends are associated with these changes, including an intensified occupation of the uplands, the initial establishment of large semi-sedentary base camps along rivers and streams, and an overall increase in the number of sites dating to this period.

During the Late Archaic period the Mid-Atlantic region was exposed to cultural influences originating from both the Southeast and Northeast. Some of the projectile point types dating to this period include Otter Creek,

Vosburg, and Brewerton variants belonging to the Laurentian tradition of the Northeast, and the Lackawaxen and Bare Island types (locally Holmes) belonging to the Piedmont tradition of the Southeast. Halifax Side-Notched and Vernon points also date to the initial portion of the Late Archaic period. As mentioned above, the use of the Piscataway type, first made at the end of the Middle Archaic period, continued into the initial portion of the Late Archaic period. During the later part of the Late Archaic period, sometimes referred to as the Terminal Late Archaic or Terminal Archaic period (ca. 2000 – 1000 BC), the Broadspear tradition began (Fiedel et al. 2008). This tradition is characterized by projectile point types such as Savannah River and Susquehanna Broadspear. The Broadspear tradition was followed by the Fishtail tradition (Kavanagh 1982). Besides the formal chipped-stone tools used during the Late Archaic period, there appears to have been an increase in the production of expedient tools made from flakes and crude cores (Klein and Klatka 1991). Throughout this period, quartz and quartzite were the most frequently used lithics, although rhyolite and argillite were also occasionally used in stone-tool manufacture.

The archeological record in the District documents an increase in site numbers for the Late Archaic period in contrast to the Early Archaic and Middle Archaic periods. A number of sites in the Rock Creek/Potomac River area of northwest Washington, DC, have significant Late Archaic period components. One of the earliest recognized sites is 51NW1, the Piney Branch Quarry site first identified by William Holmes. Reanalysis of points collected by Holmes identified a series of Susquehanna Broadspear points made of rhyolite (Fiedel et al. 2008). In the same area, Fiedel et al. (2008) located small but intensively occupied base camps along Maddox Branch that contain Late Archaic period components. Site 51NW158 is perhaps the best example, having yielded a number of Halifax, Lamoka, Holmes, and Savannah River points. Quartz and quartzite dominate the debitage assemblage, although rhyolite is also well-represented. Inashima (1985) also identified a Vernon and Holmes or Bare Island point, suggesting the presence of a Late Archaic component, at 51NW79. Closer to the Potomac River, McNett (1972) identified a series of small side-notched and square-stemmed points, as well as Piscataway points, as evidence for a Late Archaic period occupation at Site 51NW22. Finally, Fletcher's Boathouse (51NW13), at the confluence of Rock Creek and the Potomac River, yielded Lamoka, Wading River, Savannah River, and Susquehanna Broadspear points, but no intact deposits dating to this period (Barse 2002).

**Early Woodland Period (1000 – 500 BC).** The Early Woodland period generally coincides with the Sub-Boreal climatic episode, an episode that approximates modern conditions although attenuated cycles of climatic change have been identified (Carbone 1976). Ceramic manufacture and increased sedentism traditionally mark the beginning of the Early Woodland period. The earliest types of ceramics found along the nearby Coastal Plain of Maryland are the steatite-tempered Marcey Creek and Selden Island wares, which are associated with fishtail-type points, including Orient and Dry Creek. The Marcey Creek and Selden Island wares were replaced by the sand- or crushed-quartz-tempered Accokeek wares. These ceramics are associated with Calvert and Rossville point types (Wesler et al. 1981).

Early Woodland settlement patterns were riverine-based and often located at the junction of freshwater and brackish streams. Smaller camps were established seasonally in areas where there was high potential for the exploitation of numerous and differing resources. Gardner (1982) has proposed that the settlement-subsistence system of this period included a series of base camps where populations aggregated to exploit seasonal resources. Groups occupying the base camps harvested anadromous fish in the spring and early summer and exploited estuarine resources in the fall and early winter. Barber (1991) argues for an increase in sedentism during this period, in part as a result of the stabilization of sea level that in turn created additional stable environments. These newly formed environmental zones could be exploited by Native American groups.

A number of sites with Early Woodland period components have been investigated in the District. Once again, a number of these sites are located in the Rock Creek/Potomac River locality. Inashima (1985) reports the recovery of Accokeek ceramics at Site 51NW79 while Fiedel et al. (2008) note the presence of this ceramic type at Sites 51NW51 and 51NW158 in Rock Creek Park. Site 51NW158, a large base camp along Maddox Branch, also yielded Marcey Creek and Seldon Island ceramics. The Peter House (51NW103) and Whitehurst West (51NW117W) sites, located in the Whitehurst Freeway vicinity, yielded Accokeek ceramics and a number of Early Woodland projectile point types (Knepper et al. 2006). Along the Potomac River, Orient Fishtail points were found at the Fletcher's Boathouse site (Barse 2002) while Susquehanna Broadspear and Drybrook-like points were identified in a collection from the Potomac Avenue site (McNett 1972). No intact Early Woodland deposits were found at any of these sites.

**Middle Woodland Period (500 BC – AD 1000).** A diversification of ceramic vessel sizes, forms, and styles of surface decoration characterizes the Middle Woodland period. The major ceramic type in the region was the shell-tempered Mockley type (characteristic of the Mockley phase), which evolved from the sand-tempered Popes Creek type (Barse and Beaugard 1994). Projectile point types associated with the Mockley phase are Fox Creek, Rossville, Selby Bay (knives), and Jack's Reef. The presence of non-local rhyolite, argillite, and jasper lithics at a few sites suggests that localized exchange networks may have operated between the Coastal Plain and areas in both western Maryland and at the New Jersey fall line (Barse and Beaugard 1994).

At this time, base-camp settlements located at freshwater/brackish water junctions, a common location for Early Woodland period camps, were abandoned in favor of broad floodplain sites where maximal resource exploitation of tidal and non-tidal aquatic resources was possible (Davis et al. 1997). Site size also increased during this period, and the larger Middle Woodland sites have been known to include pit storage features and shell middens. There is no substantial evidence of agriculture during this time.

More substantial artifact assemblages, and sites with intact deposits, have been found in the District dating to the Middle Woodland period. Once again, several of the most important sites are located in the Rock Creek/Potomac River locality. Sites 51NW158 and 51NW171, located along Maddox Branch and interpreted as base camps, have yielded Mockley and Albemarle ceramics and Selby Bay projectile points (Fiedel et al. 2008). Moving toward the Potomac River, one of the earliest of such sites recognized is the Potomac Avenue site (51NW22) (McNett 1972). The American University excavations uncovered a line of post molds and two small pit features which McNett (1972) interprets as a wall of a large structure and associated pit features dating to the Middle Woodland period. While no diagnostic artifacts were found in the post molds or pits, the preponderance of Middle Woodland artifacts at this site led the investigators to date the features to that time period (McNett 1972). Ceramics from the site include Popes Creek and Accokeek types. McNett (1972) suggests the site was a small fishing camp.

The nearby Fletcher's Boathouse site excavations yielded nine large circular pits, several smaller pits, and post molds, along with ceramics, lithics, and fire-cracked rock (Barse 2002). While the site yielded artifacts suggesting its occupation from the Early Archaic through the Middle Woodland periods, the features and most temporally diagnostic artifacts are attributed to the Middle Woodland period. The Middle Woodland ceramics include Albemarle, Popes Creek, and Mockley wares that represent the remains of four different jar forms, and Selby Bay, Rossville, Yadkin, and Piscataway projectile points. Lithic debris is dominated by late-stage reduction flakes, and quartz and quartzite are the most common materials used, although rhyolite was also recovered. The large pits, about eight feet in diameter and five feet deep, are refuse-filled storage pits. Two radiocarbon dates place the Middle Woodland occupation of 51NW13 at 100 BC. Barse (2002) suggests that this site represents repeated occupations by small Middle Woodland groups.

Also in the Rock Creek/Potomac River locality, Middle Woodland artifacts were found at the Peter House and Whitehurst West sites (Knepper et al. 2006). Mockley and Popes Creek ceramics and projectile points dating to the Middle Woodland period were found at the two sites. Two radiocarbon assays dating to the Middle Woodland period were also obtained from somewhat mixed deposits at the Peter House site (Knepper et al. 2006). Excavated during the same Whitehurst Freeway project, the nearby Ramp3 site has yielded perhaps the single-most important Middle Woodland feature in the District (Knepper et al. 2006). An intact Middle Woodland oval pit feature located at that site contained a cremation burial and a large number of grave goods, including Popes Creek ceramics. A radiocarbon assay securely dates the feature to the Middle Woodland period. The remains were of a female aged 40 years, and the grave goods included an elaborate incised antler comb, antler discs, perforated sharks teeth, groundstone pendants, a wooden bead, and a phallic effigy. Knepper et al. (2006) suggest that the artifacts and burial have similarities with those of the Kipp Island phase of New York and Ontario. The artifacts found with the Ramp3 burial are interpreted to indicate external influences on Middle Woodland populations in the Coastal Plain region, although whether these influences are due to diffusion or population movement is not known. The authors favor a movement of proto-Algonquian speakers from the north into the Middle Atlantic region during the Middle Woodland period.

**Late Woodland Period (AD 900 – 1600).** The single most important, and common, element across much of eastern North America during the Late Woodland period was the adoption of agriculturally based subsistence systems (Anderson and Mainfort 2002). In the Mid-Atlantic region, the establishment of a system of stable agriculture during the Late Woodland period led to the development of sedentary floodplain village communities, some of which were fortified by palisades (Turner 1992). Kavanagh (1983) notes four major changes that occurred during the Late Woodland period in the Monocacy River valley: the appearance of large, permanent or semipermanent villages made possible by the cultivation of maize, beans, and squash; the presence of ceramics at numerous sites, including open camps and habitations; an intensification of riverine orientation through time; and a shift towards the use of local lithic resources, implying a breakdown in procurement networks. Hunting, gathering, and fishing were still practiced but to a lesser extent. Predominant Coastal Plain ceramics of the period include the fabric-impressed Townsend series and the cord-marked Potomac Creek series. Ceramic decoration and embellishment appear to be very important at this time. Triangular projectile points are also associated with the Late Woodland period.

After AD 1500 there was an increase in social and political activity among native tribes in Maryland and Virginia, and it has been suggested that an alliance of coastal plain Algonquian groups had formed prior to European contact (Potter 1993). There has been considerable debate among researchers as to the nature of Late Woodland social organization in this region prior to AD 1500. For instance, Turner (1992) characterizes the socio-political organization of groups settled on the Coastal Plain as being ranked, while Hantman and Klein (1992) indicate that, at least for the Piedmont region, archeologists have interpreted Late Woodland societies as ranging from egalitarian, to temporary hierarchies, to chiefdoms. With the transition to the Contact period, many of these issues are resolved.

Similar to the Middle Woodland period, a number of Late Woodland sites that contain intact deposits have been recently identified in the Rock Creek/Potomac River locality. All three sites investigated by Knepper et al. (2006) for the Whitehurst Freeway project yielded Late Woodland artifacts. Fire-cracked rock features associated with Townsend series ceramics were found at both the Peter House and Whitehurst West sites. Small amounts of Potomac Creek ceramics and Levanna and triangular points were also recovered from these features. One fire-cracked-rock feature at Peter House yielded a radiocarbon assay that dates to the late Woodland period. At all three of the Whitehurst Freeway sites, the upper mixed midden-like levels were also

dominated by Late Woodland artifacts. Fiedel et al. (2008) also located Late Woodland period artifacts at Site 51NW158, a base camp site along Maddox Branch. Materials from this site include Keyser, Potomac Creek, and Rappahannock incised ceramics and Levanna projectile points.

### **Contact Period (AD 1600 – ca. 1650)**

At the beginning of the seventeenth century, what is now Washington DC was populated by members of the Conoy group of the Necostins, a tribe visited by English colonists from Jamestown beginning in 1608 (Feest 1978) (**Figure 23**). This group was described as being few in number with their main settlements located close to rivers by John Smith (1946). Individual houses were placed within the garden or field plots and the group moved seasonally to upland areas and near the heads of rivers for hunting during cold weather months (Smith 1946). Inashima (1985) indicates that it is likely that Smith's 1608 journey took him past the mouth of Rock Creek as Smith located the village of Tauxenent in that general vicinity. Smith also depicted to the north on the west bank of the Potomac River the villages of Namassingakent, Assaomeck, and Namoraughquend and on the east bank the villages of Tessianmatuck, Nacotchtank, and five unnamed villages.

Increasingly, the relationship between the English and Necostins became based on trade, with trade in food and beaver pelts especially important. The Native Americans in turn received metal items such as bells, hatchets, and knives, as well as beads and cloth items, including stockings, shirts, and coats (Inashima 1985). Evidently, Nacotchtank on the Anacostia River was a major center where hundreds would congregate, as trade was in part based on control by the Necostins of beaver pelts from the area. In 1622, a party of colonists from Jamestown, in alliance with other nearby tribes, plundered and burned Nacotchtank. An attempted return to Nacotchtank in 1623 by the Jamestown colonists, ostensibly to trade, was thwarted when the party was ambushed. Henry Fleet, a colonist taken prisoner during the 1623 conflict, was held captive for five years. After escaping, Fleet returned to Nacotchtank in 1632, marking the last mention of this village. Fiedel et al. (2008) suggest that the Necostin merged with the Piscataway by 1694, as evidenced by the mention of the presence of an Anacostin king with Piscataway leaders during a council held at St. Mary's City.

### **Historic Period (AD 1650 – ca. 1950)**

Bedell et al. (2008) has provided an overview of the history of Rock Creek Park. The Rock Creek area was lightly populated through the mid-eighteenth century. Prior to that time, large patents had been granted to absentee owners, who in turn rented the land to tenants. After 1750, when Georgetown was established at the mouth of Rock Creek, the upper reaches of the creek became an ideal power source for mills that ground grains grown on nearby farms and plantations to supply the growing local communities. By 1795, when Washington, DC was established, it is estimated that over 100 people lived within Rock Creek Valley, inclusive of tenants, slaves, owners of small farms, and a few planters who owned larger plantations, often comprising several hundred acres. While population of the area increased, this general land-use and pattern continued to the Civil War. During the Civil War, forts such as Forts Stevens and DeRussy were constructed near Rock Creek Valley to protect Washington, DC. Confederate General Jubal Early's 1864 raid included a failed foray into Rock Creek Valley. After the Civil War, Washington, DC grew in population and this is reflected in the number of residences depicted along Rock Creek on late nineteenth century maps. In response to this increased urban population, Rock Creek Park was established during the 1890s by Congress as an urban refuge. The Rock Creek Park Commission was established to purchase property and manage the park, with the last tenants remaining into the 1900s.

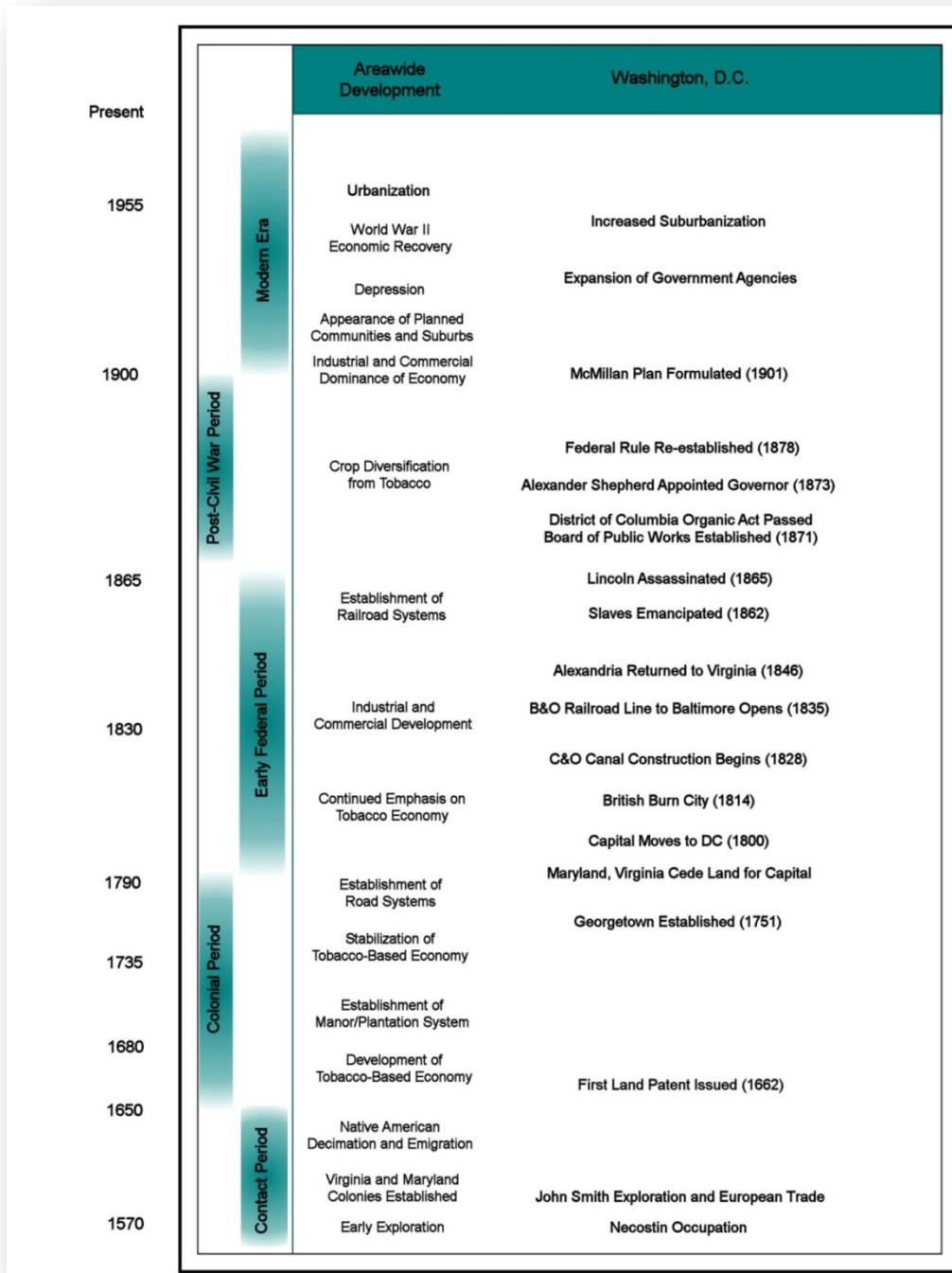


Figure 23. Historic Period Chronology of the District of Columbia Area

### 3.8.2. OVERVIEW OF PREVIOUS INVESTIGATIONS

The review of previously conducted archeological surveys indicated that much of the current Rock Creek Park Multi-Use Trail Rehabilitation APE has been subjected to varying levels of archeological examination, including intensive archival research that lacked field investigations, low intensity field investigations

typically characterized as archeological reconnaissance surveys, and intensive shovel test pit archeological survey. Archeological surveys conducted within the Rock Creek Park Multi-Use Trail Rehabilitation APE are depicted in **Figure 24**. A few portions of the Rock Creek Park Multi-Use Trail Rehabilitation APE, mainly in the south half of the project area, have not been investigated at any one of these three levels of intensity.

While a number of small-scale archeological investigations have been undertaken within or in the vicinity of Rock Creek Park and the Rock Creek Park multi-use trail, the larger projects include the early investigations conducted by W. H. Holmes during the late nineteenth century, the Section 110-based investigations conducted by the Louis Berger Group for NPS (Fiedel et al. 2008), a survey of a number of localities along Rock Creek by NPS prior to erosion control and bank stabilization projects (Inashima 1985), and the intensive archival review of an area south of Connecticut Avenue for the Georgetown Historic District conducted by Robinson & Associates, Inc. (1993). **Table 5** lists the projects conducted within the Rock Creek Park Multi-Use Trail Rehabilitation APE. For ease of discussion, the study area has been divided into five sections based on major roads or stream confluences that intersect the trail. From south to north, the sections begin with Pennsylvania Avenue to P Street, P Street to Connecticut Avenue, Connecticut Avenue to the Rock Creek- Piney Branch confluence, Piney Branch Parkway to the east, and finally the Rock Creek-Piney Branch confluence northward to near Ridge Road. The extent of archeological coverage along the Rock Creek Park multi-use trail is also depicted in **Figure 24**. The nature and results of each of the previous archeological projects conducted along the Rock Creek Park Multi-Use Trail Rehabilitation APE is discussed in the following sections by trail section. First, those archeological projects conducted within the section are discussed, followed by a discussion of the archeological sites identified by the DC HPO site file review as being located within the 100 foot corridor paralleling the trail. This information is presented in an abbreviated form in **Table 5**.

Associated with the Berger project, a geo-archeological evaluation of Rock Creek Park was conducted. Wagner (2008: Appendix A) divided the park into three landforms: uplands, floodplains, and terraces, and evaluated each for site potential and likelihood of site burial. Wagner (2008) indicates that the upland surficial soils predate the arrival of human populations in the New World, suggesting that there is little potential for deeply buried archeological sites in these topographic settings. Artifacts should be confined to near surface soils in upland settings. Wagner's (2008) analysis of currently identified floodplain locations within Rock Creek Park suggests that floodplains, defined as unstable surfaces subject to frequent flooding and reworking of deposits, are a relatively recent historic phenomenon. The historic clearing of the watershed increased runoff and the severity and frequency of flooding. This resulted not only in the creation of floodplains, but in the burial of earlier terrace formations. In essence, while the upper soil horizons of floodplain formations have little potential for the presence of archeological sites due to reworking of deposits and the relatively recent formation of these landforms, below the upper soil horizons are older, buried terrace formations that often do possess a potential for archeological resources. Field investigations identified two terrace formations within Rock Creek Park. One formation is restricted to the confluence of Rock Creek and Fenwick Branch (Wagner 2008). The second terrace formation is more widespread within Rock Creek Park (Wagner 2008). This formation lies approximately 1.5 m to 2.5 m in elevation above Rock Creek. In areas near the National Zoo, the buried terrace formation was found beneath 1.27 m of alluvial deposits. Wagner (2008) suggests that these formations, which may be associated with the Croom and Sassafras soil types, have a high potential for the presence of precontact Native American archeological sites.



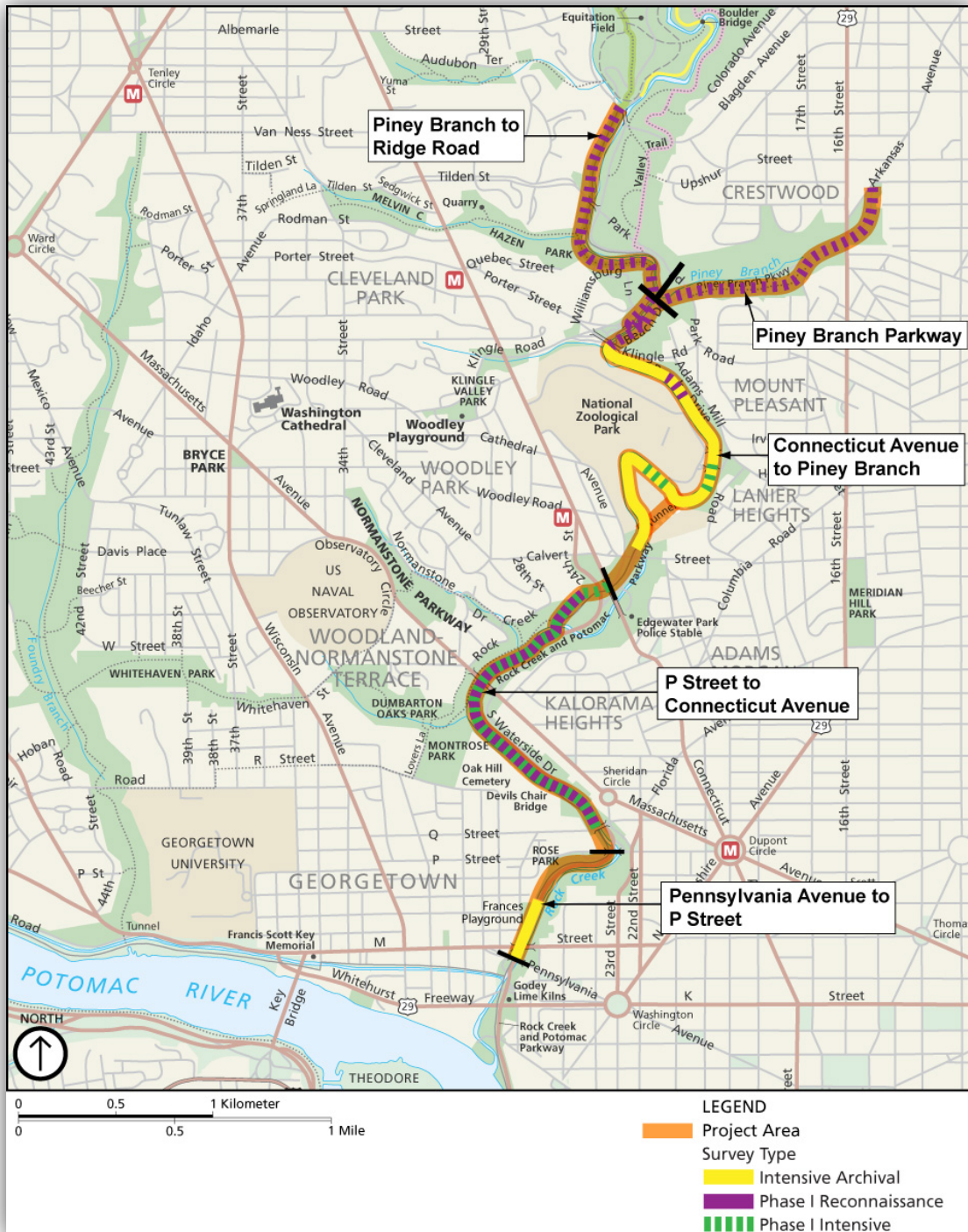


Figure 24. Locations and Intensity of Archeological Investigations along the Rock Creek Park Multi-Use Trail Rehabilitation APE

**Table 5. Archeological Surveys Conducted within the Rock Creek Park Multi-Use Trail Rehabilitation APE**

<b>SURVEY AREA/PROJECT NAME</b>	<b>PROJECT TYPE</b>	<b>CITATION</b>	<b>SITES</b>
<b>Pennsylvania Avenue to P Street</b>			
Crosstown Watermain	Intensive Archival	Fehr 1981	None
Eastern Georgetown Historic District	Intensive Archival	Robinson & Associates 1993	None
<b>P Street to Connecticut Avenue</b>			
Eastern Georgetown Historic District	Intensive Archival	Robinson & Associates 1993	None
Rock Creek Park Erosion Control	Phase I Reconnaissance	Inashima 1985	None
Berger Rock Creek Park	Phase I Reconnaissance/Intensive	Fiedel et al. 2008	51NW195
<b>Connecticut Avenue to Piney Branch</b>			
Berger Rock Creek Park	Phase I Reconnaissance/Intensive	Fiedel et al. 2008	None
Rock Creek Park Erosion Control	Phase I Reconnaissance	Inashima 1985	None
Rock Creek Fish Passages	Phase I Reconnaissance	Michaud et al. 2002	None
National Zoo Master Plan	Intensive Archival	Ayers/Saint/Gross and John Milner Associates, Inc. 2008	None
National Zoo Water Main	Phase I Intensive	Holland et al. 2009	None
National Zoo Aquatics and Amazonia Habitat	Phase I Reconnaissance	Myler and Dent 1990	None
<b>Piney Branch Parkway</b>			
Berger Rock Creek Park	Phase I Reconnaissance/Intensive	Fiedel et al. 2008	51NW001
Rock Creek Park Erosion Control	Phase I Reconnaissance	Inashima 1985	None
<b>Piney Branch to Ridge Road</b>			
Rock Creek Park Erosion Control	Phase I Reconnaissance	Inashima 1985	51NW078
Bladgen Mill Field School	Phase I/II	Salwen and Mayer 1981	51NW008
Berger Rock Creek Park	Phase I Reconnaissance/Intensive	Fiedel et al. 2008	51NW154 51NW156 51NW184 51NW185

**Pennsylvania Avenue to P Street**

Two sections within the Pennsylvania Avenue to P Street portion of the Rock Creek Park multi-use trail have been investigated by intensive archival research. Intensive archival research conducted by Robinson & Associates, Inc. (1993) included the area from Pennsylvania Avenue to near M Street as part of the Georgetown Historic District project. The report included an overview of the precontact Native American cultural chronology for the region and an inventory of archeological projects that had been undertaken in Georgetown through 1993. Each square within the Georgetown Historic District was then inventoried for the

presence of, or potential for, archeological resources. Archeological resource potential was determined through a review of historic maps and known site locations. In summary, Robinson & Associates, Inc. (1993) concluded that all of the Georgetown Historic District has a high potential for Historic period archeological resources and a moderate to high potential for precontact Native American resources in those areas not disturbed by twentieth century construction. Rock Creek is identified as an attractive location for precontact Native American settlement.

Fehr (1981) conducted an intensive archival review of areas to the east and west of Rock Creek between M Street and N Street for the Crosstown Watermain project. Known as Parcel 2, a park west of Rock Creek was slated for use as a construction staging area. Fehr (1981) indicates that portions of the park had contained a number of residential structures constructed after 1861. It was recommended that field testing be conducted to determine the nature and extent of resources present. Parcel 3 consisted of a playground east of Rock Creek, also identified as a potential construction staging area but also scheduled to be impacted by installation of the water main. Similarly, Fehr (1981) indicates that portions of the playground contained residential structures minimally constructed by 1887. It was recommended that field testing be conducted to determine the nature and extent of resources present. Evidently, no additional archeological investigations were undertaken in either location.

No intensive archeological field or archival investigations have been conducted for that part of the Rock Creek Park multi-use trail between N Street and P Street. Similarly, no intensive archeological field investigations have been conducted within the entire Pennsylvania Avenue to P Street portion of the Rock Creek Park Multi-Use Trail Rehabilitation APE. As a result, no archeological sites have been identified within this section of the Rock Creek Park Multi-Use Trail Rehabilitation APE.

### **P Street to Connecticut Avenue**

Intensive archival research for the Georgetown Historic District, as summarized for the Pennsylvania Avenue to P Street section, was conducted by Robinson & Associates, Inc. (1993) for the area from P Street to approximately Q Street. To the north, as part of the Section 110 Rock Creek Park survey sponsored by the NPS, that area from Q Street to Connecticut Avenue was surveyed by the Louis Berger Group as part of the Rock Creek Park survey (Fiedel et al. 2008). The Rock Creek Park survey, conducted between 2002 and 2006, employed various field methods, including pedestrian walkover and shovel test pit excavations at varying levels of intensity, including 10 m, 20 m, and judgmental intervals. The survey resulted in the location of 51 newly identified sites and 11 previously identified sites. These sites include precontact Native American quarries and camps and Historic period mills, tenancies, farmsteads, and Civil War-related sites. However, additional unrecorded sites are likely present within areas not investigated or investigated solely by pedestrian reconnaissance during this investigation. Investigation techniques used during the Berger project within the P Street to Connecticut Avenue section included a pedestrian reconnaissance walkover along trails and the excavation of shovel test pits in selected areas. These efforts resulted in the identification of one archeological site, 51NW195, within this section of the Rock Creek Park multi-use trail as discussed below.

The final archeological investigation undertaken in this section of the Rock Creek Park Multi-Use Trail Rehabilitation APE was conducted by NPS during the mid-1980s prior to an erosion control and bank stabilization project (Inashima 1985). Inashima (1985) investigated eight locations within this section (Locations 25 through 32) by the excavation of 45-x-45 cm test units. A total of 55 such units were excavated and no archeological sites were identified.

Two archeological sites have been recorded in this section of the Rock Creek Park multi-use trail. Site **51NW044** is a precontact Native American site located east of Oak Hill Cemetery. Little information is available on this site, which DC HPO indicates has been destroyed. The second archeological site is **51NW195**, also known as the Massachusetts Avenue Quarry Site. Fiedel et al. (2008) describe this site as an historic quarry characterized by an approximately 200-foot concave length of exposed rock that creates a 25-foot high wall. This site has not been evaluated for listing in the NRHP. Archeological sites located within 100 feet of the Rock Creek Park multi-use trail are presented in **Table 6**.

**Table 6. Archeological Sites Located within 100 feet of the Rock Creek Park Multi-Use Trail**

SITE NUMBER	SITE NAME	SITE TYPE	TIME PERIOD	NRHP STATUS
<b>P Street to Connecticut Avenue</b>				
51NW044	None	Unidentified	Precontact Native American	Not Evaluated
51NW195	Massachusetts Avenue Quarry	Quarry	19 <sup>th</sup> century	Not Evaluated
<b>Connecticut Avenue to Piney Branch</b>				
P24	Holmes Zoo	Unidentified	Precontact Native American	Not Evaluated
H27	Columbia Mill	Mill	19 <sup>th</sup> Century	Not Evaluated
<b>Piney Branch Parkway</b>				
51NW008	Bladgen Mill	Mill	19 <sup>th</sup> century	Not Evaluated
51NW078	None	Unidentified	Precontact Native American	Not Evaluated
51NW154	Peirce Mill	Mill and Unidentified prehistoric	Precontact Native American; 18 <sup>th</sup> -20 <sup>th</sup> century	Not Evaluated
51NW156	Linnaean Hill Greenhouse	Farmstead	19 <sup>th</sup> century	Not Evaluated
51NW184	J.W. Willis Site	Tenancy	19 <sup>th</sup> century	Not Evaluated
51NW185	Whitby Site	Tenancy	19 <sup>th</sup> century	Eligible
51NW001	Piney Branch Quarry	Lithic Quarry	Late Archaic	Listed

**Connecticut Avenue to Piney Branch**

A number of archeological investigations, of varying levels of intensity, have been conducted in the Connecticut Avenue to the Piney Branch Parkway trail section of the Rock Creek Park Multi-Use Trail Rehabilitation APE. Three of these projects were conducted at the National Zoo. The first was a survey of a new exhibit area located along an intermittent tributary of Rock Creek (Myler and Dent 1990). Shovel test pits were excavated at seven m intervals across the project area. Soils were found to be disturbed and no archeological resources were identified. Two of the larger projects included intensive archival research as part of the master planning process for the National Zoo (Ayers/Saint/Gross and John Milner Associates, Inc. 2008) and an archeological survey of a proposed water main corridor for the Lower Zoo (Holland et al. 2009). The

research conducted as part of the master planning process included a review of previously located archeological sites within and adjacent to Rock Creek Valley as well as historic documents and maps. A reconnaissance of the National Zoo property was then conducted to identify known or potential archeological site locations. This reconnaissance led to the identification of 16 locations thought to have a high potential for the presence of archeological resources. Nine of these locations are within Rock Creek Valley and one is located on a bench above the creek (Ayers/Saint/Gross and John Milner Associates, Inc. 2008). It is predicted that five of the locations could be precontact Native American quarries while one is the location of the Historic period Columbia Mill. Subsequently, a shovel test pit survey was conducted for a water main replacement project within National Zoo property (Holland et al. 2009). A total of 44 shovel test pits were excavated within areas of high potential along Rock Creek. All shovel test pits were described as having encountered disturbed soil strata.

Three other archeological investigations not associated with the National Zoo have been conducted within the Connecticut Avenue to Piney Branch Parkway trail section. As part of the Section 110 Rock Creek Park survey sponsored by the NPS and discussed in the previous section, that area north of the National Zoo property to confluence of Rock Creek and Piney Branch was surveyed by the Louis Berger Group (Fiedel et al. 2008). Investigation techniques consisted of a pedestrian reconnaissance walkover along trails, and no sites were identified.

Inashima (1985) indicates that areas on the east and west banks of Rock Creek, between the Klinge Road bridge to the north and the Porter Street bridge to the south, were investigated as Location 24 during the erosion control and bank stabilization project. Due to prior disturbance associated with the construction of these bridges, no subsurface testing was done (Inashima 1985). Finally, Michaud et al. (2002) discuss the results of archeological field investigations at two locations within the Connecticut Avenue to Piney Branch Parkway trail section associated with a project to remove artificial blockages along Rock Creek. Location RC-1, near the Duke Ellington Memorial Bridge, was not investigated by subsurface testing due to prior disturbance (Michaud et al. 2002). Location R-2, adjacent to the National Zoo, was also not investigated by subsurface testing due to prior disturbance (Michaud et al. 2002).

Two archeological sites have been posited to be present within the Connecticut Avenue to Piney Branch Parkway trail section of the Rock Creek Park Multi-Use Trail Rehabilitation APE. DC HPO has given these sites the temporary field numbers **P24** and **H27**. Site P24 is a precontact Native American site identified by W. H. Holmes (1897) on National Zoo property south of Beach Drive. This site has not been relocated since its initial identification. Site H27 is the location of the Columbia or Adams Mill as depicted on historic maps. These maps indicate that the mill was located on the left bank of Rock Creek in the vicinity of the National Zoo. This site, too, has not been located.

### **Piney Branch Parkway to Ridge Road**

Similar to areas to the south, this section of the Rock Creek Park Multi-Use Trail Rehabilitation APE has been investigated at varying degrees of intensity as part of the Berger Section 110 Rock Creek Park survey sponsored by the NPS (Fiedel et al. 2008). Investigation techniques included a pedestrian reconnaissance walkover along trails and the excavation of shovel test pits in selected areas. Four Historic period archeological sites were identified during the Berger survey of this portion of the trail.

**Site 51NW154** consists of the area in the vicinity of Peirce Mill. The cornerstone of the standing mill indicates construction in 1829, although the Samuel Beall's Mill, perhaps dating as early as 1760, may also have stood at this location. Artifacts dating from the eighteenth through the twentieth centuries were found during the Berger site survey. However, the archeological field investigation suggests that much of the area surrounding the extant mill structure has been disturbed (Fiedel et al. 2008). While the site is unevaluated for listing in the NRHP, Fiedel et al. (2008) indicate that the entire complex is "almost certainly" eligible. Additional testing has been done as part of the Peirce Mill project (2010-2011). Sections of the 18<sup>th</sup>-century headrace have been identified as part of this effort.

**Site 51NW156**, the Linnaean Hill Greenhouse site, is associated with the nineteenth century mansion known as Linnaean Hill (Bedell et al. 2008). This site has not been evaluated for listing in the NRHP.

**Site 51NW184**, known as the J.W. Willis Site, is the location of a 1890s farmstead or residence near the confluence of Broad Branch and Rock Creek. The site area, approximately 0.14 acres, includes what appear to be structural remains as well as nails, bone, bottle glass, and ceramics. Historic records indicate that the Willis property totaled 5.5 acres and contained a house and a greenhouse. The lack of a structure depicted at this location on historic maps led Fiedel et al. (2008) to suggest that the property was occupied for a short period of time. This site has not been evaluated for listing in the NRHP (Fiedel et al. 2008).

**Site 51NW185**, also known as the Sarah Whitby Site, is the location of the residence of the Whitby family, tenants within Rock Creek Valley and park for decades (Fiedel et al. 2008). Investigations consisted of metal detection, shovel test pits, and six 1 meter square test units in and adjacent to a cellar depression. Artifacts reflected an occupation between 1880 and 1900 and included ceramics, architectural materials, bottle glass, and personal items such as buttons, reflective of Sarah Whitby's occupation as a laundress (Fiedel et al. 2008). Two pieces of Colonoware, often associated with enslaved populations, were also recovered. Fiedel et al. (2008) recommended that this site is eligible for listing in the NRHP under Criterion D based on its association with nineteenth century African-American tenancies.

Inashima (1985) presents the results of investigations at Locations 20 and 21 prior to the Rock Creek Park erosion control and bank stabilization efforts conducted during the mid-1980s. Location 20 was divided into three sections: north, west, and east. The north section was determined to consist of fill overlaying bedrock. In the west section, fill was present over intact soil strata, although due to the thickness of the fill, the intact strata were not investigated. The east section also contains fill over intact soil strata. Fill deposits from all three areas yielded nineteenth and twentieth century artifacts as well as precontact Native American lithics, and the east section of Location 20 was recorded as **Site 51NW078**. A total of 36 test units, ranging from 45 cm to 1 m square, were excavated in the East section. Precontact Native American artifacts recovered from this area include a biface, chipping debris, fire-cracked rock, a hammerstone, scrapers, utilized flakes, and a discoidal (Inashima 1985). A total of 33 artifacts were recovered. Inashima (1985) suggests that Site 51NW078 represents a transitory encampment centered on the acquisition of cobbles from the creek and the production of lithic tools. At Location 21, there was no subsurface investigation due to prior disturbance.

Finally, **Site 51NW008**, the Bladgen Mill and Quarry Site, is a nineteenth century bone and flour mill that was investigated during a 1981 New York University archeological field school. The investigations were reported in a September 18, 1981 two-page letter from Bert Salwen and Susan Mayer to the NPS. Test excavations located a structural wall and floor associated with the bone mill and a trace of a raceway that was shared by the bone and flour mills. Aside from bone, nineteenth and twentieth century glass and ceramics were recovered. Based on 2011 consultation with DC HPO, this site has not been evaluated for listing in the NRHP.

### **Piney Branch Parkway**

The Piney Branch Parkway trail section, located from the confluence of Piney Branch and Rock Creek to the southwest to near Taylor Street NW in the northeast, has been investigated as part of the Berger Section 110 Rock Creek Park survey sponsored by the NPS (Fiedel et al. 2008) and in one location by the mid-1980s NPS erosion control and bank stabilization project. Inashima (1985) has recommended that any construction-related activities in the area be monitored due to the proximity of the Piney Branch Quarry site (51NW001), located north of Piney Branch. In addition, Fiedel et al. (2008) characterize 51NW001 as the most important archeological site in Rock Creek Park. This site was initially investigated by William Henry Holmes of the Smithsonian Institution during 1889 and 1890. Holmes excavated a number of trenches that distinguished discrete episodes of artifact deposition in a stratified sequence, described by Fiedel et al. (2008) as consisting of “great piles of quartzite cobbles and chipping debris.” Fiedel et al. (2008) examined the Holmes collections and suggest that a wide range of quarrying and tool making activities were conducted at this site. Temporally diagnostic stone tools suggest that much of the material dates to the Late Archaic period. A walkover reconnaissance of the site by Berger field crews indicates that the site remains much as it had been at the conclusion of the Holmes excavations, although an apartment building has apparently destroyed a few small quarry areas. This site is listed in the NRHP.

## **3.9. VISITOR USE AND EXPERIENCE**

Rock Creek Park annually hosts millions of recreational visitors (approximately 2.1 million in 2009) who visit the park to enjoy its many natural and cultural attributes (NPS 2010). Over the last three decades, park visitation increased by over 1.5 million (NPS 2010). Visitors are primarily residents from the District and surrounding areas. However, because Rock Creek Park is a national park, visitors come from all over the country to experience its rich resources and public amenities (**Figure 25**).

Rock Creek Park provides a scenic natural setting in an otherwise urban environment. The park offers a variety of views, from rugged expanses of mature, second-growth forest with little recent human disturbance to landscapes from the rural past. The park, located within the District of Columbia, provides access to all visitors in accordance with governing laws, regulations, and policies. Mobility-impaired visitors can currently access all facilities within the park by automobile (NPS 2007). According to the 2007 Rock Creek Park GMP, the purposes of the park include providing opportunities for safe recreation, connecting Rock Creek Park with the National Zoo, preserving forests and natural scenery, preventing pollution and obstruction of Rock Creek, and providing visitors the opportunity to experience and understand the park’s natural and cultural resources and the need for those resources to be preserved (NPS 2010).

Park recreational amenities and facilities include paved multi-use trails for nonmotorized activities such as jogging, bicycling, inline skating, etc., bird watching, hiking and horseback riding trails, canoeing and kayaking, picnic areas, tennis courts, sports fields, a golf course, interpretive centers and programs at the Rock Creek Nature Center and Planetarium, Peirce Mill complex, and Old Stone House, the Rock Creek Horse Center for public horseback riding and horse boarding, the Carter Barron Amphitheater, which offers summer musical and theatrical performances, and two community gardens (NPS 2007).



**Figure 25. Visitors Enjoying the Rock Creek Park Multi-Use Trail**

Many visitors use the trail within the study area to get from point to point, and back. However, some visitors use the trail to access destinations such as the historic Peirce Mill and Barn, the National Zoo, Rose Park, and other connecting trails that lead to nearby memorials, monuments, and museums (NPS 2007). A study of visitor use within Rock Creek Park showed that the park's trail system is the most used amenity for recreational activities including walking/hiking/jogging (44 percent), bicycling (18 percent), in-line skating (6 percent), and dog walking (17 percent) (NPS 2007). Whether taking in the scenery, commuting or exercising; runners, walkers, skaters, and bikers often compete for space along the trail system.

*The trail in Rose Park is used for recreational purposes and for connectivity to Georgetown. According to trail user counts performed on May 5, 2011, the trail at Rose Park is used for activities such as walking (69 percent), running (11 percent), bicycling (10 percent), and other uses (10 percent). The trail provides connectivity between the surrounding neighborhoods and the amenities of Rose Park, such as the tot-lot and sports facilities.*

During the weekdays, Beach Drive is used as a commuter route for those traveling to and from downtown Washington, DC. In 2009, 12.4 million non-recreational visitors were estimated. Non-recreational visits, including those from commuters, are distributed evenly throughout the year, with an average of approximately 25 percent of total visits occurring each season (NPS 2010). Recreational visits to Rock Creek Park occur fairly evenly over the warmer months of spring, summer, and early fall, and drop slightly during the winter. In 2009, an average of 25 percent of annual visits occurred during spring, 31 percent occurred during summer, 25 percent occurred during fall, and 19 percent occur during winter (NPS 2010).

Sections of the Rock Creek Park multi-use trail are not aesthetically pleasing due to moderate to advanced deterioration including cracking and rutting of pavement, ponding of water following storm events, roots disrupting the trail surface *and* areas of erosion. A 65-foot section of stone masonry wall along the Piney Branch Parkway has collapsed, leaving debris along the stream bank and pulling away some of the pavement along the trail. Additionally, social trails have destroyed vegetation in some locations within Rock Creek Park and Rose Park.



### 3.10. HUMAN HEALTH AND SAFETY

Providing high quality opportunities for trail users to experience and enjoy the park and trail in a safe manner is of utmost importance to the NPS *and FHWA*. Promoting a safe and healthy environment for workers and park visitors is listed as a goal in the NPS 2007 *Centennial Strategy for Rock Creek Park* (NPS 2007b). Any recreational or commercial activity that harms the safety of users or that damages the natural and cultural resources within the park is illegal and punishable by law.

Since the original construction of the Rock Creek Park multi-use trail, natural processes have caused cracking and heaving of the trail surface. Due to the uneven and cracked pavement throughout the trail, trail users experience slip, trip and fall hazards. Additionally, the original construction of the Rock Creek Park multi-use trail varies in width from less than six feet to 10 feet. The Rose Park trail varies from four to six feet. Minimal trail widths compromise safety especially in areas with limited sight lines, grade changes, curves and approaches that do not meet current guidelines for multi-use trails. Multi user trail groups (runners, skater, walkers, and bikers) compete for this limited space along the trail, increasing the risk of collisions and accidents. *Trail users are separated from children using the Rose Park tot-lot by chain-link fencing that opens away from the trail.*

The majority of the trail within the project area is separated by a buffer (grass, trees, or guardrail) from Beach Drive and Rock Creek and Potomac Parkway. However, many transportation access points still intersect the trail presenting the potential for conflict. Vehicular crossings of the trail occur at Broad Branch Road, Tilden Street (Peirce Mill), Porter Street, the National Zoo east entrance, Shoreham Drive, and the P Street ramp. Many of these roadways are heavily used, especially during peak commuting hours. The trail crossings are typically marked with striping but some occur in areas marked by poor sight lines, grade changes, and curves that create an unsafe crossing situation for trail users.

### 3.11. PARK OPERATIONS AND MANAGEMENT

Maintenance and operation of the trail falls under NPS jurisdiction. According to NPS, trails are to be managed in a way that reduces conflict with automobiles and incompatible uses; allows for a satisfying park experience; allows accessibility to the greatest number of people; and protects park resources (NPS 2006). *Along with the Rock Creek Park multi-use trail, the NPS operates and maintains the trail in Rose Park.*

The park and trail are open to the public between the hours of sunrise and sunset, with the exception of vehicular traffic on park roads. The Peirce Mill and Barn, located adjacent to the project area, is open on weekends 12 pm to 4 pm, closed on federal holidays. Picnic areas adjacent to the project area are either open on a first come, first serve basis or by reservation (36 CFR).

To ensure cost effectiveness, maintenance of NPS facilities is handled in a preventive and rehabilitative manner (NPS 2006). Maintenance activities are completed in a way that preserves the surrounding natural environment with minimal effect on public uses. Crews mow grass and clear and trim brush adjacent to the trail. During winter months, snow removal occurs in parking areas. Spot improvements to the trail surface continue however, maintenance on a larger scale has not been completed. The current condition of the trail surface is in need of resurfacing in many areas.

## 3.12. TRAFFIC AND TRANSPORTATION

### 3.12.1. TRAIL USE AND CONNECTIVITY

*The Rock Creek Park multi-use trail is a north/south trail that runs parallel to Beach Drive and Rock Creek and Potomac Parkway on the west side. The trail lacks connectivity to the overall bicycle and pedestrian network within the District, thereby providing limited connectivity to Rock Creek Park from neighborhoods and points of interest to the east. In many locations along the trail, network gaps exist forcing users to traverse heavily traveled roadways. These gaps create traffic safety concerns for pedestrians and bicyclists as they compete with vehicular traffic. Connectivity to bicycle and pedestrian facilities is imperative to the successful movement of people living and commuting in and around an urban area.*

*There are seven access points to the Rock Creek Park multi-use trail within the project area. Three of these access points include parking areas for vehicles, one of which is located at the National Zoo east entrance. While there are multiple non-vehicular access points to the trail, many are unmarked locations, social footpaths, on-road bicycle routes and sidewalks. Parkwide, more than half of visitors arrive by private vehicle while the majority of the other half arrive from walking or biking (NPS 2007).*

*At the north end of the project limits, the Rock Creek Park multi-use trail connects to an on-road signed bike route along Beach Drive. Users can access the trail via the existing trail to the north or by vehicle at the intersection of Beach Drive and Broad Branch Road. Trail users connecting from the north must compete with vehicular traffic until they reach the trail just south of Broad Branch Road and Beach Drive intersection. At this intersection, trail users must traverse the intersection to continue south along the trail. No sidewalks or designated bicycle lanes are located on Broad Branch Road. The Broad Branch/Grove 2 North parking area is situated at the intersection of Broad Branch Road and Beach Drive. South of this location, trail access is provided at the Peirce Mill and Barn location via Tilden Street. A parking lot is located at the Peirce Mill and Barn with two other lots nearby. Designated bicycle lanes are located on Tilden Street which connects the trail to sidewalks and an undesignated bicycle route on Connecticut Avenue to the west. A high volume of vehicular traffic competes with a high volume of trail users at this centrally located trail access point. A narrow, unmarked, unpaved trail along Piney Branch Parkway provides access to the trail south of the Peirce Mill location*

Users can *also* access the **Rock Creek Park multi-use** trail at the east entrance of the National Zoo located at the intersection of National Zoo Drive, NW and Rock Creek and Potomac Parkway, NW. The trail crosses the entrance at grade and is marked by striping. Bicyclist using the designated bike lanes on Harvard Street, east of the National Zoo entrance, can access the trail by using the National Zoo's bridge that connects to Jewett Street, NW. The National Zoo's bridge and east entrance are closed to users when the National Zoo is closed.

*The Rock Creek Park multi-use trail passes under the Porter Street, NW and Klinge Road, NW ramps. A trail tie-in is proposed at this location as part of the Klinge Valley Trail project (DDOT 2010b). The tie-in would connect the Rock Creek Park multi-use trail with a new trail along Klinge Valley and points west. Connection to the east side of Beach Drive and Rock Creek and Potomac Parkway can be made near the east entrance to the National Zoo. Designated bicycle lanes run along Harvard Street where signs direct cyclists to use the National Zoo's bridge over the parkway to connect to Jewett Street, NW. Connection to the trail can be made at National Zoo Drive, NW.*



Figure 26. DC Bicycle Route Map

South of the National Zoo, the Rock Creek Park multi-use trail crosses Shoreham Drive at its intersection with Cathedral Street. At this location, an off road trail spur runs along Shoreham Drive and connects the trail with designated on-road bicycle lanes and sidewalks on Calvert Street. Only one connection is made at the southern end of the project limits. Users can continue on the trail after crossing the P Street Ramp. ***Many trail users would use the trail in Rose Park to connect into Georgetown.*** Continuing south on the Rock Creek Park multi-use trail, which is beyond the project limits, provides users with a connection to the C&O Towpath and the Capital Crescent Trail. While the Rose Park trail is in proximity to the Rock Creek Park multi-use trail, there is currently no formal connection. ***Trail users requiring the use of both trails have created a social path to the east of Rose Park, along the exit from P Street, NW to southbound Rock Creek and Potomac Parkway, in order to achieve connectivity between Rock Creek Park, the Rose Park trail, and P Street, NW.***

On Thursday May 5, 2011 field studies were conducted in order to count the number of trail users at select locations in Rock Creek Park and Rose Park. The studies were conducted from ***4:45 to 6:45 PM*** at three separate locations: the Shoreham Drive crossing, the P Street ***ramp to Rose Park, the P Street ramp to the Rock Creek and Potomac Parkway***, and the Rose Park trail south of the Rose Park playground. Weather conditions on the day were clear and sunny with a temperature of approximately 65°F. Field investigators tallied the number of trail users at each location, and sorted the types of trail users based on their appearance. ***Table 7*** contains the total number of bicyclists, commuters and fitness trail users observed at each location. ***The hourly average at the three Rock Creek Park locations was 186 trail users at the Shoreham Drive crossing, 99 trail users at the P Street ramp to Rose Park, and 121 trail users at the P Street ramp to Rock Creek. The combined average for the Rock Creek Park locations was 135 trail users. The majority of users at these locations were either runners or bicyclists. An average of 145 trail users per hour was observed at the trail in Rose Park. Although most trail users were walkers, there are a variety of users that share the trail. The trail count at Rose Park was comparable to the counts observed at Rock Creek Park.***

Table 7. Trail User Counts on May 5, 2011

Location	User Type	Time Frame		Total from 4:45-6:45
		4:45-5:45	5:45-6:45	
Shoreham Drive crossing	Bicycles	60	73	133
	Runners	62	106	168
	Walkers	27	40	67
	Others (Strollers)	3	0	3
	<b>Total</b>	<b>152</b>	<b>219</b>	<b>371</b>
P Street Ramp (to Rose Park)	Bicycles	29	50	79
	Runners	40	68	108
	Walkers	3	8	11
	Others	0	0	0
	<b>Total</b>	<b>72</b>	<b>126</b>	<b>198</b>
P Street Ramp (to Rock Creek)	Bicycles	63	73	136
	Runners	43	60	103
	Walkers	0	3	3
	Others	0	0	0
	<b>Total</b>	<b>106</b>	<b>136</b>	<b>242</b>
Rose Park trail south of playground	Bicycles	20	10	30
	Runners	10	21	31
	Walkers	75	124	199
	Others (Strollers and Dog walkers)	16	13	29
	<b>Total</b>	<b>121</b>	<b>168</b>	<b>289</b>

### 3.12.2. PARK ROADWAY NETWORK AND MOTORIZED TRAFFIC

Rock Creek Park roads were established in fulfillment of the park's enabling legislation, which called for roadways to be instituted within the park. Beach Drive runs north and south alongside Rock Creek from the Maryland state line to the Rock Creek and Potomac Parkway, and also alongside the Rock Creek Park multi-use trail within the study area. Beach Drive is used as a popular commuting route, with an average daily traffic of approximately 6,600 vehicles on weekdays, most during peak commuting hours (NPS 2007). Portions of Beach Drive are closed to motorized vehicles on weekends and holidays to provide recreational opportunities, such as running, bicycling and in-line skating, to park visitors. Several park roads provide east-west routes across the park, and are crossed by the Rock Creek Park multi-use trail at a number of locations as it traverses from north to south. Due to speeds of volumes of motorized traffic, particularly on weekdays, some of these crossings generate the potential for trail user and motorized vehicle conflicts.

Piney Branch Parkway is an east-west route that runs east and west alongside Piney Branch. It is also managed by NPS, as is the trail that runs between the parkway and the stream from the Rock Creek Park multi-use trail to 16<sup>th</sup> Street. While the majority of this trail is unpaved, a short section of the trail along the parkway is paved. Separation of the trail and the roadway is not generally well defined along Piney Branch Parkway, and trail users and motorized vehicles travel within proximity to one another in some sections.

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## CHAPTER 4: ENVIRONMENTAL CONSEQUENCES

This “Environmental Consequences” chapter analyzes both beneficial and adverse impacts that would result from implementing any of the alternatives considered in this EA. This chapter also includes definitions of impact thresholds (e.g., negligible, minor, moderate, and major), methods used to analyze impacts, and the methods used for determining cumulative impacts. As required by the Council on Environmental Quality (CEQ) regulations implementing NEPA, a summary of the environmental consequences for each alternative is provided in **Table 2** which can be found in “Chapter 2: Alternatives.” The resource topics presented in this chapter, and the organization of the topics, correspond to the resource discussions contained in “Chapter 3: Affected Environment.”

### 4.1. GENERAL METHODOLOGY FOR ESTABLISHING IMPACT THRESHOLDS AND MEASURING EFFECTS BY RESOURCE

Potential impacts of all alternatives are described in terms of type (beneficial or adverse); context; duration (short- or long-term); and intensity (negligible, minor, moderate, major). Definitions of these descriptors include:

**Beneficial:** A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.

**Adverse:** A change that declines, degrades, and/or moves the resource away from a desired condition or detracts from its appearance or condition.

**Context:** Context is the affected environment within which an impact would occur, such as local, park-wide, regional, global, affected interests, society as whole, or any combination of these. Context is variable and depends on the circumstances involved with each impact topic. As such, the impact analysis determines the context, not vice versa.

**Duration:** The duration of the impact is described as short-term or long-term. Duration is variable with each impact topic; therefore, definitions related to each impact topic are provided in the specific impact analysis narrative.

**Intensity:** Because definitions of impact intensity (negligible, minor, moderate, and major) vary by impact topic, intensity definitions are provided separately for each impact topic analyzed.

### 4.2. CUMULATIVE IMPACTS ANALYSIS METHOD

The CEQ regulations to implement NEPA require the assessment of cumulative impacts in the decision making process for federal projects. Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions” (40 CFR 1508.7). As stated in the CEQ handbook, “Considering Cumulative Effects” (CEQ 1997), cumulative impacts need to be analyzed in terms of the specific resource, ecosystem, and human community being

affected and should focus on effects that are truly meaningful. Cumulative impacts are considered for all alternatives, including the No Action alternative.

Cumulative impacts were determined by combining the impacts of the alternative being considered with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or reasonably foreseeable future projects and plans at Rock Creek Park and, if applicable, the surrounding area. **Table 8** summarizes these actions that could affect the various resources at the park, along with the plans and policies of both the park and surrounding jurisdictions, which were discussed in Chapter 1. Additional explanation for most of these actions is provided in the narrative following the table.

The analysis of cumulative impacts was accomplished using four steps:

*Step 1* — Identify Resources Affected - Fully identify resources affected by any of the alternatives. These include the resources addressed as impact topics in chapters 3 and 4 of the document.

*Step 2* — Set Boundaries - Identify an appropriate spatial and temporal boundary for each resource. The temporal boundaries are noted to the right of the table and the spatial boundary for each resource topic is listed under each topic.

*Step 3* — Identify Cumulative Action Scenario - Determine which past, present, and reasonably foreseeable future actions to include with each resource. These are listed in **Table 8** and described below.

*Step 4* — Cumulative Impact Analysis - Summarize impacts of these other actions (x) plus impacts of the proposed action (y), to arrive at the total cumulative impact (z). This analysis is included for each resource in Chapter 4.

**Table 8. Cumulative Impact Projects**

AGENCY	CUMULATIVE IMPACT PROJECT	DESCRIPTION	STATUS
NPS	Blagden Avenue Hiker/Biker Trail (NPS 2008)	The National Park Service has proposed the construction of a hiker/biker trail along Blagden Avenue between Matthewson Drive and Beach Drive primarily in Rock Creek Park. The Preferred Alternative includes a six-foot wide hiker/biker trail constructed on the southern side of Blagden Avenue. <b>Affected Resource Areas:</b> Water quality, wildlife, visitor use and experience, and traffic and transportation	Present, currently in the planning phase.
	Peirce Mill Rehabilitation (Friends of Peirce Mill 2008)	The restoration of Peirce Mill includes removal of an asphalt parking lot and comfort station, installation of an underground pump to re-circulate water used to power the millwheel, construction of a bus parking area, improvements to the bicycle path around the mill and handicap access paths, and an upgrade of electrical and mechanical systems. <b>Affected Resource Areas:</b> Wildlife, historic structures, cultural landscapes, visitor use and experience	Completed in 2011.



AGENCY	CUMULATIVE IMPACT PROJECT	DESCRIPTION	STATUS
<p>NPS (continued)</p>	<p>Historic Trails Cultural Landscape Report</p>	<p>The National Park Service currently is developing a cultural landscape report for the historic trails in Rock Creek Park, within U.S. Reservation 339. This report will document the horse trails, pedestrian trails, multi-use trails, and social trails. The trails' significance will be evaluated and treatment recommendations for the trails will be provided.</p> <p><b>Affected Resource Areas:</b> Cultural Landscapes</p>	<p>Future; documentation and planning</p>
	<p>Rock Creek Park and the Rock Creek and Potomac Parkway General Management Plan (NPS 2007)</p>	<p>NPS has prepared a General Management Plan (Rock Creek Park GMP) which outlines their approach to manage Rock Creek Park and the Rock Creek and Potomac Parkway. In the Rock Creek Park GMP, the NPS sets long-term goals for resource protection and identifies improvements to retain and improve the current scope of visitor uses at the Park. These actions include, but are not limited to, upgrading trails and rehabilitating deteriorating sections, rehabilitating the Peirce Mill complex to focus on the history of milling and land use in the area; and rehabilitating the Linnaean Hill complex for adaptive use compatible with park values. In addition, the existing park roadway system would be retained and non-recreational through-traffic would be accommodated. The Rock Creek Park GMP allows for continued weekday auto travel throughout the park, but prescribes traffic-calming and speed enforcement measures to reduce traffic speeds and volumes to improve visitor safety and better control traffic volumes and speeds through the park.</p> <p><b>Affected Resource Areas:</b> Historic structures and districts, cultural landscapes, visitor use and experience, human health and safety, and traffic and transportation</p>	<p>Present; approved in 2007</p>
	<p>Reconstruction and Rehabilitation of Beach Drive and the RCPP (NPS 2006b)</p>	<p>In order to meet visitor needs, allow for routine maintenance, and ensure visitor safety, reconstruction is proposed for Beach Drive and the RCPP from P street to Calvert Street. Improvements include repairs of the road surface, improvements in roadway guardrails and lighting, and drainage controls.</p> <p><b>Affected Resource Areas:</b> Water quality, vegetation, aquatic wildlife, historic resources, cultural landscapes, visitor use and experience, traffic and transportation, and health and safety.</p>	<p>Present; constructed.</p>
	<p><i>Reconstruction and Rehabilitation of Rock Creek and Potomac Parkway Southbound at Waterside Drive, NW (NPS 2012)</i></p>	<p><i>The NPS, in cooperation with the FHWA, is undertaking a combination of road safety improvements located where the southbound ramp from Waterside Drive, NW merges onto Rock Creek and Potomac Parkway in Washington DC. Safety improvements at Watershed Drive, NW, were originally proposed under the 2006 Reconstruction and Rehabilitation of Beach Drive and the RCPP EA; however, in July 2011, NPS determined that the project design was not following the preferred alternative contained in the 2006 EA and construction was halted at Watershed Drive, NW in order to reinitiate the planning and compliance for this specific component of the overall project.</i></p> <p><b>Affected Resource Areas:</b> <i>Water resources, floodplains, wetlands, soils, vegetation, wildlife, visitor use and experience, transportation and safety, historic structures, cultural landscapes, and archeological resources.</i></p>	<p><i>Present; ongoing</i></p>

AGENCY	CUMULATIVE IMPACT PROJECT	DESCRIPTION	STATUS
DDOT/FHWA	Rehabilitation of Oregon Avenue, NW (DDOT 2011)	<p><i>DDOT, in conjunction with FHWA and NPS,</i> propose to rehabilitate a 1.7 mile section of Oregon Avenue between Military Road and Western Avenue. Rehabilitation would repair the road surface, provide stormwater controls, and restore aging infrastructure. Traffic calming devices, sidewalk treatments and retaining walls are proposed in order to enhance safety. In addition the project would bridge gaps in system linkage for pedestrians and bicyclists to parks, schools and residential areas adjacent to Oregon Avenue.</p> <p><b>Affected Resource Areas:</b> Traffic and transportation, archeology, historic structures and districts</p>	Future; currently undergoing agency and public review
	Klingle Valley Trail (DDOT 2010b)	<p>FHWA and DDOT, in cooperation with NPS, have proposed the construction of a multi-use trail facility within the 0.7 mile barricaded portion of Klingle Road between Porter Street, NW and Cortland Place, NW and the restoration of Klingle Creek. The Preferred Alternative involves a 10-foot wide multi-use trail which would be constructed using permeable pavement/materials within the DDOT right-of-way. The Preferred Option for the restoration of Klingle Creek includes full stream channel and bank stabilization.</p> <p><b>Affected Resource Areas:</b> Soils, water quality, wildlife, and visitor use and experience, traffic and transportation</p>	Present, currently in the design phase.
	Rehabilitation of Broad Branch Road, NW	<p>The FHWA and DDOT propose to rehabilitate Broad Branch Road between Linnean Avenue and Beach Drive, NW. Objectives of the project are to address infrastructural deficiencies, community concerns, and safety concerns.</p> <p><b>Affected Resource Areas:</b> Traffic and transportation</p>	Future; currently undergoing agency and public review

AGENCY	CUMULATIVE IMPACT PROJECT	DESCRIPTION	STATUS
DDOE	Rock Creek Watershed Implementation Plan (DDOE 2010)	DDOE, in the Rock Creek Watershed Implementation Plan, proposes specific management measures, programs, and capital improvements to address the pollutant problems in the watershed. The Plan provides both general management measures that will be applied broadly across the watershed and details specific restoration projects for defined locations in the watershed. Proposed actions include Low Impact Development projects and reforestation projects. One action proposed is the installation of RSCs in the Rock Creek Watershed. DDOE has identified the installation of RSC at two locations (at Bingham Run and at Oregon Avenue) for implementation in the near future. These projects have water quality benefits. <b>Affected Resource Areas:</b> Water quality, wildlife, human health and safety	Present; scheduled through 2013
DC Water	Clean Rivers Project (DC Water 2011c)	The Clean Rivers Project is a long-term program to reduce combined sewer overflows into DC waterways, specifically the Anacostia River, Potomac River, and Rock Creek. The project includes the construction of a mile long tunnel system to control Piney Branch/Rock Creek overflows. <b>Affected Resource Areas:</b> Water quality, wildlife	Present; completion date is variable based on funding
Smithsonian Institution	National Zoological Park Facilities Master Plan	The Smithsonian Institution (SI) recently underwent a process to identify facilities and infrastructure needs at the National Zoological Park and proposes to implement strategies for the next two decades through a master planning process. SI finalized a Comprehensive Facilities Master Plan in 2009 that will help guide facilities renewal at the National Zoo related to animal welfare, research, exhibits, visitor services, and circulation. <b>Affected Resource Areas:</b> Water Quality, Wildlife, Traffic and Transportation	Present; approved in 2008 and to be used for 20-25 years

### 4.3. SOILS

#### Methodology and Assumptions

The Soil Survey, topographic maps, and other related documents were reviewed in order to analyze potential impacts to soils from the proposed improvements to the Rock Creek Park multi-use trail. Impacts to soils were qualitatively assessed using professional judgment based on the soil characteristics and current conditions of the project area in comparison with the expected site conditions following construction.

#### Study Area

The study area for soil resource impacts is the limit of disturbance required for the proposed improvements to the Rock Creek Park multi-use trail, and any necessary staging areas for stockpile material and construction equipment. For cumulative impacts, the study area is Rock Creek Park.

### **Impact Thresholds**

*Negligible:* The effects to soils would be at or below the lower levels of detection. Any effects to soils would be slight.

*Minor:* The effects to soils would be detectable. Area of soil affected would be relatively small. Mitigation may be needed to offset adverse effects and would be relatively simple to implement and likely be successful.

*Moderate:* The effect on soil would be readily apparent and result in a change to the soil character over a relatively wide area. Mitigation measures would be necessary to offset adverse effects and likely be successful.

*Major:* The effect on soil would be readily apparent and substantially change the character of the soils over a large area in and out of the park. Mitigation measures to offset adverse effects would be needed, extensive, and their success could not be guaranteed.

*Duration:* **Short-term** – Recovers in less than three years; **Long-term** – Takes more than three years to recover.

## **4.3.1 IMPACTS OF THE NO ACTION ALTERNATIVE AND OPTIONS**

### **4.3.1.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 1: NO ACTION**

The No Action Alternative represents a continuation of the existing operations and maintenance of the Rock Creek Park multi-use trail. Under the No Action Alternative, visitors to Rock Creek Park would continue to use social trails and other non-paved pathways. Soil compaction would continue to occur along these paths, resulting in poor permeability, increased stormwater runoff, and suppression of vegetative growth. These effects would increase the overall rate of soil erosion throughout the project area. Therefore, due to soil compaction and erosion, short-and long-term minor adverse impacts to soils would occur under the No Action Alternative.

#### **Cumulative Impacts**

Stream restoration proposed under the Klinge Valley Trail project includes channel grading, construction of step pools, and stabilization of streambanks. Several stormwater BMPs are proposed for the project, which would reduce soil erosion in the watershed of Klinge Creek (DDOT 2010b). In addition, the Rock Creek Watershed Implementation Plan proposes multiple low impact development programs which would help to manage soil erosion. Sample programs under the Plan include rain leader disconnection, green roof retrofitting, and permeable pavement. Beneficial impacts of the Plan would vary based on the level of success of each individual improvement program (DDOE 2010).

Beneficial impacts to soils would result from projects in the region, due to restoration of Klinge Creek and low impact development planning in the Rock Creek watershed. The No Action Alternative would result in short- and long-term minor adverse impact to water resources in Rock Creek Park due to the continued erosion of soils caused by soil compaction and instability. Although the No Action Alternative would have a minor contribution to the cumulative effect of regional projects, there would still be long-term beneficial cumulative impacts to soils in Rock Creek Park.

#### **Conclusion**

The No Action Alternative would result in short and long-term minor adverse impacts to soil resources, due to soil compaction and erosion. The result of cumulative impacts projects would be long-term benefits to soils in

Rock Creek Park. When combined with the No Action Alternative, cumulative impacts projects would still have long-term beneficial impacts with regard to soils.

#### **4.3.1.2. PEIRCE MILL TRAIL SPUR OPTION A: NO ACTION**

The Peirce Mill Spur is an eight-foot to 10-foot wide social trail extending from Broad Branch Road to Peirce Mill. Option A for the Peirce Mill Spur represents no changes to the existing trail. Under Option A, people would continue to use the unpaved social trail along Rock Creek between Broad Branch Road and Peirce Mill. Soil compaction and exposure would continue to occur, resulting in poor permeability, suppression of vegetative growth, and increased stormwater runoff. These effects would likely result in increased soil erosion at the Peirce Mill trail spur. Therefore, due to soil compaction, Option A would result in long-term minor adverse impacts to soil resources.

##### **Cumulative Impacts**

Benefits to soil resources would result from stream restoration activities at Klingle Creek, as well as low impact development programs in the Rock Creek Watershed Implementation Plan. When combined with the long-term minor adverse impact of the No Action Alternative, cumulative impacts to soils would still be beneficial.

##### **Conclusion**

Peirce Mill Trail Spur Option A would result in long-term minor adverse impacts to soil resources, due to soil compaction and erosion. The result of cumulative impacts projects would be long-term benefits to soils in Rock Creek Park. When combined with the No Action Alternative, cumulative impacts projects would still have long-term beneficial impacts with regard to soils.

#### **4.3.1.3. ROSE PARK TRAIL OPTION A: NO ACTION**

The Rose Park trail consists of a paved trail between P Street, NW and M Street, NW. Existing trail widths vary from five to six feet. Additionally, a social trail connects the existing paved trail to the M Street sidewalk. Option A for the Rose Park trail represents no action, but continuing maintenance of the existing paved trail by the NPS. Under Option A, visitors to the Rose Park trail would continue to use the existing paved trail connecting P Street to M Street and the social trail that connects the existing paved trail to the M Street sidewalk. Soil compaction would continue to occur along the social path, resulting in poor permeability, suppression of vegetative growth, and increased stormwater runoff. These effects would increase the rate of soil erosion at the Rose Park trail, resulting in long-term minor adverse impacts to soil resources.

##### **Cumulative Impacts**

As described under Alternative 1, long-term beneficial impacts would result from projects in the region such as the Klingle Creek stream restoration and Rock Creek Watershed Implementation Plan. When combined with the long-term minor adverse impact of the No Action Alternative, cumulative impacts to soils would still be beneficial.

##### **Conclusion**

Rose Park Trail Option A would result in long-term minor adverse impacts to soil resources, due to soil compaction and erosion. The result of cumulative impacts projects would be long-term benefits to soils in Rock Creek Park. When combined with the No Action Alternative, cumulative impacts projects would still have long-term beneficial impacts with regard to soils.

## **4.3.2. IMPACTS OF THE ACTION ALTERNATIVES AND OPTIONS**

### **4.3.2.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 2: TRAIL RESURFACING**

Alternative 2 proposes multiple improvements to rehabilitate and enhance the existing Rock Creek Park multi-use trail, including new connections to neighboring trails, drainage and erosion controls, improved bridge crossings and safety improvements. This alternative would resurface the Rock Creek Park multi-use trail at its existing six-foot to 10-foot widths. In addition, Alternative 2 would resurface the Piney Branch Parkway trail to a varying width of six to eight feet.

Erosion and sediment control measures and other Best Management Practices (BMPs) would be implemented during construction to minimize soil erosion and prevent soils from leaving the project area. Construction access and staging would be designed to avoid and minimize impacts to undisturbed soils. Because the construction activities would occur on soils that are already disturbed, protective measures would be employed during construction, and the disturbed soils would be remediated immediately following construction activities, short-term negligible adverse impacts to soils would occur.

The rehabilitation proposed under Alternative 2 would result in earth disturbance and new pavement within a relatively small area, and on sites where the soils currently exist in a disturbed state. The resurfacing would provide a continuously paved trail surface in Rock Creek Park, which would eliminate areas of degraded trail that contain exposed soils, and which would stabilize the existing social trails and discourage new social trails from being developed in the park. Due to the anticipated reduction in social trail usage, the overall hazard of soil erosion in these areas would decrease.

The timber retaining wall stabilization proposed under Alternative 2 would have long term beneficial impacts by protecting soils from further erosion. Stabilization is proposed between Beach Drive and the Rock Creek Park multi-use trail to reduce soil erosion. In addition, minor grading of the trail along a 180-foot trail section south of Calvert Street would decrease the slope of the trail, thereby decreasing runoff and minimizing soil erosion. In general, these improvements would result in long-term beneficial impacts to soil resources.

#### **Cumulative Impacts**

The impact of past, present and reasonably foreseeable future projects is described under the No Action Alternative. Benefits to soil resources would result from stream restoration activities at Kingle Creek, as well as low impact development programs of the Rock Creek Watershed Implementation Plan. When combined with the long-term beneficial impacts of the No Action Alternative, cumulative impacts to soils would be beneficial.

#### **Conclusion**

Under Alternative 2, short-term negligible adverse impacts would result from construction. Alternative 2 would have long-term beneficial impacts on soil resources through the stabilization of social trails, discouragement of social trail use, rehabilitation of existing paved trails, and rehabilitation of timber retaining walls. The results of cumulative impacts projects would also be beneficial; therefore, cumulative impacts to soils of Rock Creek Park would be beneficial.

#### **4.3.2.2. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 3 (PREFERRED ALTERNATIVE): TRAIL RESURFACING AND WIDENING**

Alternative 3 proposes multiple improvements to rehabilitate and enhance the existing Rock Creek Park multi-use trail, including new connections to neighboring trails, drainage and erosion controls, improved bridge crossings and safety improvements. In addition to these improvements, Alternative 3 includes widening of the Rock Creek Park multi-use trail to a width of six - 10 depending on the environmental or physical constraints. Resurfacing of the Piney Branch Parkway trail to a varying width of six-eight feet is also included in this Alternative.

Erosion and sediment control measures and other Best Management Practices (BMPs) would be implemented during construction to minimize soil erosion and prevent soils from leaving the project area. The proposed activities would also result in ground disturbance that would extend outside of the current trail limits in areas to be widened or improved, which would require paving of approximately 2.16 acres of ground surface. These activities would result in minor short-term adverse impacts to soils. However, the proposed action under Alternative 3 would result in earth disturbance within a relatively small area, and on sites where the soils currently exist in a disturbed state.

Long-term beneficial impacts would result from the stabilization of the Rock Creek Park multi-use trail, the stabilization of social trails, and the rehabilitation of timber retaining walls. The trail rehabilitation would stabilize areas of exposed soils and degraded trail sections and would likely reduce the use of social trails in the project area. In addition, drainage improvements throughout the trail corridor would help to minimize soil erosion during storm events, resulting in long-term beneficial impacts to soil resources.

#### **Cumulative Impacts**

The impact of past, present and reasonably foreseeable future projects is described under the No Action Alternative. Benefits to soil resources would result from stream restoration activities at Klinge Creek, as well as low impact development programs of the Rock Creek Watershed Implementation Plan. When combined with the long-term beneficial impacts of the No Action Alternative, cumulative impacts to soils would be beneficial.

#### **Conclusion**

Under Alternative 3, short-term negligible adverse impacts would result from construction. Alternative 3 would have long-term beneficial impacts on soil resources through the stabilization of social trails, discouragement of social trail use, rehabilitation of existing paved trails, and rehabilitation of timber retaining walls. The results of cumulative impacts projects would also be beneficial; therefore, the cumulative impact to soils of Rock Creek Park would be beneficial.

#### **4.3.2.3. PEIRCE MILL TRAIL SPUR OPTION B (PREFERRED ALTERNATIVE): EIGHT-FOOT PAVED TRAIL SPUR**

Option B proposes to pave the Peirce Mill trail spur. Approximately 0.22 acres would be paved in the area of the existing social trail. During construction, minor excavation and construction activities in the study area would cause increased soil disturbance and increased potential for erosion. Erosion and sediment control BMPs would be implemented to minimize soil erosion, and disturbed soils would be paved or otherwise stabilized following preparation of the trail base. Short-term minor adverse impacts to soils would occur during construction. Following construction, the disturbed soils within the project area would be stabilized and

the paving of the social trail would prevent continued soil exposure and erosion, resulting in long-term beneficial impacts to soils.

### **Cumulative Impacts**

As described under Alternative 1, benefits to soil resources would result from stream restoration activities at Klinge Creek, as well as low impact development programs of the Rock Creek Watershed Implementation Plan. When combined with the beneficial effects of constructing the Peirce Mill trail spur, long-term beneficial cumulative impacts to soil resources would result.

### **Conclusion**

Short-term minor adverse impacts to soils would result from implementation of Peirce Mill Trail Spur Option B. Paving of the Peirce Mill spur would result in long-term beneficial impacts due to the stabilization of disturbed soils and rehabilitation of the trail sections. Beneficial cumulative impacts to soil resources would result from the effect of regional projects combined with construction of the Peirce Mill trail spur

#### **4.3.2.4. ROSE PARK TRAIL OPTION B (PREFERRED ALTERNATIVE): SIX-FOOT RESURFACED TRAIL**

Under Rose Park Trail Option B, the existing trail would be resurfaced to a standard width of six feet, trail connections would be improved to P Street and M Street, and the social trail would be paved. An increase of approximately *0.07* acres of new pavement would result from paving the social trail and widening the Rose Park Trail to the standard six-foot width. Minor excavation and associated construction activities in the study area would cause soil disturbance, increasing the potential for erosion. Erosion and sediment control measures and other BMPs would be implemented as needed to minimize soil erosion; therefore, short-term minor adverse impacts to soils would occur. Disturbed soils within the project area would be stabilized and the paving of the social trail would reduce the area of exposed soils, resulting in long-term beneficial impacts to soil resources.

### **Cumulative Impacts**

As described under Alternative 1, benefits to soil resources would result from stream restoration activities at Klinge Creek, as well as low impact development programs of the Rock Creek Watershed Implementation Plan. When combined with the beneficial effects of constructing Rose Park Trail Option B, long-term beneficial cumulative impacts to soil resources would result.

### **Conclusion**

Short-term minor adverse impacts to soils would result from construction of Rose Park Trail Option B. Once constructed, Option B would have a beneficial impact by stabilizing soils that are currently unpaved. The effects of Option B when added to cumulative impacts projects would result in overall long-term beneficial impacts to soil resources in Rock Creek Park.

#### **4.3.2.5. ROSE PARK TRAIL OPTION C: EIGHT-FOOT RESURFACED TRAIL**

Under Rose Park Trail Option C, the existing trail would be resurfaced at a standard width of eight feet, trail connections would be improved to P Street and M Street, and the social trail would be paved. Under Option C, an increase of approximately *0.16* acres of impervious surface would result from the resurfacing of the Rose Park trail to the standard eight-foot width and from paving the social trail. Minor excavation and associated construction activities in the study area would cause soil disturbance, increasing the potential for erosion.



Erosion and sediment control measures and other BMPs would be implemented as needed to minimize soil erosion; therefore, short-term minor adverse impacts to soils would occur.

The increased trail width and paving of the social trail would increase the impervious surface within the project area, but would stabilize areas that are currently degraded. Short-term minor adverse impacts would result from construction activities due to the soil disturbance, but long-term beneficial impacts would result from the stabilization of soils currently used as a social trail.

### **Cumulative Impacts**

As described under Alternative 1, benefits to soil resources would result from stream restoration activities at Klinge Creek, as well as low impact development programs of the Rock Creek Watershed Implementation Plan. When combined with the beneficial effects of constructing Rose Park Trail Option C, long-term beneficial cumulative impacts to soil resources would result.

### **Conclusion**

Short-term minor adverse impacts to soils would result from construction of Rose Park Trail Option C. Once constructed, Option C would have a beneficial impact by stabilizing soils that are currently unpaved. The effect of Option C when added to cumulative impacts projects would be overall long-term beneficial impacts to soil resources in Rock Creek Park.

## **4.4. WATER QUALITY**

### **Methodology and Assumptions**

NPS *Management Policies* (NPS 2006) states that the NPS will “take all necessary actions to maintain or restore the quality of surface waters and ground waters within the Parks, consistent with the Clean Water Act and all other applicable federal, state, and local laws and regulations” (NPS 2001a sec 4.6.3).

In order to examine potential impacts to water resources, the existing conditions of Rock Creek and Piney Branch were evaluated. Potential impacts to streams were considered based on the extent of possible sedimentation due to ground disturbance.

### **Study Area**

The study area for water quality consists of the portion of Rock Creek and Piney Branch adjacent to the proposed improvements associated with the Rock Creek Park Multi-Use Trail Rehabilitation project. For cumulative impacts, the study area is Rock Creek Park.

### **Impact Thresholds**

*Negligible:* Impacts are chemical, physical, or biological effects that would not be detectable, well below water quality standards or criteria, and within historical or desired water quality conditions.

*Minor:* Impacts (chemical, physical, or biological effects) would be detectable but well below water quality standards or criteria and within historical or desired water quality conditions.

*Moderate:* Impacts (chemical, physical, or biological effects) would be detectable but at or below water quality standards or criteria; however, historical baseline or desired water quality conditions would be temporally altered.

*Major:* Impacts (chemical, physical, or biological effects) would be detectable and frequently altered from the historical baseline or desired water quality conditions; chemical, physical, or biological water quality standards or criteria would temporarily be slightly and singularly exceeded.

*Duration:* **Short-term** – Following treatment, recovery would take less than 1 year; **Long-term** – Following treatment, recovery would take longer than 1 year.

#### **4.4.1. IMPACTS OF THE NO ACTION ALTERNATIVE AND OPTIONS**

##### **4.4.1.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 1: NO ACTION**

The No Action Alternative represents a continuation of the existing operations and maintenance of the Rock Creek Park multi-use trail. With no new construction to the Rock Creek Park multi-use trail, existing water resources within the study area would generally remain in their current condition. Existing surface water flow patterns into Rock Creek and Piney Branch would remain unchanged. Erosion resulting from the deteriorating trail conditions and the continued use of social trails would have a long-term minor adverse impact on surface waters as a result of sediment transport into these water resources. Therefore, the No Action Alternative would have a long-term minor adverse impact to water resources in Rock Creek Park.

##### **Cumulative Impacts**

Stream restoration proposed under the Klinge Valley Trail project includes channel grading, construction of step pools, and stabilization of streambanks. Several stormwater BMPs are proposed for the project, which would increase the capacity of Klinge Creek to safely convey stormwater as it converges with Rock Creek (DDOT 2010b). In addition, the Rock Creek Watershed Implementation Plan proposes multiple water resources improvement programs. Sample programs under the Plan include rain leader disconnection, green roof retrofitting, and permeable pavement. Beneficial impacts of the Plan would vary based on the level of success of each individual improvement program (DDOE 2010). However, Rock Creek and Piney Branch would remain impaired due to the adverse effects of pollution from urbanization and stormwater runoff.

Long-term beneficial impacts would result from projects in the region, due to stream restoration and water resource management activities. Short- and long-term beneficial impacts would occur with construction of the Klinge Valley project. Long-term adverse impacts to Rock Creek and its tributaries would continue as a result of pollution from urbanization and stormwater runoff. The No Action Alternative would result in a long-term minor impact to water resources in Rock Creek Park due to the continued erosion caused by the deteriorating trail conditions and the continued use of social trails. This impact in combination with past, present, and reasonably foreseeable future actions would result in long-term minor adverse cumulative impacts in the context of the study area due to the impairment of Rock Creek and its tributaries. The No Action Alternative would have a minor contribution to the overall cumulative effect.

##### **Conclusion**

Under the No Action Alternative, long-term minor adverse impacts to Rock Creek and Piney Branch water quality due to continued erosion and sediment transport resulting from deteriorating trail conditions and the continued use of social trails. This impact combined with past, present, and reasonably foreseeable future actions would result in long-term minor adverse cumulative impacts to Rock Creek and its tributaries. The No Action Alternative would have a minor contribution to the overall cumulative effect.

#### **4.4.1.2. PEIRCE MILL TRAIL SPUR OPTION A: NO ACTION**

The Peirce Mill Spur is an eight-foot to 10-foot wide social trail extending from the Broad Branch/Grove 2 North parking area to Peirce Mill. Option A for the Peirce Mill trail spur represents no changes to the existing trail. Water quality conditions under implementation of Option A would remain unchanged. Rock Creek would remain impaired, due to influences within the watershed on water quality. Current conditions at the Peirce Mill trail spur do not contribute to adverse water quality. Therefore, no impacts to water quality would occur as a result of Option A.

##### **Cumulative Impacts**

Although other past, present, and reasonably foreseeable future actions may affect water quality in the area, Peirce Mill Trail Spur Option A would have no impacts on water quality and therefore would not contribute to the effects of other actions. Consequently, there would be no cumulative impacts to water quality under Peirce Mill Trail Spur Option A.

##### **Conclusion**

Peirce Mill Trail Spur Option A would have no water quality impacts because current conditions at the Peirce Mill trail spur do not contribute to adverse water quality. Therefore, Peirce Mill Trail Spur Option A would not contribute to cumulative impacts.

#### **4.4.1.3. ROSE PARK TRAIL OPTION A: NO ACTION**

The Rose Park trail consists of a paved trail between P Street, NW and M Street, NW. Existing trail widths vary from five to six feet. Additionally, a social trail connects the existing paved trail to the M Street sidewalk. Option A for the Rose Park trail represents no action, but continuing maintenance of the existing paved trail by the NPS.

Water quality conditions of Rock Creek and its tributaries are largely unaffected by Rose Park. There are no surface waters, groundwater resources, or wetlands in the park. Rock Creek is a receiving water body for Rose Park runoff; however, the effect of the runoff is too small to be detected, relative to the size of the Rock Creek watershed. Therefore, long-term negligible adverse impacts would occur to water quality as a result of Option A.

##### **Cumulative Impacts**

As described under the No Action Alternative, long-term beneficial impacts would result from projects in the region, due to stream restoration and water resource management activities. Short- and long-term beneficial impacts would occur with construction of the Klingle Valley project. Long-term adverse impacts to Rock Creek and its tributaries would continue as a result of pollution from urbanization and stormwater runoff. Rose Park Trail Option A would result in long-term negligible impacts to water quality since Rock Creek receives runoff from Rose Park. This impact in combination with past, present, and reasonably foreseeable future actions would result in long-term minor adverse cumulative impacts in the context of the study area due to the impairment of Rock Creek and its tributaries. Rose Park Trail Option A would have a very minor contribution to the overall cumulative effect.

##### **Conclusion**

Long-term negligible adverse water quality impacts would occur as a result of Rose Park Trail Option A due to the relative magnitude of Rose Park within the Rock Creek watershed. This impact combined with past, present, and reasonably foreseeable future actions would result in long-term minor adverse cumulative impacts

to Rock Creek and its tributaries. Rose Park Trail Option A would have a very minor contribution to the overall cumulative effect.

#### 4.4.2. IMPACTS OF THE ACTION ALTERNATIVES AND OPTIONS

As described in the Affected Environment, water quality of Rock Creek and Piney Branch is impaired due to urban, suburban and agricultural influences. A main source of the impairment is the impervious surface area within the watershed. Under the Action Alternatives and Options, trail improvements would involve an increase in impervious surfaces within the project area. Although impervious surface area contributes to water quality impairment, effects of the proposed pavement on water quality would be too small to be detectable, *due to the relatively small increase in impervious surface and the linear nature of the trail, where most runoff is quickly absorbed by adjacent ground.* The effects of impervious areas on Rock Creek and Piney Branch are largely associated with urban development of the watershed. When taking into account that Rock Creek Park is surrounded by urban land, the proposed increases in impervious surfaces are not great enough to result in an adverse impact on water quality. **Table 9** depicts the existing, additional, and total impervious area proposed under the Action Alternatives and Options.

**Table 9. Existing and Proposed Impervious Area**

Surface Area	Alternative 2	Alternative 3	Peirce Mill Trail Spur Option B	Rose Park Trail Option B	Rose Park Trail Option C
Existing Impervious Area	3.43 ac.	3.43 ac.	0 ac.	0.20 ac.	0.20 ac.
Additional Impervious Area	1.16 ac.	2.16 ac.	0.22 ac.	0.07 ac.	0.16 ac.
Total Impervious Area	4.59 ac.	5.59 ac.	0.22 ac.	0.27 ac.	0.36 ac.

##### 4.4.2.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 2: TRAIL RESURFACING

Alternative 2 proposes multiple improvements to rehabilitate and enhance the existing Rock Creek Park multi-use trail, including new connections to neighboring trails, drainage and erosion controls, improved bridge crossings and safety improvements. This alternative would resurface the Rock Creek Park multi-use trail at its existing six-foot to 10-foot widths. In addition, Alternative 2 would resurface the Piney Branch Parkway trail to a varying width of six to eight feet.

Under Alternative 2, ground disturbance would be necessary during construction of the proposed improvements. In order to protect the existing water quality condition of Rock Creek and Piney Branch, Erosion and Sediment Controls and various other BMPs would be employed as needed during construction to reduce soil erosion and to prevent contamination of the water by sediment. During construction periods, the use of erosion and sediment controls and other BMPs would result in short-term negligible adverse impacts to water quality.

The trail resurfacing and rehabilitation would result in long-term beneficial impacts by reducing erosion and stabilizing non-vegetated areas. The proposed repairs of existing *timber* retaining walls would result in decreased amounts of sediments entering Rock Creek and would provide long term beneficial impacts to surface waters. Proposed drainage improvements, such as grading of the trail in order to stabilize soils, would provide a beneficial impact. While Alternative 2 would have long-term beneficial impacts to water resources in

Rock Creek Park, the overall beneficial impact to water resources would be small compared to the overall size of the study area and of the Rock Creek drainage area.

### **Cumulative Impacts**

As described under the No Action Alternative, long-term beneficial impacts would result from projects in the region, due to stream restoration and water resource management activities. Short- and long-term beneficial impacts would occur with construction of the Klinge Valley project. Long-term adverse impacts to Rock Creek and its tributaries would continue as a result of pollution from urbanization and stormwater runoff. Alternative 2 would result in long-term beneficial impacts to water quality as a result of reduced erosion and stabilization of non-vegetated areas from trail resurfacing and rehabilitation. This impact in combination with past, present, and reasonably foreseeable future actions would result in long-term minor adverse cumulative impacts in the context of the study area due to the impairment of Rock Creek and its tributaries. The beneficial impact of Alternative 2 would not contribute to the adverse cumulative impact.

### **Conclusion**

Alternative 2 would result in long-term beneficial impacts to water quality in Rock Creek, due to rehabilitation of the *timber* retaining walls and improvements to drainage infrastructure. The effects of Alternative 2 when combined with past, present, and reasonably foreseeable future actions would be long-term minor adverse impacts.

#### **4.4.2.2. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 3 (PREFERRED ALTERNATIVE): TRAIL RESURFACING AND WIDENING**

Alternative 3 proposes multiple improvements to rehabilitate and enhance the existing Rock Creek Park multi-use trail, including new connections to neighboring trails, drainage and erosion controls, improved bridge crossings and safety improvements. In addition to these improvements, Alternative 3 includes widening of the Rock Creek Park multi-use trail to a width of six - 10 depending on the environmental or physical constraints. Resurfacing of the Piney Branch Parkway trail to a varying width of six-eight feet is also included in this Alternative.

During construction, the soil disturbance associated with the construction activities would have a short-term negligible adverse impact to water quality due to an increase in sediment transport from the disturbed soils. Erosion and sediment control measures and other BMPs would minimize this impact.

The trail resurfacing and rehabilitation would result in long-term beneficial impacts by reducing erosion and stabilizing non-vegetated areas. The proposed repairs of existing *timber* retaining walls would result in decreased amounts of sediments entering Rock Creek and would provide a long term beneficial impact to surface waters. Proposed drainage improvements, such as grading of the trail in order to stabilize soils, would provide a beneficial impact. The overall beneficial impact to water resources would be small compared to the overall size of the study area and of the Rock Creek drainage area. As a result, Alternative 3 would have long-term beneficial impacts to water resources in Rock Creek Park.

### **Cumulative Impacts**

As described under the No Action Alternative, long-term beneficial impacts would result from projects in the region, due to stream restoration and water resource management activities. Short- and long-term beneficial impacts would occur with construction of the Klinge Valley project. Long-term adverse impacts to Rock Creek and its tributaries would continue as a result of pollution from urbanization and stormwater runoff. Alternative 3 would result in long-term beneficial impacts to water quality as a result of reduced erosion and

stabilization of non-vegetated areas from trail resurfacing and rehabilitation. This impact in combination with past, present, and reasonably foreseeable future actions would result in long-term minor adverse cumulative impacts in the context of the study area due to the impairment of Rock Creek and its tributaries. The beneficial impact of Alternative 3 would not contribute to the adverse cumulative impact.

### **Conclusion**

Long-term beneficial impacts would result from Alternative 3, from rehabilitation of the *timber* retaining walls and drainage improvements. The effects of Alternative 3 when combined with past, present, and reasonably foreseeable future actions would be long-term minor adverse impacts.

#### **4.4.2.3. PEIRCE MILL TRAIL SPUR OPTION B (PREFERRED ALTERNATIVE): EIGHT-FOOT PAVED TRAIL SPUR**

Option B represents resurfacing of the trail to a standard eight-foot width. Approximately 0.22 acres would be paved in the area of the existing social trail. Short-term negligible adverse effects to water quality would occur as a result of transport of sediments from the disturbed soils during construction. Erosion and sediment control measures and other BMPs would minimize the risk of sediment transport to waterbodies.

Effects of the increase in impervious surface on water quality of Rock Creek would be negligible. Already, Rock Creek functions as receiving waters for a watershed that is mostly impervious. Due to the relative magnitude of impervious surfaces in the watershed, long-term negligible adverse impacts associated with pavement of the trail would occur.

### **Cumulative Impacts**

As described under the No Action Alternative, long-term beneficial impacts would result from projects in the region, due to stream restoration and water resource management activities. Short- and long-term beneficial impacts would occur with construction of the Klinge Valley project. Long-term adverse impacts to Rock Creek and its tributaries would continue as a result of pollution from urbanization and stormwater runoff. Peirce Mill Trail Spur Option B would result in long-term negligible adverse impacts due to the increase in impervious surface associated with pavement of the trail. This impact in combination with past, present, and reasonably foreseeable future actions would result in long-term minor adverse cumulative impacts in the context of the study area due to the impairment of Rock Creek and its tributaries. Peirce Mill Trail Spur Option B would have a very minor contribution to the overall cumulative effect.

### **Conclusion**

Long-term negligible adverse impacts would result from the increase in impervious surface under Peirce Mill Trail Spur Option B. The impacts would be negligible due to the relative magnitude of impervious surfaces within the Rock Creek watershed. This impact combined with past, present, and reasonably foreseeable future actions would result in long-term minor adverse cumulative impacts to Rock Creek and its tributaries. Peirce Mill Trail Spur Option B would have a very minor contribution to the overall cumulative effect.

#### **4.4.2.4. ROSE PARK TRAIL OPTION B (PREFERRED ALTERNATIVE): SIX-FOOT RESURFACED TRAIL**

Under Rose Park Trail Option B, the existing trail would be resurfaced at a standard width of six feet, trail connections would be improved to P Street and M Street, and the social trail would be paved. Under Option B, an increase of *0.07* acres of impervious surface would result from paving *and widening* the social trail. During construction, minor excavation and construction activities in the study area would cause increased soil

disturbance and erosion. Erosion control measures and other BMP's would be implemented as needed to minimize soil erosion and to protect receiving water bodies; therefore, short-term negligible adverse impacts to the water quality of Rock Creek would occur. Following construction, effects of the increase in paving on water quality of Rock Creek would not be detectable. Already, Rock Creek functions as receiving waters for a watershed that is mostly impervious. Due to the relative magnitude of impervious surfaces in the watershed, long-term negligible adverse impacts to water quality would occur as a result of Option B.

### **Cumulative Impacts**

As described under the No Action Alternative, long-term beneficial impacts would result from projects in the region, due to stream restoration and water resource management activities. Short- and long-term beneficial impacts would occur with construction of the Klinge Valley project. Long-term adverse impacts to Rock Creek and its tributaries would continue as a result of pollution from urbanization and stormwater runoff. Rose Park Trail Option B would result in long-term negligible adverse impacts due to the increase in impervious surface associated with pavement of the social trail. This impact in combination with past, present, and reasonably foreseeable future actions would result in long-term minor adverse cumulative impacts in the context of the study area due to the impairment of Rock Creek and its tributaries. Rose Park Trail Option B would have a very minor contribution to the overall cumulative effect.

### **Conclusion**

Long-term negligible adverse impacts to water quality would occur as a result of Rose Park Trail Option B as a result of the increase in impervious surface associated with pavement of the social trail. Impacts would be negligible due to the relative magnitude of impervious surfaces in the watershed. This impact combined with past, present, and reasonably foreseeable future actions would result in long-term minor adverse cumulative impacts to Rock Creek and its tributaries. Rose Park Trail Option B would have a very minor contribution to the overall cumulative effect.

#### **4.4.2.5. ROSE PARK TRAIL OPTION C: EIGHT-FOOT RESURFACED TRAIL**

Under Rose Park Trail Option C, the existing trail would be resurfaced at a standard width of six feet, trail connections would be improved to P Street and M Street, and the social trail would be paved. An increase of approximately *0.16* acres of impervious surface would result from paving the social trail, and from widening of the trail. During construction, minor excavation and construction activities in the study area would cause increased soil disturbance and erosion. Erosion control measures and other BMP's would be implemented as needed to minimize soil erosion and to protect receiving water bodies; therefore, short-term negligible adverse impacts to the water quality of Rock Creek would occur. Following construction, effects of the increase in paving on water quality of Rock Creek would not be detectable. Already, Rock Creek functions as receiving waters for a watershed that is mostly impervious. Due to the relative magnitude of impervious surfaces in the watershed *and the linear nature of the paved trail*, long-term negligible adverse impacts to water quality would occur as a result of Option C.

### **Cumulative Impacts**

As described under the No Action Alternative, long-term beneficial impacts would result from projects in the region, due to stream restoration and water resource management activities. Short- and long-term beneficial impacts would occur with construction of the Klinge Valley project. Long-term adverse impacts to Rock Creek and its tributaries would continue as a result of pollution from urbanization and stormwater runoff. Rose Park Trail Option C would result in long-term negligible adverse impacts due to the increase in impervious surface associated with pavement of the social trail and widening of the trail. This impact in

combination with past, present, and reasonably foreseeable future actions would result in long-term minor adverse cumulative impacts in the context of the study area due to the impairment of Rock Creek and its tributaries. Rose Park Trail Option C would have a very minor contribution to the overall cumulative effect.

### **Conclusion**

Long-term negligible adverse impacts to water quality would occur as a result of Rose Park Trail Option C as a result of the increase in impervious surface associated with pavement of the social trail and widening of the trail. This impact combined with past, present, and reasonably foreseeable future actions would result in long-term minor adverse cumulative impacts to Rock Creek and its tributaries. Rose Park Trail Option C would have a very minor contribution to the overall cumulative effect.

## **4.5. VEGETATION**

### **Methodology and Assumptions**

Available information on vegetation and vegetative communities potentially impacted by the proposed alternatives was compiled. Impacts to vegetation were based on the anticipated extent of vegetation removal for trail construction, impacts to large trees due to critical root zones impairment, and the extent of encroachment in the proposed project area.

### **Study Area**

The study area for impacts to vegetation is the limit of disturbance required for the proposed improvements to the Rock Creek Park multi-use trail, and any necessary staging areas for stockpile material and construction equipment. For cumulative impacts, the study area is Rock Creek Park.

### **Impact Thresholds**

*Negligible:* No native vegetation would be affected or some individual native plants could be affected as a result of the alternative, but there would be no effect on native species populations. The effects would be on a small scale and no species of special concern would be affected.

*Minor:* The alternative would affect some individual native plants and would also affect a relatively minor portion of that species' population. Mitigation to offset adverse effects, including special measures to avoid affecting species of special concern, could be required and would be effective.

*Moderate:* The alternative would affect some individual native plants and would also affect a sizeable section of the species' population and over a relatively large area. Mitigation to offset adverse effects could be extensive, but would likely be successful. Some species of special concern could also be affected.

*Major:* The alternative would have a considerable effect on native plant populations, including species of special concern, and affect a relatively large area in and out of the park. Mitigation measures to offset the adverse effects would be required, extensive, and success of the mitigation measures would not be guaranteed.

*Duration:* **Short-term** - Recovers in less than three years; **Long-term** - Takes more than three years to recover.



## **4.5.1. IMPACTS OF THE NO ACTION ALTERNATIVE AND OPTIONS**

### **4.5.1.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 1: NO ACTION**

The No Action Alternative represents a continuation of the existing operations and maintenance of the Rock Creek Park multi-use trail. Under the No Action Alternative, vegetative conditions along the Rock Creek Park multi-use trail would continue to slowly deteriorate, in small, localized areas. Visitors to the trail would continue to use social trails, thereby continuing to tread upon vegetation. As a result, existing vegetation would be diminished and new vegetative growth would be precluded. Due to the effects of social trail use, there would be long-term minor adverse impacts to vegetation under the No Action Alternative.

#### **Cumulative Impacts**

Beneficial impacts to vegetation would take place under the Rock Creek Watershed Implementation Plan. Reforestation, riparian planting, and wetland creation are proposed, which would result in long-term beneficial impacts to Rock Creek Park (DDOE 2010). Otherwise, several regional projects require removal of vegetation in order to accommodate infrastructural improvements or restorative measures. Vegetation removal would be avoided to the maximum extent practicable, and would only occur in localized areas. Also, revegetation would occur to the extent practical for these projects. Therefore the effects of removing vegetation would be long-term negligible adverse impacts.

Based on the effects of the Rock Creek Watershed Implementation Plan, cumulative impact projects would result in long-term beneficial impacts to vegetation. The No Action Alternative would result in long-term minor adverse impacts to vegetation, due to the effects of social trail use. Although the No Action Alternative would have a minor contribution to the cumulative effect of regional projects, there would still be long-term beneficial cumulative impacts to vegetation in Rock Creek Park.

#### **Conclusion**

Under the No Action Alternative, long-term minor adverse impacts to vegetation would occur due to continuing use of social trails. Although the No Action Alternative would contribute a minor adverse impact to the cumulative effect of projects in the region, the effect of cumulative impact projects on vegetation would still be beneficial.

### **4.5.1.2. PEIRCE MILL TRAIL SPUR OPTION A: NO ACTION**

The Peirce Mill Spur is an eight-foot to 10-foot wide social trail extending from the Broad Branch/Grove 2 parking area to Peirce Mill. Option A for the Peirce Mill trail spur represents no changes to the existing trail. As a result of Option A, vegetative conditions along the Peirce Mill trail spur would continue to deteriorate slowly, in small, localized areas. Visitors would continue to use the social trail. Usage of the path would further compact soils and prevent vegetative regrowth. Due to the effects of social trail use, there would be long-term minor adverse impacts to vegetation under Option A.

#### **Cumulative Impacts**

The impact of past, present and reasonably foreseeable future projects is described under Alternative 1. Vegetation in Rock Creek Park would benefit from reforestation, riparian planting, and wetland creation. When combined with the long-term minor adverse impacts of Peirce Mill Trail Spur Option A, cumulative long-term beneficial impacts to vegetation would still occur.

**Conclusion**

Long-term minor adverse impacts would result from the No Action Alternative, due to the effects of social trail use. Although the No Action Alternative would contribute a minor adverse impact to the cumulative effect of projects in the region, the effect of cumulative impact projects on vegetation would still be beneficial.

**4.5.1.3. ROSE PARK TRAIL OPTION A: NO ACTION**

The Rose Park trail consists of a paved trail between P Street, NW and M Street, NW. Existing trail widths vary from five to six feet. Additionally, a social trail connects the existing paved trail to the M Street sidewalk. Option A for the Rose Park trail represents no action, but continuing maintenance of the existing paved trail by the NPS. Under Option A, vegetative conditions at Rose Park would remain relatively unchanged. Suppression of vegetative growth would continue in areas of heavy foot traffic and on the social trails that connect the existing paved trail to the M Street sidewalk; therefore, long-term negligible adverse impacts would result from Option A. No impacts to trees within the park would occur.

**Cumulative Impacts**

The impact of past, present and reasonably foreseeable future projects is described under Alternative 1. Vegetation would benefit from reforestation, riparian planting, and wetland creation. When combined with the long-term negligible adverse impacts of the No Action Alternative, long-term beneficial cumulative impacts to vegetation would result.

**Conclusion**

Long-term negligible adverse impacts to vegetation would result from Rose Park Trail Option A due to continuing use of social trails. The result of cumulative impacts projects would be long-term benefits to vegetation in Rock Creek Park. When combined with the No Action Alternative, the effect of cumulative impacts projects would be long-term beneficial impacts to vegetation.

**4.5.2. IMPACTS OF THE ACTION ALTERNATIVES AND OPTIONS****4.5.2.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 2: TRAIL RESURFACING**

Alternative 2 proposes multiple improvements to rehabilitate and enhance the existing Rock Creek Park multi-use trail, including new connections to neighboring trails, drainage and erosion controls, improved bridge crossings and safety improvements. This alternative would resurface the Rock Creek Park multi-use trail at its existing six-foot to 10-foot widths. In addition, Alternative 2 would resurface the Piney Branch Parkway trail to a varying width of six to eight feet. During construction, the proposed grading and excavation activities would cause short-term minor adverse impacts to vegetation in small localized areas. Any disturbed areas would be stabilized and re-vegetated following construction in accordance with BMPs. All re-seeding and planting would be done in accordance with an NPS approved planting plan in order to fulfill functional and aesthetic requirements of Rock Creek Park.

Under Alternative 2, the existing vegetation surrounding the Rock Creek Park multi-use trail would experience small, localized effects. Primarily, the proposed action under Alternative 2 is trail resurfacing, which would require no removal of vegetation. However, the proposed new trail connections and drainage improvements would require the removal of existing vegetation in small areas. Based on visual observations of the vegetative community, many of the species within the improvement areas are invasive, non-native plants. Therefore, because these species provide little value, the removal of existing vegetation in small areas would have long-term negligible adverse impacts.

No large, mature trees in the trail corridor would be removed. ***One large tree is proposed for removal along Beach Drive, near the intersection with Piney Branch Parkway due to its proximity to the road and trail.*** However, construction activities would have the potential to effect critical root zones of the trees. In order to preserve the trees, tree protection devices and other BMPs would be employed to protect the critical root zone. These measures include the installation of tree protection fencing prior to construction, site access limitations, protective treatments for exposed roots, and construction supervision by a project arborist. Results of the tree protection measures would vary, as site conditions and proposed trail construction varies throughout the trail corridor. Therefore, because Alternative 2 would result in a range of impacts to large trees, long-term negligible to minor adverse impacts would occur.

### **Cumulative Impacts**

The same projects would contribute to cumulative impacts as described previously under Alternative 1. Beneficial impacts would result from reforestation, riparian planting, and wetland creation. Although Alternative 2 would contribute negligible to minor adverse impacts to the cumulative effect of projects in the region, cumulative impacts to vegetation would still be beneficial.

### **Conclusion**

Long-term negligible to minor adverse impacts would result from Alternative 2, due to the removal of vegetation, and potential impacts to tree roots within the trail corridor. Based on the overall effects of regional projects, cumulative impacts to vegetation in Rock Creek Park would be beneficial when combined with the effects of Alternative 2.

#### **4.5.2.2. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 3 (PREFERRED ALTERNATIVE): TRAIL RESURFACING AND WIDENING**

Alternative 3 proposes multiple improvements to rehabilitate and enhance the existing Rock Creek Park multi-use trail, including new connections to neighboring trails, drainage and erosion controls, improved bridge crossings and safety improvements. In addition to these improvements, Alternative 3 includes widening of the Rock Creek Park multi-use trail to a width of six to 10 feet depending on the environmental or physical constraints. Resurfacing of the Piney Branch Parkway trail to a varying width of six to eight feet is also included in this Alternative. During construction, the proposed grading and excavation activities would cause short-term minor adverse impacts to vegetation in small localized areas. Any disturbed areas would be stabilized and re-vegetated following construction in accordance with BMPs. All re-seeding and planting would be done in accordance with an NPS approved planting plan in order to fulfill functional and aesthetic requirements of Rock Creek Park.

Under Alternative 3, ***approximately 16 trees would be removed to clear space for trail widening. In addition, the critical root zones of approximately 679 trees are located within the proposed widening area. Where trees are removed, or damaged beyond repair, trees would be replaced at a 1:1 ratio. Funding for tree replacement would be provided by DDOT/FHWA, and would be carried out in accordance with NPS standards.*** Tree protection measures and BMPs would be employed during construction to minimize the extent of vegetation removal and to limit impacts to critical root zones. Results of the tree protection measures would vary, as site conditions and proposed trail construction varies throughout the trail corridor. Other disturbed vegetation, resulting from construction access and grading for drainage improvements, would be re-vegetated following construction activities. Therefore, because Alternative 3 would result in a range of impacts to large trees, long-term negligible to minor adverse impacts would occur.

Most of the improvements proposed by Alternative 3 would be constructed in the area occupied by the existing Rock Creek Park multi-use trail. However, proposed widening and improvements would require paving of an additional 2.16 acres of ground surface. Existing vegetation in the proposed widening area consists primarily of maintained grasses. The trail widening and drainage improvements would result in the removal of vegetation, but the area of vegetation loss is very small in comparison to the size of the project area. Therefore Alternative 3 would result in long-term minor adverse impacts to vegetation due to minor clearing of vegetation, and conversion of vegetated areas to trail use.

### **Cumulative Impacts**

The same projects would contribute to cumulative impacts as described previously under Alternative 1. Beneficial impacts would result from reforestation, riparian planting, and wetland creation. Although trail resurfacing and widening proposed by Alternative 3 would contribute a minor adverse impact to the cumulative effect of projects in the region, cumulative impacts to vegetation would still be beneficial.

### **Conclusion**

Alternative 3 would result in long-term minor adverse impacts due to the loss of herbaceous vegetation from trail widening, and potential impacts to tree roots within the trail corridor. Based on the overall effects of regional projects, cumulative impacts to vegetation in Rock Creek Park would be beneficial when combined with the effects of Alternative 3.

#### **4.5.2.3. PEIRCE MILL TRAIL SPUR OPTION B (PREFERRED ALTERNATIVE): EIGHT-FOOT PAVED TRAIL SPUR**

Option B represents resurfacing of the trail to a standard eight-foot width. Approximately 0.22 acres would be paved in the area of the existing social trail. Short-term negligible adverse effects to water quality would occur as a result of transport of sediments from the disturbed soils during construction. Erosion and sediment control measures and other BMPs would minimize the risk of sediment transport to waterbodies.

During construction, various grading and excavation activities could cause short-term minor adverse impacts to vegetation in small localized areas. Any disturbed areas would be stabilized and re-vegetated according to an NPS approved planting plan following construction, thereby mitigating the impacts and resulting in no long-term effect on vegetation.

Proposed pavement of the Peirce Mill trail spur would require paving of approximately 0.22 acres of ground surface. Most of the proposed widening area consists of bare soils; however there are maintained grasses in the area. Because the effect of pavement would be a permanent loss of vegetation in these areas, long-term minor adverse impacts would occur under Option B.

No large, mature trees in the Peirce Mill spur area would be removed. However, construction activities would have the potential to effect critical root zones of the trees. In order to protect the trees, special measures would be employed during construction. These measures include the installation of tree protection fencing prior to construction, site access limitations, protective treatments for exposed roots, and construction supervision by a project arborist. Results of the tree protection measures would vary, as site conditions and proposed trail construction varies throughout the trail spur. Therefore, because Option B would result in a range of impacts to large trees, long-term negligible to minor adverse impacts would occur.

### Cumulative Impacts

The same projects would contribute to cumulative impacts as described previously under Alternative 1. Beneficial impacts would result from reforestation, riparian planting, and wetland creation. Although the eight-foot trail spur proposed by Option B would contribute a minor adverse impact to the cumulative effect of projects in the region, cumulative impacts to vegetation would still be beneficial.

### Conclusion

Option B would result in long-term minor adverse impacts due to the loss of herbaceous vegetation from trail widening, and potential impacts to tree roots within the trail corridor. Based on the overall effects of regional projects, cumulative impacts to vegetation in Rock Creek Park would be beneficial when combined with the effects of Option B.

#### 4.5.2.4. ROSE PARK TRAIL OPTION B (*PREFERRED ALTERNATIVE*): SIX-FOOT RESURFACED TRAIL

Under Rose Park Trail Option B, the existing trail would be resurfaced at a standard width of six feet, trail connections would be improved to P Street and M Street, and the social trail would be paved. Under Option B, an increase of *0.07* acres of impervious surface would result from paving the social trail. During construction, various grading and excavation activities would cause short-term minor adverse impacts to vegetation in small localized areas for construction access and staging. Construction access and staging areas would be located in appropriate areas and any wooded areas would be restricted. Disturbed areas would be stabilized and re-vegetated according to a NPS approved planting plan following construction, thereby mitigating the impacts.

The proposed action under Option B is trail resurfacing, which would require no removal of vegetation. However, 0.20 acres of ground surface would be paved in the location of the existing social trail. Vegetation in the social trail area is sparse, but consists of maintained grasses. The paving of areas outside of the existing paved trail would result in the loss of vegetation. The area of vegetation loss would be very small in comparison to the project area, and would result in long-term minor adverse impacts.

No large, mature trees in the Rose Park area would be removed under Option B. However, construction activities would have the potential to effect critical root zones of the trees. In order to preserve the trees, special measures would be employed in the critical root zone. These measures include the installation of tree protection fencing prior to construction, site access limitations, protective treatments for exposed roots, and construction supervision by a project arborist. *Special measures would be taken to preserve the large oak tree near the Dumbarton Street playground area. Measures could include development of a tree save plan by an arborist or licensed tree expert, or installation of tree protection fencing. Impacts to the tree's root system would be avoided to the extent possible. If necessary, alternative trail materials and/or narrowing of the trail would be utilized to preserve the tree's roots.* Results of the tree protection measures would vary, as site conditions and proposed trail construction varies throughout the Rose Park trail. Therefore, because Option B would result in a range of impacts to large trees, long-term negligible to minor adverse impacts would occur.

### Cumulative Impacts

As described under Alternative 1, benefits to vegetative resources would result from reforestation, riparian planting, and wetland creation under the Rock Creek Watershed Implementation Plan. Although the six-foot trail proposed by Option B would contribute a minor adverse impact to the cumulative effect of projects in the region, cumulative impacts to vegetation would still be beneficial.

## Conclusion

Long-term minor adverse impacts to vegetation would result from Rose Park Trail Option B, due to a loss of vegetated area and potential impacts to tree roots along the trail. The result of cumulative impacts projects would be long-term benefits to vegetation in Rock Creek Park. When combined with Option B, cumulative impacts projects would still result in long-term beneficial impacts to vegetation.

### 4.5.2.5. ROSE PARK TRAIL OPTION C: EIGHT-FOOT RESURFACED TRAIL

Under Rose Park Trail Option C, the existing trail would be resurfaced at a standard width of eight feet, trail connections would be improved to P Street and M Street, and the social trail would be paved. An increase of approximately *0.16* acres of impervious surface would result from paving the social trail, and from widening of the trail. During construction, various grading and excavation activities would cause short-term minor adverse impacts to vegetation in small localized areas for construction access and staging. Construction access and staging areas would be located in appropriate areas and any wooded areas would be restricted. Disturbed areas would be stabilized and re-vegetated according to a NPS approved planting plan following construction, thereby mitigating the impacts.

Existing vegetation in the proposed trail widening area consists of maintained grasses, while the social trail pathway is mostly comprised of grasses and bare soil. Because the effect of pavement would be a permanent loss of vegetation in these areas, long-term minor adverse impacts would occur under Option C.

No large, mature trees in the Rose Park area would be removed under Option C. However, construction activities would have the potential to effect critical root zones of the trees. In order to preserve the trees, special measures would be employed in the critical root zone. These measures include the installation of tree protection fencing prior to construction, site access limitations, protective treatments for exposed roots, and construction supervision by a project arborist. *Special measures would be taken to preserve the large oak tree near the Dumbarton Street playground area. Measures could include development of a tree save plan by an arborist or licensed tree expert, or installation of tree protection fencing. Impacts to the tree's root system would be avoided to the extent possible. If necessary, alternative trail materials and/or narrowing of the trail would be utilized to preserve the tree's roots.* Results of the tree protection measures would vary, as site conditions and proposed trail construction varies throughout the Rose Park trail. Therefore, because Option C would result in a range of impacts to large trees, long-term negligible to minor adverse impacts would occur.

## Cumulative Impacts

As described under Alternative 1, benefits to vegetative resources would result from reforestation, riparian planting, and wetland creation under the Rock Creek Watershed Implementation Plan. Although the eight-foot trail proposed by Option C would contribute a minor adverse impact to the cumulative effect of projects in the region, cumulative impacts to vegetation would still be beneficial.

## Conclusion

Long-term minor adverse impacts to vegetation would result from Rose Park Trail Option C, due to a loss of vegetated area and potential impacts to tree roots along the trail. The result of cumulative impacts projects would be long-term benefits to vegetation in Rock Creek Park. When combined with Option C, cumulative impacts projects would still result in long-term beneficial impacts to vegetation.

## 4.6. WILDLIFE

### Methodology and Assumptions

According to NPS *Management Policies* (NPS 2006), the restoration of native wildlife species is a high priority. Management goals for wildlife include maintaining components and processes of naturally evolving park ecosystems, including natural abundance, diversity, and the ecological integrity of plants and animals. Information on Rock Creek Park wildlife was taken from park documents and records.

### Study Area

The study area for impacts to wildlife includes the limit of disturbance required for the proposed improvements, as well as potential wildlife habitats throughout Rock Creek Park. Wildlife habitat areas in the park consist of forested uplands, stream channels and maintained open spaces. For cumulative impacts, the study area is Rock Creek Park.

### Impact Thresholds

*Negligible:* There would be no observable or measurable impacts to native species, their habitats, or the natural processes sustaining them. Impacts would be well within natural fluctuations.

*Minor:* Impacts would be detectable, but they would not be expected to be outside the natural range of variability of native species' populations, their habitats, or the natural processes sustaining them. Mitigation measures, if needed to offset adverse effects, would be simple and successful.

*Moderate:* Breeding animals of concern are present; animals are present during particularly vulnerable life-stages, such as migration or juvenile stages; mortality or interference with activities necessary for survival can be expected on an occasional basis, but is not expected to threaten the continued existence of the species in the park unit. Impacts on native species, their habitats, or the natural processes sustaining them would be detectable, and they could be outside the natural range of variability. Mitigation measures, if needed to offset adverse effects, would be extensive and likely successful.

*Major:* Impacts on native species, their habitats, or the natural processes sustaining them would be detectable, and they would be expected to be outside the natural range of variability. Key ecosystem processes might be disrupted. Loss of habitat might affect the viability of at least some native species. Extensive mitigation measures would be needed to offset any adverse effects and their success would not be guaranteed.

*Duration:* **Short-term** – Recovers in less than 1 year; **Long-term** – Takes more than 1 year to recover.

### 4.6.1. IMPACTS OF THE NO ACTION ALTERNATIVE AND OPTIONS

#### 4.6.1.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 1: NO ACTION

The No Action Alternative represents a continuation of the existing operations and maintenance of the Rock Creek Park multi-use trail.

#### Aquatic Wildlife

Potential impacts to aquatic wildlife would occur under the No Action Alternative in the form of continuing erosion of the Rock Creek and Piney Branch streambanks. Excess sediments are known to negatively impact aquatic ecosystems. A number of benthic macroinvertebrate species depend on channel substrates for spawning and feeding. Overloading of the channel bottom causes degradation of benthic habitat, resulting in a

reduction of benthic diversity and abundance. Sedimentation also causes degradation of fish spawning areas. In severe cases, fish mortality is caused by the smothering or suffocation of fish. Under the No Action Alternative, erosive conditions would persist in several locations adjacent to the Rock Creek Park multi-use trail. The negative effects associated with these conditions would be negligible, due to the relative magnitude of the watershed. As a result, long-term negligible adverse impacts to aquatic wildlife would occur.

### **Terrestrial Wildlife**

Rock Creek Park provides habitat for a variety of woodland and riparian wildlife species that can tolerate urban conditions. Rock Creek Park is recognized as a prime birding site, especially for migrants and seasonal visitors. Under Alternative 1, woodland and riparian habitat within the Rock Creek Park multi-use trail corridor would remain the same. The continuing deterioration of the trail corridor is not expected to result in appreciable losses of habitat in the form of individual large trees or wooded areas.

Currently, human activities on the Rock Creek Park multi-use trail result in small disturbances to terrestrial wildlife. Generally, terrestrial wildlife species of Rock Creek have adapted to the disturbances. Based on the predictability of human actions on the trail, and the resiliency of the park's species, continuation of the existing trail condition would not result in a measureable impact to terrestrial wildlife. Therefore, because small disturbances to terrestrial wildlife would continue, the No Action Alternative would have long-term negligible adverse impacts.

### **Cumulative Impacts**

Regional projects would have long-term beneficial impacts to wildlife, by improving existing aquatic habitat. The Blagden Avenue Hiker/Biker trail (NPS 2008), Klinge Valley trail (DDOT 2010b), Rock Creek Watershed Implementation Plan (DDOE 2010), and Clean Rivers project (DC Water 2011c) would all improve water quality and aquatic habitat conditions. The installation of a fish passage structure at Peirce Mill has resulted in increased aquatic habitat for certain aquatic species (Friends of Peirce Mill 2008). Additional projects which would remove barriers to fish passage are proposed under the Rock Creek Watershed Implementation Plan.

Terrestrial wildlife would experience short-term negligible adverse impacts as a result of the regional projects. Construction activities would cause wildlife to avoid the construction areas, but the wildlife is expected to return following construction. In the long-term, terrestrial habitat area may increase due to reforestation under projects such as the Rock Creek Watershed Implementation Plan.

Under the No Action Alternative, the effect on wildlife would consist of long-term negligible adverse impacts to aquatic and terrestrial organisms. Impacts associated with projects in the vicinity of Rock Creek would result in long-term beneficial impacts to aquatic wildlife and long-term negligible adverse impacts to terrestrial wildlife. Combining the No Action Alternative and regional projects, cumulative long-term beneficial impacts to aquatic wildlife would occur due to the relative magnitude of improvements to aquatic habitat. Cumulative long-term negligible adverse impacts to terrestrial wildlife would occur, due to the continuing human activity in Rock Creek Park.

### **Conclusion**

Under the No Action Alternative, erosive conditions would persist in several locations adjacent to Rock Creek. As a result, long-term negligible adverse impacts to aquatic wildlife would occur. Due to small disturbances associated with human activity on the trail, there would be long-term negligible adverse impacts to terrestrial wildlife. Although the No Action Alternative would contribute a small adverse impact to aquatic and terrestrial



wildlife, the combined effect of regional projects would still provide a beneficial impact to aquatic wildlife. The cumulative effect on terrestrial wildlife would be a long-term negligible adverse impact.

#### **4.6.1.2. PEIRCE MILL TRAIL SPUR OPTION A: NO ACTION**

Option A proposes no changes to existing habitat in the Peirce Mill trail spur area. Aquatic and terrestrial wildlife would experience no displacement under this option. Due to small disturbances associated with human activity on the social trail, there would be long-term negligible impacts to terrestrial wildlife. Implementation of Option A would result in no impacts to aquatic wildlife.

##### **Cumulative Impacts**

Alternative 1 describes regional projects which would result in cumulative impacts to wildlife. No cumulative impacts to aquatic wildlife would result from regional projects and Peirce Mill Trail Spur Option A. When combined with the effects of regional projects, terrestrial wildlife would experience a cumulative long-term negligible adverse impact.

##### **Conclusion**

No impacts to aquatic wildlife would occur under Peirce Mill Trail Spur Option A. Long-term negligible adverse impacts to terrestrial wildlife would occur. When combined with the effects of regional projects, there would be long-term negligible adverse impacts to terrestrial wildlife, and no impacts to aquatic wildlife.

#### **4.6.1.3. ROSE PARK TRAIL OPTION A: NO ACTION**

Option A proposes no changes to existing habitat in the Rose Park area. Aquatic wildlife is absent from Rose Park. Terrestrial wildlife inhabitants of the park would experience no displacement under Option A. Due to small disturbances associated with human activity on the trail, there would be long-term negligible impacts to terrestrial wildlife. No impacts to aquatic wildlife would occur.

##### **Cumulative Impacts**

Alternative 1 describes regional projects which would result in cumulative impacts to wildlife. No cumulative impacts to aquatic wildlife would result from regional projects and Rose Park Trail Option A. When combined with the effects of regional projects, terrestrial wildlife would experience a cumulative long-term negligible adverse impact.

##### **Conclusion**

No impacts to aquatic wildlife would occur under Rose Park Trail Option A. Long-term negligible adverse impacts to terrestrial wildlife would occur. When combined with the effects of regional projects, there would be long-term negligible adverse impacts to terrestrial wildlife, and no impacts to aquatic wildlife.

### **4.6.2. IMPACTS OF THE ACTION ALTERNATIVES AND OPTIONS**

#### **4.6.2.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 2: TRAIL RESURFACING**

Alternative 2 proposes multiple improvements to rehabilitate and enhance the existing Rock Creek Park multi-use trail including new connections to neighboring trails, drainage and erosion controls, improved bridge crossings and safety improvements. This alternative would resurface the Rock Creek Park multi-use trail at its existing six-foot to 10-foot widths. In addition, Alternative 2 includes resurfacing the Piney Branch Parkway trail to a varying width of six-eight feet, depending on physical and environmental constraints.

### **Aquatic Wildlife**

Construction of Alternative 2 would require ground disturbances, which would expose soils in the project area. Erosion and sediment control measures and other BMPs would be used to prevent soil movement into nearby stream channels. Alternative 2 would also improve drainage infrastructure along the Rock Creek Park multi-use trail. The improvement would have a long-term beneficial effect on aquatic wildlife by reducing sediment release into Rock Creek and its tributaries, resulting in increased aquatic habitat quality.

### **Terrestrial Wildlife**

Alternative 2 would result in disturbance to wildlife during construction activities, and would result in the removal of vegetation in small localized areas. *Construction activities would temporarily increase noise levels, but DDOT would require that construction noise be within allowable limits established by the District. DDOT will continue coordination with the National Zoo during the design phases to ensure that construction activities are acceptable and would not cause unacceptable negative impacts to the Zoo patrons and animals.* During construction, larger terrestrial wildlife would likely avoid the immediate area by moving to habitable areas nearby. Some smaller species such as insects, reptiles and amphibians may be impacted by construction activities, including impacts to habitat. Vegetative disturbance would be minor, and would be limited to the area immediately adjacent to existing trails. No rare habitat areas are known to exist in the project area; therefore no rare habitat areas would be disturbed. Because of the small size of the impact and short construction duration, Alternative 2 would result in short-term and long-term negligible adverse impacts to terrestrial wildlife.

In summary, Alternative 2 would result in long-term beneficial impacts to aquatic wildlife due to stabilization of riparian areas. Short-term and long-term negligible adverse impacts to terrestrial wildlife would occur due to disturbance during construction and minor loss of vegetation.

### **Cumulative Impacts**

Cumulative impacts projects are described under Alternative 1. Beneficial impacts would result from improvements to the aquatic habitat of Rock Creek and its tributaries. Negligible impacts would result from regional projects with regard to terrestrial habitats. Combining Alternative 2 and regional projects, cumulative long-term beneficial impacts to aquatic wildlife would occur and long-term negligible adverse impacts to terrestrial wildlife would occur.

### **Conclusion**

Under Alternative 2, construction activities would result in soil disturbance and the potential for sediment transport to Rock Creek. The stabilization of the existing trails and drainage improvement would result in some conversion of vegetation to trail use. Therefore, Alternative 2 would have short-term negligible adverse impacts to aquatic resources, but long-term beneficial impacts. Long-term negligible adverse impacts to terrestrial wildlife would occur due to the removal of vegetation. Cumulative long-term beneficial impacts to aquatic wildlife would occur and long-term negligible adverse impacts to terrestrial wildlife would occur.

#### **4.6.2.2. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 3 (PREFERRED ALTERNATIVE): TRAIL RESURFACING AND WIDENING**

Alternative 3 proposes multiple improvements to rehabilitate and enhance the existing Rock Creek Park multi-use trail, including new connections to neighboring trails, drainage and erosion controls, improved bridge crossings and safety improvements. In addition to these improvements, Alternative 3 includes widening of the Rock Creek Park multi-use trail to a minimum width of six feet where there are environmental or physical

constraints and a maximum width of 10 feet where environmentally feasible. Resurfacing of the Piney Branch Parkway trail to a varying width of six-eight feet is also included.

### **Aquatic Wildlife**

Indirect impacts to aquatic resources would occur due to increased potential for soil erosion during construction activities. Erosion and sediment control measures and other BMPs would be implemented as needed to control soil erosion and to protect receiving water bodies. As a result, short-term negligible adverse impacts would occur to aquatic habitat in Rock Creek and its tributaries from Alternative 3.

Alternative 3 also includes improvements to drainage infrastructure along the Rock Creek Park multi-use trail. The improvement would have a long-term beneficial effect on aquatic wildlife by reducing sediment release into Rock Creek and its tributaries, resulting in increased aquatic habitat quality.

### **Terrestrial Wildlife**

Alternative 3 would result in disturbance to wildlife during construction activities, and would result in the removal of vegetation in small localized areas. *Construction activities would temporarily increase noise levels, but DDOT would require that construction noise is within allowable limits established by the District.* During construction, larger terrestrial wildlife would likely avoid the immediate area by moving to habitable areas nearby. Some smaller species such as insects, reptiles and amphibians may be impacted by construction activities, including impacts to habitat. Vegetative disturbance would be minor, and would be limited to the area immediately adjacent to existing trails. No rare habitat areas are known to exist in the project area; therefore no rare habitat areas would be disturbed. Because of the small size of the impact and short construction duration, Alternative 3 would result in short-term and long-term negligible adverse impacts to terrestrial wildlife.

### **Cumulative Impacts**

Cumulative impacts projects are described under Alternative 1. Beneficial impacts would result from improvements to the aquatic habitat of Rock Creek and its tributaries. Negligible impacts would result from regional projects with regard to terrestrial habitats. Combining Alternative 3 and regional projects, cumulative long-term beneficial impacts to aquatic wildlife would occur and long-term negligible adverse impacts to terrestrial wildlife would occur.

### **Conclusion**

Under Alternative 3, construction activities would result in soil disturbance and the potential for sediment transport to Rock Creek. The stabilization of the existing trails and drainage improvement would result in some conversion of vegetation to trail use. Therefore, Alternative 3 would have short-term negligible adverse impacts to aquatic resources, but long-term beneficial impacts. Long-term negligible adverse impacts to terrestrial wildlife would occur due to the removal of vegetation. Cumulative long-term beneficial impacts to aquatic wildlife would occur and long-term negligible adverse impacts to terrestrial wildlife would occur.

#### **4.6.2.3. PEIRCE MILL TRAIL SPUR OPTION B (PREFERRED ALTERNATIVE): EIGHT-FOOT PAVED TRAIL SPUR**

Option B would resurface the existing social trail between Broad Branch Road and Peirce Mill, which would result in 0.22 acres of pavement. The proposed improvement would result in earth disturbance during construction, which would increase the potential for sediments to enter Rock Creek, thereby affecting aquatic habitat. Erosion and sediment control measures and BMPs would be established prior to earth disturbance

activities to minimize the risk of adverse effects to the aquatic resources. As a result, short-term negligible adverse impacts would occur to aquatic habitat in Rock Creek and its tributaries under Option B.

During construction, terrestrial wildlife would likely avoid the immediate area by moving to habitable areas nearby. Vegetative disturbance would be minor, and would be limited to the area of the existing social trail. The social trail area supports only sparse vegetation as a result of continued trampling of vegetation and soil compaction. No rare habitat areas are known to exist in the project area; therefore no rare habitat areas would be disturbed. Because of the short construction duration and the negligible effects to terrestrial vegetation, Alternative 3 would result in short-term and long-term negligible adverse impacts to terrestrial wildlife.

### **Cumulative Impacts**

The impact of past, present and reasonably foreseeable future projects is described under the No Action Alternative. Aquatic wildlife would benefit from the improvement of habitat conditions in Rock Creek and its tributaries. Impacts to terrestrial habitat would be negligible. When combined with the impacts of constructing the Peirce Mill trail spur, cumulative long-term beneficial impacts to aquatic wildlife would occur and long-term negligible adverse impacts to terrestrial wildlife would occur.

### **Conclusion**

Peirce Mill Trail Spur Option B would result in ground disturbance which would have a short-term negligible impact on aquatic species due to the potential increase in sediment transport. Short- and long-term negligible adverse impacts to terrestrial wildlife would result from construction activities due to losses of terrestrial wildlife habitat. Cumulative long-term beneficial impacts to aquatic wildlife would occur, and cumulative long-term negligible adverse impacts to terrestrial wildlife would occur under Option B.

#### **4.6.2.4. ROSE PARK TRAIL OPTION B (PREFERRED ALTERNATIVE): SIX-FOOT RESURFACED TRAIL**

Under Option B, indirect impacts to aquatic resources would occur due to increased potential for soil erosion during construction activities. Erosion and sediment control measures and other BMPs would be implemented as needed to control soil erosion and to protect receiving water bodies. Due to the soil disturbance, short-term negligible adverse impacts would occur to aquatic habitat in Rock Creek and its tributaries from Option B.

During construction, terrestrial wildlife would likely avoid the immediate area by moving to habitable areas nearby, causing a short-term negligible adverse impact to wildlife. The proposed paving of the social trail would result in loss of sparse vegetation groundcover, but would not obstruct the movements of local terrestrial wildlife throughout the maintained open space. Trees within Rose Park would not be affected allowing continued opportunity for wildlife to use the park for foraging, nesting and hiding sites, which are well-suited to terrestrial wildlife needs. No rare or unique habitat is known to exist in the proposed pavement area. Due to the removal of vegetation, long-term negligible adverse impacts to terrestrial wildlife associated with Option B would occur.

### **Cumulative Impacts**

The impact of past, present and reasonably foreseeable future projects is described under the No Action Alternative. Aquatic wildlife would benefit from improvement of habitat conditions in Rock Creek and its tributaries. Impacts to terrestrial habitat would be negligible. When combined with the impacts of resurfacing the Rose Park trail and paving the social trail, cumulative long-term beneficial impacts to aquatic wildlife would occur and long-term negligible adverse impacts to terrestrial wildlife would occur.

## **Conclusion**

Construction activities under Options B would involve soil disturbance which would result in short-term negligible adverse impacts to aquatic species due to the increased risk of sediment transport. Terrestrial wildlife would experience short-term negligible adverse impacts due to disturbances during construction. The loss of vegetation would result in long-term negligible adverse impacts to terrestrial wildlife. Adding the effects of Option B to regional projects would result in cumulative long-term beneficial impacts to aquatic wildlife and cumulative long-term negligible adverse impacts to terrestrial wildlife.

### **4.6.2.5. ROSE PARK TRAIL OPTION C: EIGHT-FOOT RESURFACED TRAIL**

Under Option C, indirect impacts to aquatic resources would occur due to increased potential for soil erosion during construction activities. Erosion and sediment control measures and other BMPs would be implemented as needed to control soil erosion and to protect receiving water bodies. Due to the soil disturbance, short-term negligible adverse impacts would occur to aquatic habitat in Rock Creek and its tributaries from Option C.

During construction, terrestrial wildlife would likely avoid the immediate area by moving to habitable areas nearby, causing a short-term negligible adverse impact to wildlife. The proposed paving of the social trail would result in loss of sparse vegetation groundcover, but would not obstruct the movements of local terrestrial wildlife throughout the maintained open space. Trees within Rose Park would not be affected. No rare or unique habitat is known to exist in the proposed pavement area. Due to the removal of vegetation, long-term negligible adverse impacts to terrestrial wildlife associated with Option C would occur.

## **Cumulative Impacts**

The impact of past, present and reasonably foreseeable future projects is described under the No Action Alternative. Aquatic wildlife would benefit from improvement of habitat conditions in Rock Creek and its tributaries. Impacts to terrestrial habitat would be negligible. When combined with the impacts of resurfacing the Rose Park trail and paving the social trail, cumulative long-term beneficial impacts to aquatic wildlife would occur and long-term negligible adverse impacts to terrestrial wildlife would occur.

## **Conclusion**

Construction activities under Options C would involve soil disturbance which would result in short-term negligible adverse impacts to aquatic species due to the increased risk of sediment transport. Terrestrial wildlife would experience short-term negligible adverse impacts due to disturbances during construction. The loss of vegetation would result in long-term negligible adverse impacts to terrestrial wildlife. Adding the effects of Option C to regional projects would result in cumulative long-term beneficial impacts to aquatic wildlife and cumulative long-term negligible adverse impacts to terrestrial wildlife.

## **4.7. CULTURAL RESOURCES**

### **4.7.1. GENERAL METHODOLOGY AND ASSUMPTIONS**

The NPS categorizes cultural resources by the following categories: archeological resources, cultural landscapes, historic districts and structures, museum objects, and ethnographic resources. Only impacts on archeological resources, cultural landscapes, and historic districts and structures are of potential concern for this project.

The analyses of impacts on cultural resources that are presented in this section respond to the requirements of both NEPA and Section 106 of the NHPA. In accordance with the Advisory Council's regulations

implementing Section 106 (36 CFR Part 800, *Protection of Historic Properties*), impacts on cultural resources were identified and evaluated by (1) determining the APE; (2) identifying cultural resources present in the APE that are listed in or eligible to be listed in the NRHP (i.e., historic properties); (3) applying the criteria of adverse effect to affected historic properties; and (4) considering ways to avoid, minimize, or mitigate adverse effects. The assessment of effects to cultural resources is also taking place in a series of meetings with the DC HPO, other interested federal agencies, and Consulting Parties invited by the DDOT and the NPS.

Under the implementing regulations for Section 106, a determination of either *adverse effect* or *no adverse effect* must also be made for affected historic properties. An adverse effect occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the NRHP (e.g., diminishing the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association). Adverse effects also include reasonably foreseeable effects caused by the proposal that would occur later, be farther removed in distance, or be cumulative (36 CFR 800.5). A determination of *no adverse effect* means there is either no effect or that the effect would not diminish, in any way, the characteristic of the cultural resource that qualify it for inclusion in the NRHP.

CEQ regulations and DO-12 of the NPS also call for a discussion of the appropriateness of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact: for example, reducing the intensity of an impact from major to moderate or minor. Any resultant reduction in intensity of impact due to mitigation, however, is an estimate of the effectiveness of mitigation under NEPA only. Cultural resources are nonrenewable resources and adverse impacts generally consume, diminish, or destroy the original historic material or form, resulting in a loss in the integrity of the resource that can never be recovered. Therefore, although actions determined to have an adverse effect under Section 106 may be mitigated, the effect remains adverse.

#### **4.7.2. STUDY AREA**

The overall study area for cultural resources is the APE as defined in accordance with Section 106 regulations (see the "Cultural Resources" section in "Chapter 3: Affected Environment").

### **4.8. HISTORIC STRUCTURES AND DISTRICTS**

#### **Methodology and Assumptions**

The NPS guidance for evaluating impacts, DO-12, (NPS 2001) requires that impact assessment be scientific, accurate, and quantified to the extent possible. For cultural resources, it is rarely possible to measure impacts in quantifiable terms; therefore, impact thresholds must rely heavily on the professional judgment of resource experts.

A summary is included in the impact analysis sections for cultural landscapes and historic districts and structures. The impact analysis is an assessment of the effect of the undertaking (implementation of the alternatives) on NRHP-eligible or listed cultural resources only, based upon the Advisory Council's criteria of adverse effect.

#### **Study Area**

The study area for cultural resources is the APE as defined by the NPS under Section 106 regulations (see the "Cultural Resources" section in "Chapter 3: Affected Environment"). As indicated in Chapter 3, the APE for this undertaking is a 200-foot band expanded as appropriate to capture key adjacent historic properties, which encompasses NPS reservations 339 (Rock Creek Park) and 360 (Rock Creek and Potomac Parkway), as well

as a portion of the Georgetown Historic District in northwest Washington DC. The APE was established by DDOT and the NPS after consultation with the DC HPO and Consulting Parties invited under the Section 106 process. For the purposes of evaluation, the proposed APE for historic resources includes the area from which the project site is visible, as well as resources that could be impacted due to changes in the character of the area (see the Cultural Resource Map in **Appendix D** showing individually listed historic properties, historic districts, and contributing features of the historic districts).

### Impact Thresholds

For a historic district or structure to be listed on the NRHP, it must possess significance (the meaning or value ascribed to the historic district or structure), and the features necessary to convey its significance must have integrity. For purposes of analyzing potential impacts on historic districts and structures, the thresholds of change for the intensity of an impact are defined as follows:

- Negligible:* The impact is at the lowest level of detection with neither adverse nor beneficial consequences. For purposes of Section 106, the determination of effect would be *no adverse effect*.
- Minor:* Adverse impact: Alteration of a pattern(s) or feature(s) of a historic district or structure listed on or eligible for the NRHP would not diminish the integrity of a character-defining feature(s) or the overall integrity of the historic property. For purposes of Section 106, the determination would be *no adverse effect*.
- Moderate:* Adverse impact: The impact would alter a character-defining feature(s) of a historic district or structure and diminish the overall integrity of that feature(s) of the historic property. For purposes of Section 106, the determination of effect would be *adverse effect*, but one that could be fairly easily avoided, minimized, or mitigated through an Agreement Document.
- Major:* Adverse impact: The impact would alter character-defining feature(s) of the historic district or structure and severely diminish the integrity of that feature(s) and the overall integrity of the historic property. For purposes of Section 106 the determination of effect would be *adverse effect* and would present serious difficulty to avoid, minimize, or mitigate through an Agreement Document.

*Duration* – **Short-term** impacts are equivalent to the period of construction; **Long-term** impacts last beyond the period of construction.

## 4.8.1. IMPACTS OF THE NO ACTION ALTERNATIVE AND OPTIONS

### 4.8.1.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 1: NO ACTION

The present use of the trail network is causing deterioration of the park grounds alongside the trail. Without taking action, these problems would persist and perhaps increase. Under the No Action Alternative, trail users would continue to leave the paved surfaces and create social paths due to difficulties navigating the narrow sections of the trails, particularly when passing other users going in opposite directions. Safety hazards, such as path misalignments, surface defects, sharp turns, steep slopes, and overgrowing vegetation also discourage people from staying on the trails. The new social paths established by users damage the surrounding grounds, existing circulation patterns, and views within the APE, all of which are character-defining features of the

National Register properties. In addition, sand and silt build-up damage the path in many locations, which would potentially distort the overall character of the trail.

In summary, the No Action Alternative would have a minor long-term adverse impact on historic resources due to the continued deterioration of the trail and its character-defining features.

### **Cumulative Impacts**

As described in the Rock Creek Park GMP, the Peirce Mill Rehabilitation project would have “a significant beneficial impact” where rehabilitation increases the trail system’s integrity (NPS 2007). Other projects identified in the Rock Creek Park GMP would also provide beneficial impacts. However, there would be no incremental impact as a result of No Action Alternative when combined with these improvements. Therefore, there would be no cumulative impact on historic resources and cultural landscapes within the APE.

### **Conclusion**

Under the No Action Alternative, problems of deterioration would persist, resulting in local direct and indirect long-term minor adverse impacts to the contributing circulation resources, green space, and views within the APE. However, these impacts would not be sufficient to diminish the overall park integrity. There would be no cumulative impact on historic resources and cultural landscapes within the APE as a result of the No Action Alternative. For purposes of Section 106, the determination of effect for the No Action Alternative would be *no adverse effect*.

#### **4.8.1.2. PEIRCE MILL TRAIL SPUR OPTION A: NO ACTION**

Under Option A, a new trail spur through Peirce Mill would not be inserted. The present use of social trails near Peirce Mill is causing deterioration of the park grounds. Trail users would continue to leave the paved surfaces and create social paths, damaging the surrounding grounds, and existing circulation patterns. Under the no action option, problems of deterioration would persist, resulting in local direct and indirect long-term minor adverse impacts.

### **Cumulative Impacts**

As described in the Rock Creek Park GMP, the Peirce Mill Rehabilitation project would have “a significant beneficial impact” where rehabilitation increases the trail system’s integrity (NPS 2007). Other projects identified in the Rock Creek Park GMP would also provide beneficial impacts. However, there would be no incremental impact as a result of No Action Alternative when combined with these improvements. Therefore, there would be no cumulative impact on historic resources and cultural landscapes within the APE.

### **Conclusion**

Under the No Action Alternative, problems of deterioration would persist, resulting in local direct and indirect long-term minor adverse impacts to the contributing circulation resources, green space, and views within the APE. However, these impacts would not be sufficient to diminish the overall park integrity. There would be no cumulative impact on historic resources and cultural landscapes within the APE as a result of the No Action Alternative. For purposes of Section 106, the determination of effect for the No Action Alternative would be *no adverse effect*.

#### **4.8.1.3. ROSE PARK TRAIL OPTION A: NO ACTION**

Under Option A, NPS would continue to maintain the existing Rose Park trail; the trail would not be widened and a new trail connection would not be inserted. The present use of social trails throughout Rose Park is causing deterioration of the park grounds. Trail users will continue to leave the paved surfaced and create



social paths, damaging the surrounding grounds, and existing circulation patterns. Under the no action option, problems of deterioration will persist, resulting in local direct and indirect long-term minor adverse impacts

### **Cumulative Impacts**

As described in the Rock Creek Park GMP, the Peirce Mill Rehabilitation project would have “a significant beneficial impact” where rehabilitation increases the trail system’s integrity (NPS 2007). Other projects identified in the Rock Creek Park GMP would also provide beneficial impacts. However, there would be no incremental impact as a result of No Action Alternative when combined with Option A for Rose Park. Therefore, Rose Park Trail Option A would not contribute to cumulative impacts.

### **Conclusion**

Under the No Action Alternative, problems of deterioration would persist, resulting in local direct and indirect long-term minor adverse impacts to the contributing circulation resources, green space, and views within the APE. However, these impacts would not be sufficient to diminish the overall park integrity. There would be no cumulative impact on historic resources and cultural landscapes within the APE as a result of the No Action Alternative. For purposes of Section 106, the determination of effect for the No Action Alternative would be *no adverse effect*.

## **4.8.2. IMPACTS OF THE ACTION ALTERNATIVES AND OPTIONS**

### **4.8.2.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 2: TRAIL RESURFACING**

All work proposed under Alternative 2 would be completed in accordance with *the Secretary of the Interior’s Standards for the Treatment of Historic Properties* in order to avoid and/or minimize any adverse impacts. This analysis includes actions common to all build alternatives, including spot improvements related to trail user and vehicular traffic separation; roadway crossing safety; new connections; minor trail realignments and grading; drainage and soil erosion; and *timber* retaining walls.

The spine of the trail network extends along the western side of the Rock Creek and Potomac Parkway and Beach Drive as it winds through Rock Creek to Peirce Mill, often following historic trail routes. The undertaking intends to maximize retention of the trail’s historic alignment to allow for a fuller interpretation of the historic usage of the park and parkway. Minor trail realignment and grading improvements would enhance sight distance and approaches along the trail to the south of Shoreham Drive, at Devil’s Chair Bridge, south of Peirce Mill, and south of Calvert Street. Due to their localized nature, minor trail realignments and grade improvements may slightly alter the character-defining features but would not diminish the overall integrity of the resource, thus having local direct and indirect long-term minor adverse impacts on contributing features.

The undertaking proposes to construct several new trail connectors to increase safety and trail connectivity. In some areas, this may include paving extant social trails. While new trail connectors would result in a small amount of increased paving, the connectors are proposed for a short span of the trail. To reduce adverse impacts to the park, all proposed trail connections would be the minimum span needed to achieve the stated goals and laid directly on the existing topography. New connectors would be consistent in material and design features with the existing trails and would not introduce new elements inconsistent with the park and parkway’s other features. The new connection improvements would be carefully laid out in order to leave plantings and views unaffected. The topography in the areas of some improvements may require minor re-grading for new connections. New paved connections through grassy areas and in areas previously undeveloped would have local direct and indirect long-term minor adverse impacts; however, formalizing and

paving extant social trails may provide a local indirect long-term beneficial impact by limiting damage to the green setting through which the trails run.

Two proposed paved trail sections would have the potential to affect contributing resources to the Rock Creek Park Historic District, including one along the existing social trail to the east of the Broad Branch/Grove 2 North parking area near Peirce Mill, which would join to the existing Rock Creek Park multi-use trail located immediately south of the parking area. According to the Revised 2003 Cultural Landscape Inventory (CLI) for Peirce Mill, the existing path follows the historic alignment of an early nineteenth-century wagon route between Peirce Mill and Blagden Mill, which was later used as a bridle path. The circulation routes surrounding Peirce Mill, one of the most significant cultural landscapes within the APE, reflect the evolving orientation of the landscape as it changed from a functional to recreational purposes. The CLI states that Peirce Mill's "current configuration of circulation systems . . . retains only limited integrity to all significant periods" due to alterations over the twentieth century. While the addition of a trail connection would slightly complicate the visitor's understanding of the mill's historic circulation system, and would introduce additional paving within the APE, the improvement would not alter the character-defining features or significantly diminish the overall integrity of the existing, historic trail. New paved connections near Peirce Mill's historic circulation would have local direct and indirect long-term, minor adverse impacts.

The second new paved trail section would be a new eight-foot trail along Piney Branch Parkway, a contributing resource in the Rock Creek Park Historic District. The parkway, a PWA project that addressed increased automobile use, was completed in 1935. The proposed extension would follow both paved and social trails between Beach Drive on the west and Arkansas Avenue on the east. The proposed trail would generally follow the alignment of a foot path that previously extended through this section of the park, according to a 1921 Office of Public Buildings and Grounds map. The path does not appear, however, on a 1942 map. The new portions of the trail would inject a considerable amount of paving alongside Piney Branch Parkway, but would formalize the existing social path, perhaps preventing further damage to the grassy border of the parkway by providing a permanent pathway for recreational users. New paving would involve no significant re-grading to minimize its impact. Due to the presence of paved portions of a trail in this area, the social trail, and the generally open character of the parkway, the new trail improvement at Piney Branch would have local direct and indirect long-term minor adverse impacts.

The bridges in the park and along the parkway are important components of the trails, providing ease of circulation throughout the network. Generally, construction around the footbridges, bridges, and tunnels may cause a short-term disruption in trail usage, as access to sections of the trail could temporarily be cut off. The proposed improvements to the Devil's Chair Bridge and the Shoreham Hill footbridge would only affect the approaches to the bridges and therefore would not disturb the significant creek abutments of either bridge. The alteration of the approach on the north side of the Devil's Chair Bridge would retain the existing concrete railing. The altered approaches would therefore have local direct and indirect long-term negligible adverse impacts on the Devil's Chair Bridge and the Shoreham Hill footbridge. Although the improvements at these two footbridges would slightly modify views of both the bridges and the trails, the work would not impair the historic bridle path alignments. Due to the minor nature of the alterations, the topography, and vegetation, the planned improvements would have negligible adverse impacts on views to and from nearby historic resources such as Oak Hill Cemetery.

Alternative 2 proposes to construct two new structures within the APE, including a new footbridge immediately adjacent to the west side of the existing Beach Drive Bridge and a new sidewalk along the western length of the Beach Drive tunnel. Since neither the bridge nor the tunnel are contributing resources to

the historic district and since materials used would be consistent with existing materials within the park, the this improvement would have local direct and indirect long-term minor adverse impacts on contributing resources in the APE.

Drainage and erosion issues would also be addressed by improvements under Alternative 2. Current creek conditions, erosion, and drainage issues south of the Beach Drive tunnel and south of Peirce Mill allow for frequent trail inundation near the creek's edge, causing silt to build up on the surface and erosion of the trail base. The proposed improvements would not only create safer conditions along the path; they would also increase the effective life of this trail section and nearby historic resources, including Peirce Mill. The drainage and erosion improvement south of the Beach Drive tunnel would reconstruct and armor the creek bank to stabilize the area. Details of the streambank stabilization method would be included in the final project design. Neither the tunnel nor the trail section in question is a contributing resource; however, the stabilization would be compatible with the undeveloped nature of the surroundings and as a result would have no adverse effect on historic resources.

An improvement south of Peirce Mill proposes to address erosion issues through a minor modification of the running vertical profile of the existing trail. If the improved re-grading is not sufficient to address the drainage and erosion issues and the culvert cannot handle the projected flow, a new culvert can be inserted adjacent to the existing culvert to supplement its flow capacity. Design details for a potential new culvert have not been finalized, however if it is necessary, the new culvert will utilize materials consistent with existing materials and will not introduce new elements inconsistent with the park and the parkway's other features. Some of the culverts along Beach Drive contribute to Rock Creek Park's significance, including culvert no. 67, which is in the vicinity of the proposed improvement south of Peirce Mill; however, the improvement would not remove or alter any of culvert no. 67's historic material. The drainage and erosion improvements will have no adverse effect on historic resources and would have the potential for beneficial effects in the stabilization of existing trail routes.

### **Cumulative Impacts**

The Peirce Mill Rehabilitation and other improvements identified in the Rock Creek Park GMP would have direct long-term beneficial impacts on the Rock Creek Park and Rock Creek and Potomac Parkway Historic Districts. The incremental impacts of these actions, when combined with the proposed action would result in long-term beneficial cumulative impacts. However, if construction of any of the improvements identified in the Rock Creek Park GMP were constructed concurrently with Alternative 2, a short-term minor adverse cumulative effect on historic districts and structures would result.

### **Conclusion**

Since its inception, the trail network throughout Rock Creek Park and the Rock Creek and Potomac Parkway has been adapted for new uses – from early service uses, to pedestrian promenades and carriage drives, to equestrian paths, and finally, to modern-day cycling, jogging, and skating. The Rock Creek Trail Rehabilitation project endeavors to carefully continue the evolution of the park and the parkway and aid in carrying out the recreational mission set forth in Rock Creek Park's 1890 enabling legislation and excerpted below:

*-The designated area is to be "perpetually dedicated and set apart as a public park or pleasure ground for the benefit and enjoyment of the people of the United States"*

*-The park is to “provide for the preservation from injury or spoliation of timber, animals, or curiosities within said park, and their retention in their natural condition, as nearly as possible”*

*-Park managers are directed to provide for public recreation, specifically to “layout and prepare roadways and bridle paths, to be used for driving and for horseback riding, respectively, and footways for pedestrians” (NPS, 1990).*

Overall, the impacts of Alternative 2 would be modest and the historic alignments and characteristics of the trails and their landscape setting are well respected. Alternative 2 proposes sensitive realignments and connecting paths that do not significantly alter historic trails. With the exception of the new trail along Piney Branch Parkway, all new trails will be introduced in short spans and would not significantly diminish the overall integrity of the historic resources or cultural landscapes within the APE. Cumulative impacts on the historic districts, historic resources, and cultural landscapes within the APE would be beneficial. The determination of effect for purposes of Section 106 for Alternative 2 would be *no adverse effects*.

#### **4.8.2.2. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 3 (PREFERRED ALTERNATIVE): TRAIL RESURFACING AND WIDENING**

All work proposed under Alternative 3 would be completed in accordance with the Secretary of the Interior’s Standards for the Treatment of Historic Properties in order to minimize any adverse impacts.

The spot improvements proposed under Alternative 3 are the same as those detailed in Alternative 2 and would therefore have the same impacts described in Alternative 2. In addition to these improvements, Alternative 3 proposes to resurface and widen the multi-use trail to a minimum of six feet at locations with existing physical and environmental constraints, and to a maximum of 10 feet for safety where environmentally feasible. This increase, which varies from one foot to four feet, has the greatest potential impact on the trail network itself. One of the stated goals of this project is to increase safety while maintaining the trail in a relatively unchanged state, due to the importance of the resource, which this widening should accomplish. Widening the trail would improve sight lines, reduce hazardous corners, and promote safe passing for users. In general, widening occurs in locations where visitor use has effectively extended the width of the existing path or created a parallel unpaved path. The trail widening would therefore pave bare dirt surfaces, or social trails, already used by visitors. Providing sufficient room for most users may provide a beneficial impact by decreasing damage to the green setting through which the trails run. It should be noted, however, that there are a few locations where social trails do not closely follow the existing paved surface. These unpaved trails would likely continue to be used, whether or not the paved surface is widened.

As stated previously, the additional paving required for widening the trail – both contributing and noncontributing sections – varies along the network between 1 and four feet. Because widening existing trails would introduce new paved surfacing, the action would be minimized in areas that follow historic paths. Since the topography of the park and parkway varies, a few small areas may have to be regraded if the paved trail is to be widened. As proposed, the widening and areas of minor regrading would potentially modify historic paths, but would preserve their character-defining features and would retain the curvilinear design without significantly diminishing the integrity of the resource.

In addition to the historic trail routes and green space in the park and parkway, the roadways in the study area, including Rock Creek and Potomac Parkway, Beach Drive, and Piney Branch Parkway, are contributing

features within the APE, with the potential to be affected by the proposed actions due to their proximity to the trail network. The winding roads are characterized by flanking trees and their canopies. Vegetation would be carefully protected in the widening plans; however, if trail widening results in the removal of vegetation, the action has the potential to open this space in certain locations, slightly altering views of the park and parkway and the visitors' experience.

For the reasons stated above, widening the trail between 1 and four feet may alter the character-defining features but would not diminish the overall integrity of the resource thus having local direct and indirect long-term minor adverse impacts. A local direct and indirect short-term negligible adverse impact to green space paralleling the trails may also occur if the paved trails are inaccessible during construction forcing visitors to use grassy areas for their recreation.

### **Cumulative Impacts**

The Peirce Mill Rehabilitation and other improvements identified in the Rock Creek Park GMP would have direct long-term beneficial impacts on the Rock Creek Park and Rock Creek and Potomac Parkway Historic Districts. If any of the improvements identified in the Rock Creek Park GMP were constructed concurrently with Alternative 2, a short-term minor adverse cumulative effect on historic districts and structures would result. However, the incremental impacts of these actions, when combined with the proposed action would result in long-term beneficial cumulative impacts.

### **Conclusion**

Alternative 3 would introduce additional paving within the APE, adding to the adverse impacts on the historic resources of Rock Creek Park and Rock Creek and Potomac Parkway. Due to the limited extent of the additional impacts and local direct long-term beneficial impact of replacing social trails with permanent trails, as compared to Alternative 2, the new work would not raise the intensity of Alternative 3's overall impact. The actions would not significantly diminish the overall integrity of any of the historic resources or cultural landscapes in the APE. The adverse impacts would therefore remain local direct long-term and minor. Cumulative impacts on the historic districts, historic resources, or cultural landscapes within the APE would be beneficial. The determination of effect for purposes of Section 106 for Alternative 3 would be *no adverse effects*.

#### **4.8.2.3. PEIRCE MILL TRAIL SPUR OPTION B (PREFERRED ALTERNATIVE): EIGHT-FOOT PAVED TRAIL SPUR**

Option B proposes a trail connection north of Peirce Mill and would pave a social trail presently connecting Peirce Mill to Broad Branch Road. According to the Revised 2003 Cultural Landscape Inventory (CLI) for Peirce Mill, the social trail partially follows the course of an early nineteenth-century millrace that was filled in by 1970 and then takes a diagonal path away from it. The circulation routes surrounding Peirce Mill, one of the most significant cultural landscapes within the APE, reflect the evolving orientation of the landscape as it changed from functional to recreational purposes. The CLI states that Peirce Mill's "current configuration of circulation systems on site retains only limited integrity to all significant periods." Materials to be removed and paving would be minimal. Since the paved path would partially follow the historic alignment of the millrace, additional alterations that further diminish the integrity of the millrace course would be minimized.

### **Cumulative Impacts**

Peirce Mill Trail Spur Option A would contribute no incremental impacts when combined with past, present, and future activities within the APE. Therefore there would be cumulative impacts under Option A. The

Peirce Mill Rehabilitation and would have direct long-term beneficial impacts. Peirce Mill Trail Spur Option B would have long-term beneficial impacts and, when combined with the Peirce Mill Rehabilitation, a long-term beneficial cumulative impact would result.

### **Conclusion**

Under Peirce Mill Trail Spur Option B, there would be a long-term beneficial impact due to the improvement of the deteriorated grounds where social trails exist. There would be additional long-term beneficial impacts created from engaging the public with the historic millrace alignment. Peirce Mill Trail Spur Option B would introduce additional paving within the APE; however, due to the limited extent of the additional impacts, the work would not significantly diminish the overall integrity of any historic resources or cultural landscapes in the APE. The adverse impacts would therefore remain local direct long-term and minor.

Peirce Mill Trail Spur Option A would not contribute to cumulative impacts. Under Peirce Mill Trail Spur Option B, a long-term beneficial cumulative impact to historic sites and districts would occur. The determination of effect for purposes of Section 106 for the Peirce Mill Trail Spur Options would be *no adverse effects*.

#### **4.8.2.4. ROSE PARK TRAIL OPTION B (PREFERRED ALTERNATIVE): SIX-FOOT RESURFACED TRAIL**

Under Option B, the Rose Park trail would be resurfaced along its current alignment to a continuous six-foot width and would also include connections to the existing Rock Creek Trail system to the north and M Street to the south to increase safety and access to the trail network. The widening of the trail would avoid damage to the existing trees and would retain the curvilinear design of the multi-use trail without significantly diminishing the integrity of the resource. The proposed connections at M Street would pave an existing social trail. The social trail runs through a group of small trees and is one of a number of social trails in the area providing links to the paved trail. The paving of the trail will avoid damage to the existing trees. Widening the trail and inserting new paved connections would have local direct and indirect long-term minor adverse impacts.

### **Cumulative Impacts**

There are no other identified past, present or future actions within geographic proximity that would potentially have an incremental impact to Rose Park. Therefore, there are no cumulative impacts.

### **Conclusion**

The action alternatives would introduce additional paving within the APE; however, due to the limited extent of the additional impacts, and the local direct long-term beneficial impact of replacing social trails with permanent trails, the work would not substantially raise the intensity of Option B's overall impact. The action would not significantly diminish the overall integrity of any of the historic resources in the APE. The adverse impacts would therefore remain local direct long-term and minor. The determination of effect for purposes of Section 106 would be *no adverse effects*. There would be no cumulative impacts.

#### **4.8.2.5. ROSE PARK TRAIL OPTION C: EIGHT-FOOT RESURFACED TRAIL**

Under Option C, the Rose Park trail would be resurfaced along its current alignment to a continuous eight-foot width and would also include connections to the existing Rock Creek Trail system to the north and M Street to the south. The impacts of Option C are similar to those described under Option B; however Option C would introduce additional paving within the APE, adding to the adverse impacts on the historic resources of Rose

Park but not raising the overall impact evaluation. Widening the trail and inserting new paved connections would have local direct and indirect long-term minor adverse impacts.

### **Cumulative Impacts**

There are no other identified past, present or future actions within geographic proximity that would potentially have an incremental impact to Rose Park. Therefore, there are no cumulative impacts.

### **Conclusion**

The action alternatives would introduce additional paving within the APE; however, due to the limited extent of the additional impacts, and the local direct long-term beneficial impact of replacing social trails with permanent trails, the work would not substantially raise the intensity of Option B or C's overall impact. The action would not significantly diminish the overall integrity of any of the historic resources in the APE. The adverse impacts would therefore remain local direct long-term and minor. The determination of effect for purposes of Section 106 would be *no adverse effects*. There would be no cumulative impacts.

## **4.9. CULTURAL LANDSCAPES**

### **Study Area**

Cultural landscapes, as defined by *The Secretary of the Interior's Standards for the Treatment of Historic Properties: Guidelines for the Treatment of Cultural Landscapes* (NPS 1992), consist of "a geographic area (including both cultural and natural resources and the wildlife or domestic animals therein) associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values." The Rock Creek Park administrative unit encompasses the last major natural landscape in the District. The area comprising the park was little modified by human interaction prior to its creation as a park. Since that time, the park has balanced the preservation and maintenance of the valley's natural and cultural resources with the recreational and transportation requirements of modern Washington, DC while incorporating the highest cultural and aesthetic values. As such, Rock Creek Park is considered a significant cultural and historic landscape.

In 1997, the NPS began a cultural landscape inventory of Rock Creek Park in order to more effectively document and manage the qualities and attributes of the park's component landscapes and cultural features that make it significant and worthy of preservation (National Park Service 1998, revised 2003). The results of that inventory concluded that Rock Creek Park met the criteria for listing in the NRHP as a historic designed landscape. In addition, the inventory determined that two component landscapes of the park, Linnaean Hill (including the Peirce-Klinge Mansion) and the Peirce Mill contribute to the significance of the Rock Creek Park cultural landscape, and thus comprise individually eligible landscape elements.

### **Impact Thresholds**

For an historic district, structure, or cultural landscape to be listed in the NRHP, it must possess significance and the features which convey its significance must have integrity. For purposes of evaluating potential impacts on historic districts and structures, the thresholds of change are defined as follows:

*Negligible:* The impact is at the lowest level of detection with neither adverse nor beneficial consequences. For Section 106 of the NHPA, the determination of effect would be *no adverse effect*.

*Minor:* Adverse Impact: - Alteration of the patterns or features of a historic district or structure would not diminish the integrity of the character-defining features or the overall integrity of the historic property. For Section 106, the determination would be *no adverse effect*.

*Moderate:*        Adverse Impact: - The project would alter the character-defining features of the historic district or structure and diminish the integrity of the features of the historic property. The determination of effect for Section 106 would be an adverse effect, but one that could be avoided, minimized or mitigated.

*Major:*         Adverse Impact: - The project would alter the character-defining features of the historic district or structure and severely diminish the integrity of the features and the overall integrity of the historic property. For purposes of Section 106, the determination of effect would be *adverse effect* and the effects would be difficult to avoid, minimize or mitigate.

## **4.9.1. IMPACTS OF THE NO ACTION ALTERNATIVE AND OPTIONS**

### **4.9.1.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 1: NO ACTION**

Under the No Action Alternative, the multi-use trail would not be widened or otherwise improved causing the park grounds flanking the trail to continue to deteriorate. Trail users would continue to leave the paved surfaces and create social paths due to difficulties navigating the narrow sections of the trails, particularly when passing other users going in opposite directions. Safety hazards, such as path misalignments, surface defects, sharp turns, steep slopes, and overgrowing vegetation also discourage people from staying on the trails. The new social paths established by users damage the existing circulation patterns, and views within the APE, all of which are character-defining features of the National Register properties. In addition, sand and silt deposition would continue to damage the path in many locations, which would potentially distort the overall character of the trail.

In summary, the No Action Alternative would have a minor long-term impact to cultural landscapes due to the continued deterioration of the trail, and the natural setting of Rock Creek Park.

#### **Cumulative Impacts**

There would be no incremental impact as a result of No Action Alternative when combined with these improvements. Therefore, there would be no cumulative impact on historic resources and cultural landscapes within the APE.

#### **Conclusion**

Under the No Action Alternative, problems of deterioration would persist, resulting in local direct and indirect long-term minor adverse impacts to the contributing circulation resources, green space, and views within the APE. However, these impacts would not be sufficient to diminish the overall park integrity. There would be no cumulative impacts under the No Action Alternative. For purposes of Section 106, the determination of effect for the No Action Alternative would be *no adverse effect*.

### **4.9.1.2. PEIRCE MILL TRAIL SPUR OPTION A: NO ACTION**

Under Option A, a new trail spur through Peirce Mill would not be inserted. The present use of social trails near Peirce Mill is causing deterioration of the park grounds. Trail users would continue to leave the paved surfaces and create social paths, damaging the surrounding grounds, and existing circulation patterns. Under the No Action option, problems of deterioration would persist, resulting in local direct and indirect long-term minor adverse impacts.



### **Cumulative Impacts**

As described in the Rock Creek Park GMP, the Peirce Mill Rehabilitation project would have “a significant beneficial impact” where rehabilitation increases the trail system’s integrity (NPS 2007). Other projects identified in the Rock Creek Park GMP would also provide beneficial impacts. However, there would be no incremental impact as a result of No Action Alternative when combined with these improvements. Therefore, there would be no cumulative impact on cultural landscapes within the APE.

### **Conclusion**

Under the No Action Alternative, problems of deterioration would persist, resulting in local direct and indirect long-term minor adverse impacts to the contributing circulation resources, green space, and views within the APE. However, these impacts would not be sufficient to diminish the overall park integrity. There would be no cumulative impact on cultural landscapes within the APE as a result of the No Action Alternative. For purposes of Section 106, the determination of effect for the No Action Alternative would be *no adverse effect*.

#### **4.9.1.3. ROSE PARK TRAIL OPTION A: NO ACTION**

Rose Park is assessed in this EA because it is located within the APE and is a contributing resource to the Georgetown Historic District; however, *since the trail in Rose Park is an existing feature in the landscape, Rose Park Trail Option A would not have an effect on the cultural landscape of Rose Park or Rock Creek and Potomac Parkway.*

## **4.9.2. IMPACTS OF THE ACTION ALTERNATIVES AND OPTIONS**

### **4.9.2.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 2: TRAIL RESURFACING AND ALTERNATIVE 3 (PREFERRED ALTERNATIVE): TRAIL RESURFACING AND WIDENING**

The two Action Alternatives would implement the same spot improvements; however, Alternative 3 would widen the existing trail in certain areas. The Action Alternatives would result in improved safety, user accessibility, and erosion control within a historical significant park and cultural landscape. Improvements proposed in the Action Alternatives would be modest and would aid in carrying out the recreational mission set forth in Rock Creek Park’s 1890 enabling legislation.

The trail network throughout the park is a significant component of Rock Creek Park’s circulation system, and as such, is a contributing feature of the park’s cultural landscape. The trails have historically provided Washingtonians access to the park and their continued use and evolution represents the long tradition of recreational activities offered within the park. The undertaking proposes sensitive realignments to the trails and connecting paths that do not significantly alter the cultural landscape. With the exception of the new trail along Piney Branch Parkway, all new trails would be introduced in short spans. Any re-grading, widening, or trail connections would respect and retain the curvilinear design of the multi-use trail – a character-defining feature of the resource. New trail surfaces would be compatible with the historic character of the circulation network in color and materials and would not detract from the natural setting. These actions would not significantly diminish the integrity of the trail network and thus would have local direct and indirect long-term minor adverse impacts on the trail network.

The wooded quality of Rock Creek Park is intrinsic to its natural setting and is a character-defining feature of the park. While landscape plans would be developed with sensitivity to the cultural landscape and in accordance with NPS policies, the Action Alternatives would remove a small amount of vegetation and may affect a limited number of mature trees. The removal of vegetation has the potential to open this space in certain locations, slightly altering views of the park and parkway and the visitors' experience; however, the overall integrity of the resource would not be diminished due to the limited effect on vegetation and the measures to avoid vegetation loss through design. For these reasons, vegetation removal would have local direct and indirect long-term minor adverse impacts.

### **Cumulative Impacts**

Cumulative impacts of Rock Creek Park GMP and the Peirce Mill Rehabilitation, in combination with Action Alternatives for the current undertaking, would have direct long-term beneficial impacts on the cultural landscape. Construction activity resulting from these projects would result in a short-term minor adverse cumulative effect on the cultural landscape depending on the duration and extent of construction.

### **Conclusion**

Since its inception, the trail network throughout Rock Creek Park and the Rock Creek and Potomac Parkway has been adapted for new uses – from early service uses, to pedestrian promenades and carriage drives, to equestrian paths, and finally, to modern-day cycling, jogging, and skating. The Rock Creek Park Multi-use Trail Rehabilitation project endeavors to carefully continue the evolution of the park and the parkway and aid in carrying out the recreational mission set forth in Rock Creek Park's 1890 enabling legislation as excerpted below:

*-The designated area is to be “perpetually dedicated and set apart as a public park or pleasure ground for the benefit and enjoyment of the people of the United States”*

*-The park is to “provide for the preservation from injury or spoliation of timber, animals, or curiosities within said park, and their retention in their natural condition, as nearly as possible”*

*-Park managers are directed to provide for public recreation, specifically to “layout and prepare roadways and bridle paths, to be used for driving and for horseback riding, respectively, and footways for pedestrians” (Bushong 1990).*

Action Alternatives 2 and 3 would temporarily close sections of the trail while construction is underway, creating short-term minor adverse impacts. In the long term, the rehabilitation project under Alternatives 2 and 3 would seem to provide a balance of local long-term direct and indirect minor adverse impacts and local long-term direct and indirect beneficial impacts within the APE. Adverse impacts would include the introduction of new paving in previously unpaved areas and areas of re-grading. Due to modest trail realignments and re-grading, these actions would have minor adverse impacts on views in the immediate vicinity of the work. However, the actions would have beneficial impacts, including increased longevity of the trails, decreased damage to the trails by formalizing social trails, and improved safety for all park users. Overall, the impacts of the Action Alternatives would be modest, and the historic alignments and characteristics of the trails and their cultural landscape setting are well respected. The undertaking proposes sensitive realignments and connecting paths that do not significantly alter historic trails. With the exception of the new trail along Piney Branch Parkway, all new trails will be introduced in short spans and would not significantly diminish the overall integrity of the historic resources or cultural landscapes within the APE. Cumulative impacts on the historic districts, historic resources, and cultural landscapes within the APE would be beneficial. The determination of effect for purposes of Section 106 for Action Alternatives 2 and 3 would be *no adverse effects*.

#### **4.9.2.2. PEIRCE MILL SPUR OPTION B (PREFERRED ALTERNATIVE): EIGHT-FOOT PAVED TRAIL SPUR**

Option B proposes a trail connection north of Peirce Mill and would pave a social trail presently connecting Peirce Mill to Broad Branch Road. According to the Revised 2003 Cultural Landscape Inventory (CLI) for Peirce Mill, the social trail partially follows the course of an early nineteenth-century millrace that was filled in by 1970. The circulation routes surrounding Peirce Mill, one of the most significant cultural landscapes within the APE, reflect the evolving orientation of the landscape as it changed from functional to recreational purposes. The CLI states that Peirce Mill's "current configuration of circulation systems on site retains only limited integrity to all significant periods." Since the paved path would partially follow the historic alignment of the millrace, additional alterations that further diminish the integrity of the millrace course would be minimized. The Peirce Mill Cultural Landscape Report prepared in 2009 identified the new trail in the preferred treatment.

Under Option B, there would be a long-term beneficial impact due to the improvement of the deteriorated grounds where social trails exist. There would be additional long-term beneficial impacts created from engaging the public with the historic millrace alignment. While the proposed improvement would introduce additional paving within the APE, due to the limited extent of the additional impacts, the work would not significantly diminish the overall integrity of the cultural landscapes within the APE. The adverse impacts would remain local, direct, long-term, and minor.

#### **Cumulative Impacts**

Cumulative impacts of this action, in combination with Alternative 2 or 3 for the current undertaking would therefore have direct long-term beneficial impacts on Rock Creek Park and Peirce Mill, a component landscape of the park. The rehabilitation of Peirce Mill would have long-term beneficial impacts. Construction activity resulting from these projects would result in a short-term minor adverse cumulative effect on cultural landscapes depending on the duration and extent of construction. Cumulative impacts of the Peirce Mill Spur Options, in combination with the No-Action Alternative for the current undertaking would therefore primarily have direct long-term beneficial impacts on cultural landscapes within the APE.

#### **Conclusion**

Under Option B, there would be a long-term beneficial impact due to the improvement of the deteriorated grounds where social trails exist. There would be additional long-term beneficial impacts created from engaging the public with the historic millrace alignment.

The action alternative would introduce additional paving within the APE; however, due to the limited extent of the additional impacts, the work would not significantly diminish the overall integrity of the cultural landscapes in the APE. The adverse impacts would therefore remain local direct long-term and minor.

Cumulative impacts of this action would have direct long-term beneficial impacts on Rock Creek Park and Peirce Mill, a component landscape of the park. The determination of effect for purposes of Section 106 for the Peirce Mill Spur Options would be *no adverse effects*.

#### **4.9.2.3. ROSE PARK TRAIL OPTION B (PREFERRED ALTERNATIVE) AND C**

Rose Park is assessed in this EA because it is located within the APE and is a contributing resource to the Georgetown Historic District. *However, because the trail is an existing part of the park's landscape, the*

*proposed improvements would have a negligible impact on the overall integrity of the cultural landscape of Rose Park and the Rock Creek and Potomac Parkway.*

## 4.10. ARCHEOLOGICAL RESOURCES

### Methodology and Assumptions

Archeological resources within Rock Creek Valley have been shown to include potentially deeply buried resources as well as resources that are present at and exposed on the current land surface. Potential impacts to resources are assessed according to the extent the proposed alternatives would involve ground-disturbing activities such as excavation, grading, or vegetation removal. Analysis of possible impacts to archeological resources was based on a review of previous archeological studies, the nature of previously identified archeological sites, the consideration of the proposed design concepts, and other sources of information.

### Study Area

The APE for archeological resources is defined as that area within the project LOD between Pennsylvania Avenue to the south and Broad Branch Road to the north, inclusive of the Piney Branch Parkway trail and proposed connections to existing bicycle and pedestrian networks.

### Impact Thresholds

Impacts to archeological sites occur when proposed alternatives result in complete or partial destruction of the resource, and are equivalent to a loss of integrity as defined in Section 106 of NHPA. In determining the appropriate impact threshold, both the extent to which the proposed alternative results in a loss of integrity and the degree to which losses can be compensated by mitigating activities, including preservation or data recovery, are considered. Only those resources considered significant for listing in the NRHP are protected by federal regulations. Resources are eligible for listing in the NRHP if they meet one or more eligibility criteria (for archeological site, generally Criterion D, having the potential to provide information important to history or prehistory) and if they possess integrity.

For the analysis of impacts to archeological resources, the determination of the intensity of an impact is based on the foreseeable loss of integrity to known or potential resources. The analysis considers only the direct impacts of construction-related activities as the facility should have no ground-disturbing activities and no additional effects upon archeological resources under any of the alternatives under consideration upon completion of construction. However, all impacts are considered long term, in that the impact to an archeological resource will last past the period of construction. The definition of impact thresholds used in this analysis are:

*Negligible:* The lowest level of detection that would have neither adverse nor beneficial impacts. The determination of effect for Section 106 of NHPA would be no adverse effect.

*Minor:* Disturbance of archeological resources will result in little, if any, loss of site integrity. The determination of effect for Section 106 of NHPA would be no adverse effect.

*Moderate:* Site disturbance will result in a loss of integrity and a partial loss of the character-defining features and information potential that form the basis of the site's NRHP eligibility. Mitigation is accomplished by a combination of archeological data recovery and in-place preservation. The determination of effect for Section 106 of NHPA would be an adverse effect.

*Major:* The disturbances result in a loss of site integrity to the extent that the resource is no longer eligible for listing in the NRHP. The site's character-defining features and information potential are lost to the extent that archeological data recovery is the primary form of mitigation. The determination of effect for Section 106 of NHPA would be an adverse effect.

*Beneficial:* Beneficial impacts can occur when an archeological site is stabilized in its current condition to maintain its existing level of integrity or when an archeological site is preserved in accordance with the *Secretary of Interior's Standards for the Treatment of Historic Properties* (NPS 1992). The determination of effect for Section 106 of NHPA would be *no adverse effect*.

*Duration:* **Short-term** impacts last for the duration of construction-related activities while **long-term** impacts last beyond the proposed construction activities. All impacts to archeological sites are considered long-term impacts.

## **4.10.1. IMPACTS OF THE NO ACTION ALTERNATIVE AND OPTIONS**

### **4.10.1.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 1: NO ACTION**

Under the No Action Alternative, NPS would continue to care for the existing trails with spot repairs and maintenance initiated as needed. Under this alternative, there would be no impacts to archeological resources as maintenance and repairs would continue to be confined to the existing trail footprint. As none of these activities would involve considerable ground disturbance either within or adjacent to the existing trail, any existing archeological resources would remain undisturbed.

#### **Cumulative Impacts**

Because there is no impact to archeological resources as a result of the No Action Alternative, it would not contribute to the overall cumulative impact on archeological resources.

#### **Conclusion**

As no ground disturbing actions are anticipated under the No Action Alternative, selection of this alternative would have *no adverse effects* to archeological resources. Because there is no impact to archeological resources as a result of the No Action alternative, it would not contribute to the overall cumulative impact on archeological resources.

### **4.10.1.2. PEIRCE MILL TRAIL SPUR OPTION A: NO ACTION**

Under Option A, the social trail would remain unchanged. Because there would be no ground disturbance, any existing archeological resources would remain undisturbed, and there would be no impacts to archeological resources.

#### **Cumulative Impacts**

Because there is no impact to archeological resources as a result of Option A, the No Action Alternative would not contribute to the overall cumulative impact on archeological resources.

#### **Conclusion**

There would be no impact to archeological resources under Peirce Mill Trail Spur Option A. No cumulative impacts would occur.

#### **4.10.1.3. ROSE PARK TRAIL OPTION A: NO ACTION**

Under the No Action Alternative, the NPS would continue to existing management and maintenance practices for the existing Rose Park trail. There would be no impacts to archeological resources as no ground disturbing activities are anticipated. As none of these activities would involve ground disturbance, any existing archeological resources would remain undisturbed.

##### **Cumulative Impacts**

Because there is no impact to archeological resources as a result of Option A, the No Action Alternative would not contribute to the overall cumulative impact on archeological resources.

##### **Conclusion**

There would be no impact to archeological resources under Rose Park Trail Option A. No cumulative impacts would occur.

#### **4.10.2. IMPACTS OF THE ACTION ALTERNATIVES AND OPTIONS**

##### **4.10.2.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 2: TRAIL RESURFACING**

Under Alternative 2, the multi-use trail would be resurfaced at existing widths, spot improvements would be made for visitor use and safety, connections to existing bicycle and pedestrian networks would be included at Cathedral Avenue, Calvert Street, Connecticut Avenue, the Beach Drive tunnel sidewalk, P Street, Rose Park trail, and unpaved portions of Piney Branch Parkway trail would be paved to six feet at locations with environmental constraints and eight feet where environmentally feasible. These various actions and options are evaluated individually as they differ in the degree to which each might result in impacts to archeological resources.

##### **Resurfacing with Spot Improvements and Connections**

Under this alternative, no ground disturbance would occur with regard to the trail resurfacing to existing widths. Spot improvements are envisioned to include several minor trail realignments, drainage and erosion control improvements, street crossing improvements, *timber* retaining wall rehabilitation, and grade improvements. Given that the spot improvements are envisioned to be small-scale in nature, most such actions would entail little ground disturbance. For these actions and areas, the small scale of anticipated ground disturbance suggests that impacts to archeological resources would be negligible to minor and would involve the limited disturbance of near-surface deposits in relatively small areas. Partial loss of archeological sites under these scenarios would be negligible to minor.

Several spot improvements incorporate greater degrees of ground disturbance. Three spot improvement locations include grade improvements between Calvert Street and Connecticut Avenue, embankment stabilization north of Calvert Street, and drainage and erosion control improvements south of Tilden Street. These locations have not been surveyed for the presence of archeological sites. For these locations the restricted scale of anticipated ground disturbance suggests that impacts to potential archeological resources would be minor to moderate and would generally involve the disturbance of near-surface deposits. Partial loss of archeological sites under these scenarios would be minor to moderate.

Under Alternative 2, new connections from the existing Rock Creek Park multi-use trail to existing bicycle and pedestrian networks would be constructed at Cathedral Avenue, Calvert Street, Connecticut Avenue, the Beach Drive tunnel sidewalk, P Street, Rose Park trail, and Piney Branch Parkway trail. These areas have either been

included in intensive archival review projects (Rose Park and P Street), have been surveyed by pedestrian reconnaissance (Piney Branch Parkway trail and Beach Drive tunnel), or have not been investigated (Connecticut Avenue, Cathedral Avenue, and Calvert Street). No archeological sites have been found as a result of the limited archeological investigations conducted at the proposed connection locations. Areas adjacent to Rock Creek are generally characterized as having a moderate to high potential for the presence of precontact Native American archeological sites. Grading and vegetation removal to construct the proposed connections would impact potential archeological resources. Under this scenario the restricted scale of anticipated ground disturbance suggests that impacts to potential archeological resources would be minor to moderate and would generally involve the disturbance of near-surface deposits. Partial loss of archeological sites under these scenarios would be minor to moderate.

As the presence of NRHP-eligible archeological sites is at present unknown outside of 51NW001, and as final design plans are not available, only general strategies for the mitigation of adverse impacts can be outlined. It is the preferred mitigation strategy to avoid any disturbance to archeological sites by siting of the project component, including trail connector construction, grading, and spot improvements. The lead agencies would continue to coordinate with DC HPO on further archeological investigations or mitigation measures if necessary.

#### **Piney Branch Parkway Trail and Connections**

Under Alternative 2 the unpaved portions of Piney Branch Parkway trail would be paved to six feet at locations with environmental constraints and eight feet where environmentally feasible, and connections would be created to Beach Drive and Rock Creek Park multi-use trail at the west end and to the Arkansas Avenue and Taylor Avenue sidewalks at the east end. Most recently, this area has been investigated by a pedestrian walkover and shovel test and test unit excavations with the NRHP-listed archeological site 51NW001 (Fiedel et al.) Parkway trail APE and is a precontact Native American quarry site. Based on the presence of this site, there is a high probability for additional quarries or subsidiary sites in or near the project APE.

Grading and vegetation removal to widen the existing unpaved portion of the trail and construct the proposed connections could impact identified and potential archeological resources. Under this scenario the restricted scale of anticipated ground disturbance suggests that impacts to potential archeological resources would be minor to moderate and generally involve the disturbance of near-surface deposits. Partial loss of identified and potential archeological sites under these scenarios would be minor to moderate.

As the presence of NRHP-eligible archeological sites is at present unknown outside of the 51NW001 site area, and as final design plans are not available, only general strategies for the mitigation of adverse impacts can be outlined. It is the preferred mitigation strategy to avoid any disturbance to archeological sites by siting of the project component, including trail and connector construction. The lead agencies would continue to coordinate with DC HPO on further archeological investigations or mitigation measures if necessary.

#### **Cumulative Impacts**

Although past actions may have affected archeological resources, the present and reasonably foreseeable future actions listed in **Table 8** would have no impacts to archeological resources in the study area. The Rock Creek Park Multi-Use Trail Rehabilitation has the potential to impact potential archeological sites in areas that have not yet been surveyed for these resources. These include portions of spot improvements, trail connections, and the Piney Branch Parkway trail and connections. Therefore, Alternative 2 would increase negative cumulative impacts upon archeological resources within Rock Creek Park.

## Conclusion

Alternative 2 would resurface the trail to the existing width resulting in no ground-disturbing activities. However, spot improvements and selection of options for the creation of trail access spurs would result in limited and localized ground disturbing activities. In this instance avoidance, minimization, and mitigation within as yet unidentified archeological resources, would result in *no adverse effects*. Alternative 2 would increase negative cumulative impacts upon potential archeological resources within Rock Creek Park.

### **4.10.2.2. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 3 (PREFERRED ALTERNATIVE): TRAIL RESURFACING AND WIDENING**

Under Alternative 3, the multi-use trail would be resurfaced and widened to a minimum of six feet at locations with existing physical and environmental constraints and to a maximum of 10 feet where environmentally feasible, spot improvements would be made for visitor use and safety, connections to existing bicycle and pedestrian networks would be included at Cathedral Avenue, Calvert Street, Connecticut Avenue, the Beach Drive tunnel sidewalk, P Street, Rose Park trail, and Piney Branch Parkway trail would be constructed, and unpaved portions of Piney Branch Parkway trail would be paved to six feet at locations with environmental constraints and eight feet where environmentally feasible.

#### **Resurfacing with Spot Improvements and Connections**

Under this alternative, the existing Rock Creek Park multi-use trail would be resurfaced and widened to a minimum of six feet at locations with existing physical and environmental constraints, and to a maximum of 10 feet where environmentally feasible. The area from Harvard Street south to Pennsylvania Avenue currently ranges from less than six feet wide to maximally eight feet wide with the exception of a short section to either side of Massachusetts Avenue, which is currently 10 feet wide. For this area, intensive shovel test pit survey has been conducted in limited areas within the National Zoo and between Connecticut Avenue and Q Street. Areas south of Q Street have not been surveyed for archeological resources or have been investigated by intensive archival research. For these locations the restricted scale of anticipated ground disturbance, generally between two and four feet wide along the multi-use trail, suggests that impacts to potential archeological resources would be minor to moderate and would generally involve the disturbance of near-surface deposits. Partial loss of archeological sites under these scenarios would be minor to moderate.

In general, all paved areas north of Harvard Street to Broad Branch Road would either not require widening or widening would be two feet or less. These areas have been investigated for archeological resources either by intensive archival research or pedestrian reconnaissance. Two archeological sites, 51NW154 and 51NW008, neither of which have been evaluated for listing in the NRHP, have been located with the project APE north of Harvard Street. For the area north of Harvard Street and for archeological sites 51NW154 and 51NW008, the restricted scale of anticipated ground disturbance suggests that impacts to potential archeological resources or deposits would be minor to moderate and would generally involve the disturbance of near-surface deposits. Such impacts could range in intensity from minor to moderate depending on the nature of the potential archeological resources. Partial loss of archeological sites under these scenarios would be negligible to minor. One final archeological site, 51NW216, is the location of the Colored Union Benevolent Association Cemetery dated between 1870 and 1890. Because of the uncertainty of the location of all 7,500 interments within this cemetery, it is possible that the proposed trail widening would occur above graves. However, anticipated ground disturbance would be minimal and would not impact any interments. The final trail route would avoid all known graves.

In several areas, the proposed LOD is wider than those discussed above. These restricted areas include:



- West bank of Rock Creek north of Piney Branch Parkway
- West bank of Rock Creek between Piney Branch parkway and Porter Street, NW
- East Bank of Rock Creek south of Porter Street, NW
- East bank of Rock Creek north of Bluffs Bridge
- At Peirce Mill (51NW154)
- East bank of Rock Creek at the National Zoo
- West bank of Rock Creek between Calvert Street and Connecticut Avenue
- East bank of Rock Creek at Beach Drive tunnel
- At Shoreham Hill Footbridge
- West bank of Rock Creek at Devils Chair Bridge
- West Bank of Rock Creek at P Street Bridge

Impacts at these locations could range in intensity from minor to moderate depending on the nature of the potential archeological resources. Partial loss of archeological sites under these scenarios would be minor to moderate.

Several spot improvements incorporate greater degrees of ground disturbance. Three spot improvement locations include grade improvements between Calvert Street and Connecticut Avenue, embankment stabilization north of Calvert Street, and drainage and erosion control improvements south of Tilden Street. These locations have not been surveyed for the presence of archeological sites. For these locations the restricted scale of anticipated ground disturbance suggests that impacts to potential archeological resources would be minor to moderate and would generally involve the disturbance of near-surface deposits. Partial loss of archeological sites under these scenarios would be minor to moderate.

Under Alternative 3, new connections would be constructed from the existing Rock Creek Park multi-use trail to the existing bicycle and pedestrian networks at Cathedral Avenue, Calvert Street, Connecticut Avenue, the Beach Drive tunnel sidewalk, P Street, Rose Park trail, and Piney Branch Parkway trail. These areas have either been included in intensive archival review projects (Rose Park and P Street) or have been surveyed by pedestrian reconnaissance (Piney Branch Parkway trail and Beach Drive tunnel) or have not been investigated (Connecticut Avenue, Cathedral Avenue, and Calvert Street). No archeological sites have been found as a result of the limited archeological investigations conducted at the proposed connection locations. Areas adjacent to Rock Creek are generally characterized as having a moderate to high potential for the presence of precontact Native American archeological sites. Grading and vegetation removal to construct the proposed connections would impact potential archeological resources. Under this scenario the restricted scale of anticipated ground disturbance suggests that impacts to potential archeological resources would be minor to moderate and would generally involve the disturbance of near-surface deposits. Partial loss of archeological sites under these scenarios would be minor to moderate.

### **Piney Branch Parkway Trail and Connections**

Under Alternative 3 the unpaved portions of Piney Branch Parkway trail would be paved to six feet at locations with environmental constraints and eight feet where environmentally feasible, and connections would be created to Beach Drive and Rock Creek Park multi-use trail at the west end and to the Arkansas Avenue and Taylor Avenue sidewalks at the east end. Most recently, this area has been investigated by a pedestrian walkover and shovel test and test unit excavations with the NRHP-listed archeological site 51NW001 (Fiedel et al. 2008). Site 51NW001, the Piney Branch Quarry, is located adjacent to but north of the Piney Branch

Parkway trail APE and is a precontact Native American quarry site. Based on the presence of this site, there is a high probability for additional quarries or subsidiary sites in or near the project APE.

Grading and vegetation removal to widen the existing unpaved portion of the trail and construct the proposed connections could impact identified and potential archeological resources. Under this scenario the restricted scale of anticipated ground disturbance suggests that impacts to identified and potential archeological resources would be minor to moderate and generally involve the disturbance of near-surface deposits. Such impacts to other as yet undiscovered archeological resources could range in intensity from minor to moderate depending on the nature of the potential archeological resources. Partial loss of identified and potential archeological sites under these scenarios would be minor to moderate.

As the presence of NRHP-eligible archeological sites is at present unknown outside of the 51NW001 site area, and as final design plans are not available, only general strategies for the mitigation of adverse impacts can be outlined. It is the preferred mitigation strategy to avoid any disturbance to archeological sites by siting of the project component, including trail and connector construction. The lead agencies would continue to coordinate with DC HPO on further archeological investigations or mitigation measures if necessary.

### **Cumulative Impacts**

Although past actions may have affected archeological resources, the present and reasonably foreseeable future actions presented in **Table 8** would have no impacts to archeological resources in the study area. Alternative 3 has the potential to impact potential archeological sites in areas that have not yet been surveyed for these resources. These include portions of spot improvements, trail connections, and the Piney Branch Parkway trail and connections. Therefore, Alternative 3 would increase negative cumulative impacts upon archeological resources within Rock Creek Park.

### **Conclusion**

Alternative 3 would result in the widening and paving of the trail, the undertaking of spot improvements, and the possible selection of options for the creation of trail access spurs. All of these activities would result in limited and localized ground disturbing activities. In this instance avoidance, minimization, and mitigation within as yet unidentified archeological resources, would result in a determination of *no adverse effects*. Alternative 3 would increase negative cumulative impacts upon potential archeological resources within Rock Creek Park.

#### **4.10.2.3. PEIRCE MILL TRAIL SPUR OPTION B (PREFERRED ALTERNATIVE): EIGHT-FOOT PAVED TRAIL SPUR**

Under this option, the existing social trail would be paved to an eight-foot width from south of Broad Branch Road to Peirce Mill. Peirce Mill has been registered with DC HPO as archeological site 51NW154. The Peirce Mill archeological site has not been evaluated for listing in the NRHP. Grading and vegetation removal to widen the social trail could impact archeological deposits associated with the Peirce Mill, if present. Under this scenario the restricted scale of anticipated ground disturbance suggests that impacts to archeological resources associated with 51NW154 would be minor to moderate and generally involve the disturbance of near-surface deposits. Partial loss of archeological site deposits under these scenarios would be minor to moderate.

As 51NW154 has not been evaluated for listing in the NRHP, and as final design plans are not available, only general strategies for the mitigation of adverse impacts can be outlined. It is the preferred mitigation strategy to avoid any disturbance to archeological sites by siting of the project component, including trail connector

construction, grading, and spot improvements. The lead agencies would continue to coordinate with DC HPO on further archeological investigations or mitigation measures if necessary.

### **Cumulative Impacts**

Although past actions may have affected archeological resources, the present and reasonably foreseeable future actions presented in **Table 8** would have no impacts to archeological resources in the study area. The Peirce Mill Trail Spur Option B would involve paving within recorded archeological site 51NW154 that has the potential to impact archeological deposits. Therefore, the Peirce Mill Trail Spur Option B would increase negative cumulative impacts upon archeological resources within Rock Creek Park.

### **Conclusion**

Peirce Mill Trail Spur Option B would result in the paving of an existing social trail within a known resource, 51NW154, which has not been evaluated for listing in the NRHP. All of these activities would result in limited and localized ground disturbing activities. In this instance avoidance, minimization, and mitigation within known resource 51NW154, as well as yet unidentified archeological resources, would result in a determination of *no adverse effects*. Peirce Mill Trail Spur Option B would increase negative cumulative impacts upon the known archeological resource, 51NW154, within Rock Creek Park.

#### **4.10.2.4. ROSE PARK TRAIL OPTION B (PREFERRED ALTERNATIVE): SIX-FOOT RESURFACED TRAIL**

Under this option the existing Rose Park trail would be resurfaced and widened to six feet, and a new connection to M Street along an existing social trail would be created. Fehr (1981) and Robinson & Associates (1993) characterize areas adjacent to Rock Creek as having a moderate to high potential for the presence of precontact Native American archeological sites. Background research indicates that the areas considered under this option have not been surveyed for the presence of archeological resources. Grading and vegetation removal to widen the existing trail and construct the proposed connections could impact potential archeological resources. Under this scenario the restricted scale of anticipated ground disturbance suggests that impacts to archeological resources would be minor to moderate and generally involve the disturbance of near-surface deposits. Partial loss of archeological sites under these scenarios would be minor to moderate.

As the presence of NRHP-eligible archeological sites is at present unknown, and as final design plans are not available, only general strategies for the mitigation of adverse impacts can be outlined. It is the preferred mitigation strategy to avoid any disturbance to archeological sites by siting of the project component, including trail and connector construction and grading. The lead agencies would continue to coordinate with DC HPO on further archeological investigations or mitigation measures if necessary.

### **Cumulative Impacts**

Although past actions may have affected archeological resources, the present and reasonably foreseeable future actions presented in **Table 8** would have no impacts to archeological resources in the study area. As this APE has not been surveyed for the presence of archeological resources, the Rose Park Trail Option B has the potential to impact potential archeological sites. Trail paving has the potential to impact as yet unidentified archeological sites. Therefore, the Rose Park Trail Option B would increase negative cumulative impacts upon archeological resources within Rock Creek Park.

### **Conclusion**

Rose Park Trail Option B would result in the repaving and widening of an existing trail and the paving of connections in areas that have not been surveyed for the presence of archeological resources. All of these

activities would result in limited and localized ground disturbing activities. In this instance avoidance, minimization, and mitigation within as yet unidentified archeological resources would result in a determination of *no adverse effects*. Rose Park Trail Option B would increase negative cumulative impacts upon as yet unidentified archeological resources within Rock Creek Park.

#### **4.10.2.5. ROSE PARK TRAIL OPTION C: EIGHT-FOOT RESURFACED TRAIL**

Under this option the existing Rose Park trail would be resurfaced and widened to eight feet, and a new connection to M Street along an existing social trail would be created. Fehr (1981) and Robinson & Associates (1993) characterize areas adjacent to Rock Creek as having a moderate to high potential for the presence of precontact Native American archeological sites. Background research indicates that the areas considered under this option have not been surveyed for the presence of archeological resources. Grading and vegetation removal to widen the existing trail and construct the proposed connections could impact potential archeological resources. Under this scenario the restricted scale of anticipated ground disturbance suggests that impacts to archeological resources would be minor to moderate and generally involve the disturbance of near-surface deposits. Partial loss of archeological sites under these scenarios would be minor to moderate.

As the presence of NRHP-eligible archeological sites is at present unknown, and as final design plans are not available, only general strategies for the mitigation of adverse impacts can be outlined. It is the preferred mitigation strategy to avoid any disturbance to archeological sites by siting of the project component, including trail and connector construction and grading. The lead agencies would continue to coordinate with DC HPO on further archeological investigations or mitigation measures if necessary.

#### **Cumulative Impacts**

Although past actions may have affected archeological resources, the present and reasonably foreseeable future actions presented in **Table 8** would have no impacts to archeological resources in the study area. As this APE has not been surveyed for the presence of archeological resources, the Rose Park Trail Option C has the potential to impact potential archeological sites. Trail paving has the potential to impact as yet unidentified archeological sites. Therefore, the Rose Park Trail Option C would increase negative cumulative impacts upon archeological resources within Rock Creek Park.

#### **Conclusion**

Rose Park Trail Option C would result in the repaving and widening of an existing trail and the paving of connections in areas that have not been surveyed for the presence of archeological resources. All of these activities would result in limited and localized ground disturbing activities. In this instance avoidance, minimization, and mitigation within as yet unidentified archeological resources would result in a determination of *no adverse effects*. Rose Park Trail Option C would increase negative cumulative impacts upon as yet unidentified archeological resources within Rock Creek Park.

### **4.11. VISITOR USE AND EXPERIENCE**

#### **Methodology and Assumptions**

The potential impacts on the visitor's ability to experience the full range of trail usage and adjoining park amenities were analyzed by first examining the overall purposes and objectives of Rock Creek Park as stated by NPS in various park plans and documents. Then the potential changes in visitor use and experience proposed by the alternatives were evaluated by identifying changes in user safety, aesthetics or visual quality,

ability to navigate and access the trail unimpeded, and whether or how these projected changes would affect the desired visitor experience, to what degree, and for how long.

### **Study Area**

The study area for visitor use and experience is the trail and area immediately surrounding the trail. For cumulative impacts, the study area is Rock Creek Park.

### **Impact Thresholds**

The thresholds of change for the intensity of impacts on visitor use and experience are defined as follows:

*Negligible:* Changes in visitor use and/or experience would be below or at the level of detection. The visitor would not likely be aware of the impacts associated with the alternative.

*Minor:* Changes in visitor use and/or experience would be detectable, although the changes would be slight. The visitor would be aware of the impacts associated with the alternative, but the effects would be slight.

*Moderate:* Changes in visitor use and/or experience would be readily apparent. The visitor would be aware of the impacts associated with the alternative and would likely be able to express an opinion about the changes.

*Major:* Changes in visitor use and/or experience would be readily apparent. The visitor would be aware of the impacts associated with the alternative and would likely express a strong opinion about the changes.

*Duration:* **Short-term** – occurs only during the treatment action; **Long-term** – occurs after the treatment action.

## **4.11.1. IMPACTS OF THE NO ACTION ALTERNATIVE AND OPTIONS**

### **4.11.1.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 1: NO ACTION**

The No Action Alternative represents a continuation of current trail conditions and management practices. No improvements aside from regular maintenance activities performed by NPS would occur. Trail users would continue to experience disadvantageous conditions including an uneven, cracked trail surface, poor drainage, and substandard sightlines and grade changes. The No Action Alternative has the potential to cause usage of the trail to decrease over time. Aesthetic issues such as cracked and heaving pavement, and soil erosion and water ponding would continue to occur.

Under the No Action Alternative, multiple types of users would continue to compete for space along the trail. Especially where the trail is constructed at substandard widths, overcrowding of the trail presents a difficulty for pedestrians, bicyclists, runners, and those enjoying nature to safely pass one another. Therefore, due to the potential for accidents along narrow and overcrowded sections of the trail, the No Action Alternative would have long-term moderate adverse impacts on visitor use and experience.

### **Cumulative Impacts**

The Blagden Avenue Hiker/Biker trail (NPS 2008) and the Klinge Valley trail (DDOT 2010b) would both have beneficial impacts on visitor use and experience, by improving connectivity and access to the Rock Creek Park multi-use trail. The restoration of Peirce Mill (Friends of Peirce Mill 2008) would have a beneficial impact as this would provide Rock Creek Park visitors with educational and historical preservation opportunities. The Rock Creek Park GMP (NPS 2007) would also have a beneficial impact on visitor use and experience as the plan establishes long-term goals and outlines improvements to retain and improve the current

scope of visitor uses at the Park. Overall, long-term beneficial impacts would result from cumulative impacts projects on visitor use and experience. Although the No Action Alternative would contribute an adverse impact when combined with regional projects, there would still be long-term beneficial cumulative impacts to visitor use and experience based on these regional projects.

**Conclusion**

The No Action Alternative would result in long-term moderate adverse impacts on visitor use and experience, due to existing trail conditions and overcrowding of the trail, as well as aesthetic issues. Cumulative impacts under the No Action Alternative would be beneficial, based on the many cumulative impacts projects in Rock Creek Park with long-term benefits.

**4.11.1.2. PEIRCE MILL TRAIL SPUR OPTION A: NO ACTION**

Under Option A, the unpaved social trail from south of Broad Branch Road to Peirce Mill would remain unchanged. Currently, the Peirce Mill trail spur is an unmarked, unpaved pathway that is closer to Rock Creek than the Rock Creek Park multi-use trail. Leaving the spur unpaved would not have any noticeable beneficial or adverse impact on visitor use and experience, as trail users would not be prohibited from using the spur and would have the option to use the main stem of the Rock Creek Park multi-use trail.

**Cumulative Impacts**

Regional projects would have beneficial impacts to visitor use and experience, as described under Alternative 1. Because Peirce Mill Trail Spur Option A would not result in a beneficial or adverse impact, there would be no appreciable cumulative impact.

**Conclusion**

Peirce Mill Spur Option A would not have a noticeable impact on visitor use and experience as trail users would not be prohibited from using the unpaved spur and would have another trail option in the form of the main stem of Rock Creek Trail. Cumulative impacts would be beneficial based on the improvements provided by regional projects.

**4.11.1.3. ROSE PARK TRAIL OPTION A: NO ACTION**

Under Option A, no new construction would occur along the five-foot to six-foot wide section of the Rose Park trail between P Street, NW and M Street, NW. NPS would continue to maintain the trail in its existing state. The narrow trail width creates the potential for user conflict as it is hard to pass other users, especially those with strollers or bicyclists using trailers, while staying on the trail. Trail users on the main stem of Rock Creek Trail cannot safely access the Rose Park Trail as there is no existing direct connection. Unpaved trail spurs currently provide this connection but are disadvantageous as they meander through open spaces of Rose Park. Under Option A, the trail surface would remain cracked, narrow, and uneven. Rose Park Trail Option A would have a long-term minor adverse impact on visitor use and experience because of the cracked and uneven trail surface, and the narrow trail width.

**Cumulative Impacts**

Regional projects would have beneficial impacts to visitor use and experience, as described under Alternative 1. Although Rose Park Trail Option A would contribute a minor adverse impact, there would still be long-term beneficial cumulative impacts to visitor use and experience based on regional projects.

**Conclusion**

Rose Park Trail Option A would have a long-term minor adverse impact on visitor use and experience due to the cracked and uneven trail surface, and user conflicts resulting from the narrow trail width. Cumulative impacts would be beneficial based on the improvements provided by regional projects.

**4.11.2. IMPACTS OF THE ACTION ALTERNATIVES AND OPTIONS****4.11.2.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 2: TRAIL RESURFACING**

Under Alternative 2, the overall trail condition would be improved. This alternative includes resurfacing the trail at its existing varying width. A new trail section would be added immediately south of the Broad Branch/Grove 2 parking area allowing trail users to continue on Rock Creek Park multi-use trail without the interference of vehicles pulling in and out of parking spaces. The trail would be widened through the Beach Drive tunnel and along the Beach Drive Bridge over Rock Creek. Trails users would be allowed to continue safely on the trail during times when the National Zoo gates were closed. Trail users would also gain a better sense of safety as the tunnel trail section would be widened and physically separated from vehicular traffic. Widening the trail over the Rock Creek Bridge would also create a better sense of safety as the trail width would increase from three feet to **10** feet at the bridge. Users would be able to pass one another more easily. Under Alternative 2, improved road crossings would occur at five heavily traveled roadways including Broad Branch Road, Jewett Street, the National Zoo entrance, Shoreham Drive and P Street, NW.

The construction of Alternative 2 would have a short-term moderate adverse impact on visitor use and experience. Construction equipment and noise would distract from the park aesthetics and natural soundscape. The Rock Creek Park multi-use trail is heavily traveled on a daily basis and construction work would temporarily impede use of the trail. Trail users and drivers would be notified in advance of any closures or detours. Potential mitigations would include electronic signage, postings to the Rock Creek Park and DDOT websites and social network pages, and email blasts to interested parties identified during the planning process. These impacts, while adverse, would be short term and only last for the duration of construction.

Resurfacing of the trail would correct the uneven and cracked pavement, creating a smoother riding surface for trail users as well as improve aesthetics. The potential for user conflict especially in areas of narrow width would continue to occur under Alternative 2. On these narrow areas, trail users would have to slow down or go off the trail to allow the parties to pass, which would result in ruts and compacted soils along the trail. Resurfacing and improvements under Alternative 2 would have long-term beneficial impacts on visitor use and experience because potential user conflicts would be mitigated and the trail would be more aesthetically pleasing.

**Cumulative Impacts**

Regional projects would have beneficial impacts to visitor use and experience, as described under Alternative 1. Resurfacing and improvements under Alternative 2 would result in long-term beneficial impacts because the physical and aesthetic condition of the Rock Creek Park multi-use trail would be improved. Therefore, Alternative 2 would contribute to beneficial cumulative impacts on visitor use and experience when coupled with these past, present, and reasonably foreseeable actions.

**Conclusion**

The construction of Alternative 2 would have a short-term moderate adverse impact on visitor use and experience because construction would temporarily impede use of the trail. Resurfacing and improvements

under Alternative 2 would have a long-term beneficial impact on visitor use and experience due to physical and aesthetic improvements; however, the trail would remain at its current width. Long-term beneficial cumulative impacts would result for Alternative 2 in combination with regional projects.

#### **4.11.2.2. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 3 (PREFERRED ALTERNATIVE): TRAIL RESURFACING AND WIDENING**

Under Alternative 3, the trail would be resurfaced and widened to a minimum width of six feet and a maximum width of **10** feet. Widening the trail to a standard width would allow for multiple users, including those with bicycle trailers and strollers, to pass one another more easily on the trail. In addition, the overall trail condition would be improved. A new trail section would be added immediately south of the Broad Branch/Grove 2 parking area allowing trail users to continue on the Rock Creek Park multi-use trail without the interference of vehicles pulling in and out of parking spaces. The trail would be widened through the Beach Drive tunnel and along the Beach Drive Bridge over Rock Creek. Trails users would be allowed to continue safely on the trail during times when the National Zoo gates were closed. Trail users would also gain a better sense of safety as the tunnel trail section would be widened and physically separated from vehicular traffic. Widening the trail over the Rock Creek Bridge would also create a better sense of safety as the trail would increase from three feet to **10** feet. Under Alternative 3, improved road crossings would occur at five heavily traveled roadways including Broad Branch Road, Jewett Street, the National Zoo entrance, Shoreham Drive and P Street, NW.

The construction of Alternative 3 would have a short-term moderate adverse impact on visitor use and experience. Construction equipment and noise would distract from the park aesthetics and natural soundscape. The Rock Creek Park multi-use trail is heavily traveled on a daily basis and construction work would temporarily impede use of the trail. Trail users and drivers would be notified in advance of any closures or detours. Potential mitigations would include electronic signage, postings to the Rock Creek Park and DDOT websites and social network pages, and email blasts to interested parties identified during the planning process. Construction of Alternative 3 would take slightly longer than Alternative 2 since the trail would be widened. The construction impacts associated with Alternative 3, while adverse, would be short term and only last for the duration of construction.

Resurfacing of the trail would correct the uneven and cracked pavement, creating a smoother riding surface for trail users. Widening the trail would reduce the potential for user conflicts. Resurfacing and widening under Alternative 3 would have a long-term beneficial impact on visitor use and experience because potential user conflicts would be mitigated and the trail would be more aesthetically pleasing.

#### **Cumulative Impacts**

Regional projects would have beneficial impacts to visitor use and experience, as described under Alternative 1. Resurfacing and improvements under Alternative 3 would result in long-term beneficial impacts because the condition of the Rock Creek Park multi-use trail would be improved. Therefore, Alternative 3 would contribute to beneficial cumulative impacts on visitor use and experience when coupled with these past, present, and reasonably foreseeable actions.

#### **Conclusion**

The construction of Alternative 3 would have a short-term moderate adverse impact on visitor use and experience because construction would temporarily impede use of the trail. Resurfacing and improvements under Alternative 3 would have a long-term beneficial impact on visitor use and experience. Widening of the



trail would reduce the potential for user conflicts. Long-term beneficial cumulative impacts would result for Alternative 3 in combination with regional projects.

#### **4.11.2.3. PEIRCE MILL TRAIL SPUR OPTION B (*PREFERRED ALTERNATIVE*): EIGHT-FOOT PAVED TRAIL SPUR**

Currently, trail users in this area have a choice to either stay on the main trail or use the unpaved footpath that runs alongside Rock Creek. The resurfacing and widening of the unpaved footpath under Option B would have a long-term beneficial impact on visitor use and experience as trail users of multiple types would be given another trail option to experience the park's resources.

##### **Cumulative Impacts**

As described under Alternative 1, long-term beneficial impacts to visitor use and experience would result from the Blagden Avenue Hiker/Biker trail, the Klinge Valley trail, the restoration of Peirce Mill, and the Rock Creek GMP. Option B would contribute a small beneficial increment when combined with these past, present, and reasonably foreseeable actions because this option would provide improved access within Rock Creek Park.

##### **Conclusion**

The resurfacing and widening of the unpaved footpath under Option B would have a long-term beneficial impact on visitor use and experience as trail users of multiple types would be given another trail option to experience the park's resources. Cumulative impacts under Peirce Mill Trail Spur Option B would be beneficial.

#### **4.11.2.4. ROSE PARK TRAIL OPTION B (*PREFERRED ALTERNATIVE*): SIX-FOOT RESURFACED TRAIL**

Under Option B, the Rose Park trail would be resurfaced and widened to a uniform width of six feet. In addition, a direct connection to Rock Creek Trail and sidewalks on M Street and P Street would be constructed. With the new connection, the trail would no longer require usage of the P Street Ramp, a steep hillside with no sidewalk. While the trail would be widened to a consistent six-foot width, it would continue to present a challenge for multiple types of users to pass one another, especially those with strollers, bike trailers and wheelchairs. Option B would have a long-term beneficial impact on visitor use and experience, based on the trail resurfacing, widening, and access improvements.

##### **Cumulative Impacts**

As described under Alternative 1, long-term beneficial impacts to visitor use and experience would result from the Blagden Avenue Hiker/Biker trail, the Klinge Valley trail, the restoration of Peirce Mill, and the Rock Creek GMP. Rose Park Trail Option B would contribute a small beneficial increment when coupled with these past, present, and reasonably foreseeable actions. Cumulative impacts under Rose Park Trail Option B would be beneficial.

##### **Conclusion**

Option B would provide improved access from the Rock Creek Park multi-use trail to the Rose Park trail, and improvement of the trail condition. As a result, there would be long-term beneficial impacts to visitor use and experience. When combined with the beneficial impacts of regional projects, the cumulative impact of Option B on visitor use and experience would be beneficial.

#### **4.11.2.5. ROSE PARK TRAIL OPTION C: EIGHT-FOOT RESURFACED TRAIL**

Under Option C, the trail would be resurfaced and widened to a uniform width of eight feet. In addition, a direct connection to Rock Creek Trail and sidewalks on M Street and P Street would be constructed. With the new connection, the trail would no longer require usage of the P Street Ramp, a steep hillside with no sidewalk. An eight-foot trail width would provide multiple trail users with space to pass one another on the trail, reducing the potential for user conflicts. Option C would have a long-term beneficial impact on visitor use and experience, based on the trail resurfacing, widening, and access improvements.

#### **Cumulative Impacts**

As described under Alternative 1, long-term beneficial impacts to visitor use and experience would result from the Blagden Avenue Hiker/Biker trail, the Klinge Valley trail, the restoration of Peirce Mill, and the Rock Creek GMP. Rose Park Trail Option B would contribute a small beneficial increment when coupled with these past, present, and reasonably foreseeable actions. Cumulative impacts under Rose Park Trail Option C would be beneficial.

#### **Conclusion**

Option C would provide improved access from the Rock Creek Park multi-use trail to the Rose Park trail, improvement of the trail condition, and a wider trail. As a result, there would be long-term beneficial impacts to visitor use and experience. When combined with the beneficial impacts of regional projects, the cumulative impact of Option C on visitor use and experience would be beneficial.

### **4.12. HUMAN HEALTH AND SAFETY**

#### **Methodology and Assumptions**

The potential change in human health and safety proposed by the alternatives was evaluated by identifying changes in user safety including the user's ability to navigate and access the trail unimpeded.

#### **Study Area**

The study area for human health and safety is the Rock Creek Park multi-use trail within the project limits.

#### **Impact Thresholds**

The impact intensities for the assessment of impacts on health and safety follow. Where impacts on health and safety become moderate, it is assumed that current visitor satisfaction and safety levels would begin to decline, and some of the Park's long-term visitor goals would not be achieved.

*Negligible:* The effects would be at the lowest levels of detection and would not have an appreciable effect on the human health or safety.

*Minor:* The effect would be detectable but would not have an appreciable effect on human health and safety. If mitigation were needed, it would be relatively simple and would likely be successful.

*Moderate:* The effects would be readily apparent and result in noticeable effects to human health and safety on a local scale. If mitigation were needed, measures would likely be successful.

*Major:* The effects would be readily apparent and result in substantial, noticeable effects to human health and safety on a regional scale. If required, mitigation measures would be extensive, and success would not be guaranteed.

*Duration:* **Short-term** – Effects last one year or less; **Long-term** – Effects last longer than one year.

## **4.12.1. IMPACTS OF THE NO ACTION ALTERNATIVE AND OPTIONS**

### **4.12.1.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 1: NO ACTION**

Under the No Action Alternative, the Rock Creek Park multi-use trail would generally remain in its current condition, and normal maintenance activities performed by the NPS would continue. Existing conditions include uneven and cracked trail surfaces, poor grade changes and poor drainage. Also, trail users compete for space along the trail due to substandard trail widths. In general, the existing conditions represent minor slip, trip and fall hazards.

With no construction of the proposed trail rehabilitation, the existing trail conditions would continue to pose a minor slip, trip and fall hazard to trail users. However, these hazards are common and would not have an appreciable effect on human health and safety. Bicyclists and pedestrians experience a similar slip, trip and fall hazard in the urban environments surrounding Rock Creek Park. NPS maintenance of the trail would continue in a manner that would promote safety to the extent possible. As a result, the No Action Alternative would have negligible adverse impacts on human health and safety.

#### **Cumulative Impacts**

The Rock Creek Park GMP would have a beneficial impact on human health and safety as the plan calls for rehabilitating deteriorated trail sections. Specifically, the GMP calls for rehabilitation of the Rock Creek Park multi-use trail in selected areas, and construction of a paved Piney Branch Parkway trail (NPS 2007). Rehabilitation is also proposed for Rock Creek Park trail sections located along Oregon Avenue (DDOT 2011), Beach Drive and the Rock Creek and Potomac Parkway (NPS 2006b). The Rock Creek Watershed Implementation Plan would also have a beneficial impact, as the plan involves improvements that address the pollutant problem in the watershed (DDOE 2010). In addition to these projects, the NPS would continue to provide an environment at Rock Creek Park that is conducive to human health and safety to the extent possible.

Overall, the negligible adverse impact of the No Action Alternative would not result in an adverse incremental effect on human health and safety in the region. Based on the ongoing and proposed safety provisions within Rock Creek Park, cumulative impacts on human health and safety in the park would be beneficial.

#### **Conclusion**

Leaving the trail in its existing condition would have long-term, negligible adverse impacts on human health and safety. Trail users would continue experience a minor slip, trip and fall hazard due to depreciating conditions of the trail. However, the NPS would continue its normal maintenance activities in order to sustain safe trail usage to the extent possible. There would be a beneficial cumulative impact associated with ongoing and proposed safety provisions in Rock Creek Park.

### **4.12.1.2. PEIRCE MILL TRAIL SPUR OPTION A: NO ACTION**

Under Option A, the existing social trail would remain unchanged. Users would continue to use the trail as an alternative route between Broad Branch Road and Peirce Mill. There would be no impacts to human health and safety.

**Cumulative Impacts**

Cumulative impacts projects are described under the Alternative 1: the No Action Alternative. Peirce Mill Trail Spur Option A would have no impacts to human health and safety. Based on the ongoing and proposed safety provisions of Rock Creek Park, cumulative impacts to human health and safety under Option A would be beneficial.

**Conclusion**

Peirce Mill Trail Spur Option A would have no impacts to human health and safety. Current conditions are not unsafe. Cumulative impacts to human health and safety under Option A would be beneficial, due to ongoing and proposed safety provisions of Rock Creek Park.

**4.12.1.3. ROSE PARK TRAIL OPTION A: NO ACTION**

Under Rose Park Trail Option A, there would be no new construction or rehabilitation of the Rose Park trail. Existing trail conditions include a minor slip, trip and fall hazard due to cracked pavement and substandard trail width. The hazard is comparable to the same slip, trip and fall hazard that pedestrians and bicyclists experience in the urban environments surrounding Rose Park. *Trail width would continue to be substandard causing potential conflicts among some users and causing users to leave the trail surface to pass.* NPS maintenance of the Rose Park trail would continue in a manner that would promote safety to the extent possible. As a result, the No Action Alternative would have negligible adverse impacts on human health and safety.

**Cumulative Impacts**

Cumulative impacts projects are described under the Alternative 1: the No Action Alternative. Rose Park Trail Option A would have no impacts to human health and safety. Based on the ongoing and proposed safety provisions of Rock Creek Park, cumulative impacts to human health and safety under Option A would be beneficial.

**Conclusion**

Rose Park Trail Option A would have a long-term negligible adverse impact on human health and safety. Trail users would continue experience a minor slip, trip and fall hazard due to depreciating conditions of the trail. However, the NPS would continue its normal maintenance activities in order to sustain safe trail usage to the extent possible. Cumulative impacts to human health and safety under Option A would be beneficial, due to ongoing and proposed safety provisions of Rose Park.

**4.12.2. IMPACTS OF THE ACTION ALTERNATIVES AND OPTIONS****4.12.2.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 2: TRAIL RESURFACING**

Alternative 2 proposes to rehabilitate the Rock Creek Park multi-use trail through upgrades which include resurfacing. Impacts on human health and safety were determined by analyzing impacts associated with additional proposed upgrades such as separation of traffic and trail users, safety improvements at roadway crossings, minor trail realignments, minor trail grading, and drainage and soil erosion improvements.

Under Alternative 2, short-term safety measures would be implemented in proposed construction areas throughout the Rock Creek Park multi-use trail. Signage would be utilized in order to warn pedestrians and bicyclists in zones that are under construction. Staging areas that house equipment and materials would be fenced off from the public. At road crossings, maintenance of traffic (MOT) during construction stages would

be conducted to provide safe conditions for trail users, drivers and workers. As a result of safety mitigation measures, construction of Alternative 2 would have short-term negligible adverse impacts.

The proposed improvements under Alternative 2 include resurfacing the trail at its current widths. Resurfacing of the trail would result in increased safety through the correction of uneven and cracked pavement. A smoother surface would help to minimize slip, trip and fall hazards along the trail.

Alternative 2 also proposes to improve the existing design of the multi-use trail, in order to increase safety for pedestrians and bicyclists. Vehicle separation improvements at the Broad Branch/Grove 2 North parking area, the Beach Drive tunnel, and the Beach Drive Bridge over Rock Creek would increase safety by distancing trail users from vehicle traffic. Improved road crossings would occur at five heavily traveled roadways including Broad Branch Road, Jewett Street, the National Zoo entrance, Shoreham Drive and P Street, NW. These crossing improvements would be designed to increase driver awareness of trail users, thereby reducing the potential for trail user and motorist conflicts. Improvements that would minimize the existing potential for user conflict on the trail include the new bicycle and pedestrian bridge at Beach Drive over Rock Creek, Beach Drive tunnel sidewalk widening, and minor realignments at curves and approaches for turning and sight-distance improvements.

Overall, the proposed actions would enhance safety throughout the multi-use trail. Based on the resurfacing, vehicle separations, and improved road crossings, Alternative 2 would result in long-term beneficial impacts to human health and safety.

### **Cumulative Impacts**

Impacts to human health and safety as a result of cumulative impacts projects are described under the No Action Alternative. Based on the ongoing and proposed safety provisions within Rock Creek Park, cumulative impacts on human health and safety in the park would be beneficial. When combined with the long-term beneficial impacts of Alternative 2, long-term beneficial cumulative impacts would occur.

### **Conclusion**

Construction associated with Alternative 2 would have short-term negligible adverse impacts, based on the implementation of safety mitigation measures. Rehabilitation of the trail to include vehicle separation, road crossing improvements, trail resurfacing, and minor realignments would result in enhanced safety for trail users. Therefore, Alternative 2 would have long-term beneficial impacts to human health and safety. Alternative 2 would contribute a beneficial cumulative impact to human health and safety on the Rock Creek Park multi-use trail.

#### **4.12.2.2. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 3 (*PREFERRED ALTERNATIVE*): TRAIL RESURFACING AND WIDENING**

Alternative 3 proposes to rehabilitate the Rock Creek Park multi-use trail through upgrades which include resurfacing and widening. Impacts on human health and safety were determined by analyzing impacts associated with additional proposed upgrades such as separation of traffic and trail users, safety improvements at roadway crossings, minor trail realignments, minor trail grading, and drainage and soil erosion improvements.

Under Alternative 3, short-term safety measures would be implemented in proposed construction areas throughout the Rock Creek Park multi-use trail. Signage would be utilized in order to warn pedestrians and bicyclists in zones that are under construction. Staging areas that house equipment and materials would be

fenced off from the public. At road crossings, maintenance of traffic (MOT) during construction stages would be conducted to provide safe conditions for trail users, drivers and workers. As a result of safety mitigation measures, construction of Alternative 3 would have short-term negligible adverse impacts.

The proposed improvements under Alternative 3 include resurfacing and widening of the trail to a maximum 10 foot width. Resurfacing of the trail would result in increased safety through the correction of uneven and cracked pavement. A smoother surface would help to minimize slip, trip and fall hazards along the trail. In addition, widening of the trail would reduce the potential for conflicts between trail users. The increase in trail width would allow for multiple types of users to pass one another without having to leave the paved alignment.

Alternative 3 also proposes to improve the existing design of the multi-use trail, in order to increase safety for pedestrians and bicyclists. Vehicle separation improvements at the Broad Branch/Grove 2 North parking area, the Beach Drive tunnel, and the Beach Drive Bridge over Rock Creek would increase safety by distancing trail users from vehicle traffic. Improved road crossings would occur at five heavily traveled roadways including Broad Branch Road, Jewett Street, the National Zoo entrance, Shoreham Drive and P Street, NW. These crossing improvements would be designed to increase driver awareness of trail crossings, and further reduce the potential for trail user and motorized vehicle conflicts. Improvements that would minimize the existing potential for user conflict on the trail include the new bicycle and pedestrian bridge at Beach Drive over Rock Creek, Beach Drive tunnel sidewalk widening, and minor realignments at curves and approaches for turning and sight-distance improvements.

Trail improvements under Alternative 3 including resurfacing, widening, vehicle separation, and improved road crossings would enhance safety throughout the multi-use trail. Therefore, Alternative 3 would result in long-term beneficial impacts to human health and safety.

### **Cumulative Impacts**

Impacts to human health and safety as a result of cumulative impacts projects are described under the No Action Alternative. Based on the ongoing and proposed safety provisions within Rock Creek Park, cumulative impacts on human health and safety in the park would be beneficial. When combined with the long-term beneficial impacts of Alternative 3, long-term beneficial cumulative impacts would occur.

### **Conclusion**

Construction associated with Alternative 3 would have short-term negligible adverse impacts, based on the implementation of safety mitigation measures. Rehabilitation of the trail to include vehicle separation, road crossing improvements, trail resurfacing, and minor realignments would result in enhanced safety for trail users. In addition, trail users would benefit from widening of the trail, which would reduce the potential for conflicts between trail users. As a result, Alternative 3 would have long-term beneficial impacts to human health and safety. Alternative 3 would contribute a beneficial cumulative impact to human health and safety on the Rock Creek Park multi-use trail.

#### **4.12.2.3. PEIRCE MILL TRAIL SPUR OPTION B (PREFERRED ALTERNATIVE): EIGHT-FOOT PAVED TRAIL SPUR**

Peirce Mill Spur Option B involves paving the existing social trail between Broad Branch Road and Peirce Mill. During construction, short-term safety measures would be implemented in the proposed construction area. Safety signage would be posted to warn trail users of the construction, and fencing would be placed to keep the public from construction staging areas. As a result of safety mitigation measures, construction of Peirce Mill Trail Spur Option B would have short-term negligible adverse impacts.

The existing social trail is well-defined and can be navigated easily by a pedestrian or a bicyclist. However, the construction of a smooth paved surface would slightly improve safety conditions for certain trail users such as in-line skaters and wheelchair users. Because resurfacing the social trail would provide safety benefits to these users, Peirce Mill Trail Spur Option B would have long-term beneficial impacts to human health and safety.

### **Cumulative Impacts**

Cumulative impacts projects are described under the Alternative 1: the No Action Alternative. When combined with other past, present, and future actions within Rock Creek Park, Peirce Mill Spur Option B would contribute a small benefit to human health and safety. The overall cumulative impact of Option B combined with cumulative impact projects would be beneficial.

### **Conclusion**

Peirce Mill Trail Spur Option B would provide a long-term beneficial impact to human health and safety, because the trail would become safely accessible to trail users such as in-line skaters and wheelchair users. Cumulative impacts of Option B would be beneficial based on the ongoing and proposed safety provisions in Rock Creek Park.

#### **4.12.2.4. ROSE PARK TRAIL OPTION B (PREFERRED ALTERNATIVE): SIX-FOOT RESURFACED TRAIL**

Rose Park Trail Option B consists of resurfacing of the existing Rose Park trail to a width of six feet. During construction, the Rose Park trail would be closed. Safety measures would be employed during the construction period, including signage to warn trail users of the construction, and fencing to keep the public from construction staging areas. As a result, there would be short-term negligible adverse impacts to human health and safety.

Under Rose Park Trail Option B, resurfacing the trail would create a smoother trail surface. Rehabilitation of the trail to cover cracked and uneven pavement would result in increased safety, by minimizing slip, trip and fall hazards. Providing a continuous trail with end points and connections to M Street and P Street as proposed under Rose Park Trail Option B would also improve safety for trail users. Although the existing social trails in these areas are easily navigated by pedestrians and bicyclists, a paved connection would improve safety conditions for certain users such as in-line skaters and wheelchair users. ***Better trail connections, a smoother surface and trail widening could further promote the safe use of the trail through Rose Park. Increased trail use and pedestrian/bicyclist conflicts resulting from the proposed trail width increase of zero to two-feet are not expected to be noticeable. Any additional trail usage would not cause a noticeable increase in the risk of unsafe conflicts for trail users, and any added risk would be offset by the improved trail conditions.***

***According to Conflicts on Multiple-Use Trails: Synthesis of the Literature and State of the Practice (FHWA and the National Recreational Trails Advisory Committee), trail-user conflicts on multiple-use trails is recognized as a common concern. High speed differentials between users, inadequate sight distances, inadequate trail width, poor trail surfaces, and congestion are reported factors influencing user safety. This research does not list any information on trail safety for conflicts with other nearby recreational uses such as use of ball fields, picnicking in campground or children playing on playgrounds, but it is assumed these activities would add to the trail congestion. A general trail user response to congestion is to slow down and take precaution. In addition, research shows that user information and education can have a measureable effect on reducing user conflict and increasing safety. Brochures at trailheads and signage along the trail to promote sharing and to identify safety issues such as trail congestion are effective measures to reduce***

*user conflicts. These, and other measures, will be considered during advanced trail design to reduce user conflicts and enhance user safety.*

Because resurfacing of the Rose Park trail and connections to M Street and P Street would provide safety benefits, Option B would have long-term beneficial impacts to human health and safety.

### **Cumulative Impacts**

Cumulative impacts projects are described under the Alternative 1: the No Action Alternative. When combined with other past, present, and future actions within Rock Creek Park, Rose Park Trail Option B would contribute a small benefit to human health and safety. The overall cumulative impact of Option B combined with cumulative impact projects would be beneficial.

### **Conclusion**

Rose Park Trail Option B would have a long-term beneficial impact to human health and safety, through resurfacing of the existing trail. Option B would also result in beneficial cumulative impacts based on the ongoing and proposed safety provisions of Rose Park.

#### **4.12.2.5. ROSE PARK TRAIL OPTION C: EIGHT-FOOT RESURFACED TRAIL**

Rose Park Trail Option C consists of resurfacing of the existing Rose Park trail to a width of eight feet. During construction, the Rose Park trail would be closed. Safety measures would be employed during the construction period, including signage to warn trail users of the construction, and fencing to keep the public from construction staging areas. As a result, there would be short-term negligible adverse impacts to human health and safety.

Under Rose Park Trail Option C, resurfacing the trail would create a smoother trail surface. Rehabilitation of the trail to cover cracked and uneven pavement would result in increased safety, by minimizing slip, trip and fall hazards. Widening of the trail to an eight-foot width (*the minimum multi-use trail width recommended by AASHTO for short distances under physical constraints*) would provide sufficient space for multiple trail users. Providing a continuous trail with end points and connections to M Street and P Street as proposed under Rose Park Trail Option B would also improve safety for trail users. Although the existing social trails in these areas are easily navigated by pedestrians and bicyclists, a paved connection would improve safety conditions for certain users such as in-line skaters and wheelchair users. *Better trail connections, a smoother surface and trail widening could further promote the use of the trail through Rose Park. Increased trail use and pedestrian/bicyclist conflicts resulting from the proposed increase in trail width of two to four feet are not expected to be noticeable. Any additional trail usage would not cause a noticeable increase in the risk of unsafe conflicts for trail users, and any added risk would be offset by the improved trail conditions.*

*According to Conflicts on Multiple-Use Trails: Synthesis of the Literature and State of the Practice (FHWA and the National Recreational Trails Advisory Committee), trail-user conflicts on multiple-use trails is recognized as a common concern. High speed differentials between users, inadequate sight distances, inadequate trail width, poor trail surfaces, and congestion are reported factors influencing user safety. This research does not list any information on trail safety for conflicts with other nearby recreational uses such as use of ball fields, picnicking in campground adjacent to trails or children playing on playgrounds, but it is assumed these activities would add to the trail congestion. A general trail user response to congestion is to slow down and take precaution. In addition, research shows that user information and education can have a significant effect on reducing user conflict and increasing safety. Brochures at trailheads and signage along the trail to promote sharing and to identify safety issues such as trail congestion are effective*



*measures to reduce user conflicts. These, and other measures, will be considered during advanced trail design to reduce user conflicts and enhance user safety.*

Because resurfacing of the Rose Park trail and connections to M Street and P Street would provide safety benefits, Option C would have long-term beneficial impacts to human health and safety.

### **Cumulative Impacts**

Cumulative impacts projects are described under the Alternative 1: the No Action Alternative. When combined with other past, present, and future actions within Rock Creek Park, Rose Park Trail Option C would contribute a small benefit to human health and safety. The overall cumulative impact of Option C combined with cumulative impact projects would be beneficial.

### **Conclusion**

Long-term beneficial impacts to human health and safety would result from Option C, through resurfacing of the trail and widening the trail to a width of eight feet. Option C would also result in beneficial cumulative impacts based on the ongoing and proposed safety provisions of Rose Park.

## **4.13. PARK OPERATIONS AND MANAGEMENT**

### **Methodology and Assumptions**

The NPS staff's knowledge regarding operational efficiency, protection, and preservation of important resources, and providing an effective visitor experience was used to determine intensity levels of potential impacts on park operations and management.

### **Study Area**

The study area for park operations and management is Rock Creek Park multi-use trail and the area immediately bordering the trail.

### **Impact Thresholds**

*Negligible:* The impacts would be at low levels of detection and would not have an appreciable impact on park operations.

*Minor:* The impact would be detectable and would be of a magnitude that would not have an appreciable impact on park operations. If mitigation was needed to offset adverse impacts, it would be simple and likely successful.

*Moderate:* The impacts would be readily apparent and result in a substantial change in park operations in a manner noticeable to staff and the public. Mitigation measures would be necessary to offset adverse impacts and would likely be successful.

*Major:* The impacts would be readily apparent, result in a substantial change in park operation in a manner noticeable to staff and the public, and be markedly different from existing operations. Mitigation measures to offset adverse impacts would be needed, extensive, and success could not be guaranteed.

*Duration:* **Short-term** - Impacts lasting for the duration of the treatment action; **Long-term** - Impacts lasting longer than the duration of the treatment action.

## **4.13.1. IMPACTS OF THE NO ACTION ALTERNATIVE AND OPTIONS**

### **4.13.1.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 1: NO ACTION**

Under the No Action Alternative, the Rock Creek Park multi-use trail would generally remain in its current condition, and normal maintenance activities performed by the NPS would continue. Normal maintenance activities include asphalt patching, weed control, tree trimming, and removal of sediment and debris from the trail. The NPS monitors the trail and performs maintenance as needed, to ensure that the trail remains open. Because the current maintenance needs of the trail corridor are noticeable and require attention, the No Action Alternative would result in long-term minor adverse impacts to park operations and management.

#### **Cumulative Impacts**

The Rock Creek Park GMP would provide benefits to park operations and maintenance as the plan calls for rehabilitation of deteriorated trail sections. The plan also involves upgrades to facilities which would provide improved working conditions for park administrative staff and Park Police (NPS 2007). Park operations would be disrupted during construction of upgrades, but in the long-term park maintenance and operations would largely benefit from the upgrades. The No Action Alternative would contribute a minor adverse impact to park operations and management, by way of the increasing maintenance needs of the trail. When combined with the beneficial impacts of cumulative impact projects, the cumulative effect of the No Action Alternative would be a long-term negligible adverse impact.

#### **Conclusion**

Under the No Action Alternative, current maintenance of the Rock Creek Park multi-use trail would continue. Based on the amount of maintenance required by the trail condition, long-term minor adverse impacts to park operations and management would occur. When combined with the beneficial impacts of cumulative impact projects, the cumulative effect would be a long-term negligible adverse impact.

### **4.13.1.2. PEIRCE MILL TRAIL SPUR OPTION A: NO ACTION**

Peirce Mill Spur Option A proposes no changes to the existing social trail between Broad Branch Road and Peirce Mill. Currently, the NPS does not maintain the trail. No maintenance would be anticipated under the No Action Alternative. As a result, there would be no impacts to park operation and maintenance under Option A.

#### **Cumulative Impacts**

The Rock Creek Park GMP would provide benefits to park operations and maintenance as the plan calls for rehabilitation of deteriorated trail sections. The plan also involves upgrades to facilities which would provide improved working conditions for park administrative staff and Park Police. Park operations would be disrupted during construction of upgrades, but in the long-term park maintenance and operations would largely benefit from the upgrades. When combined with cumulative impact projects, Peirce Mill Spur Option A would have no incremental effect on park operations and management therefore there would be no cumulative impact.

#### **Conclusion**

Peirce Mill Trail Spur Option A would have no impact on park operations and management. There would be no cumulative impact when combined with the effects of regional projects.

### **4.13.1.3. ROSE PARK TRAIL OPTION A: NO ACTION**

Under the Option A, the current maintenance of the Rose Park trail would continue. Maintenance activities include asphalt patching, weed control, tree trimming, and removal of sediment and debris from the trail. The

NPS monitors the trail and performs maintenance as needed, to ensure that the trail remains open. Because the current maintenance needs of the trail corridor are noticeable and require attention, Option A would result in long-term minor adverse impacts to park operations and management.

### **Cumulative Impacts**

The Rock Creek Park GMP would provide benefits to park operations and maintenance as the plan calls for rehabilitation of deteriorated trail sections. The plan also involves upgrades to facilities which would provide improved working conditions for park administrative staff and Park Police. Park operations would be disrupted during construction of upgrades, but in the long-term park maintenance and operations would largely benefit from the upgrades. Option A would contribute a minor adverse impact to park operations and management, by way of the increasing maintenance needs of the trail. When combined with the beneficial impacts of cumulative impact projects, the cumulative effect of the No Action Alternative would be a long-term negligible adverse impact.

### **Conclusion**

Under the Rose Park Trail Option A, current maintenance of the Rose Park trail would continue. Based on the amount of maintenance required by the trail condition, long-term minor adverse impacts to park operations and management would occur. When combined with the beneficial impacts of cumulative impact projects, the cumulative effect would be a long-term negligible adverse impact.

## **4.13.2. IMPACTS OF THE ACTION ALTERNATIVES AND OPTIONS**

### **4.13.2.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 2: TRAIL RESURFACING**

Alternative 2 proposes multiple improvements to rehabilitate and enhance the existing Rock Creek Park multi-use trail, including new connections to neighboring trails, drainage and erosion controls, improved bridge crossings and safety improvements. This alternative would resurface the Rock Creek Park multi-use trail and the Piney Branch Parkway trail.

Construction throughout the Rock Creek Park multi-use trail would be conducted by DDOT. In order to construct trail improvements, detours and closings of the trail would be required. During the construction of road crossing improvements, maintenance of traffic would be required. DDOT would implement temporary traffic controls along the trail and at road crossings as needed. Overall, the construction to be done would be relatively simple, would be completed by small groups of workers, and would require relatively small equipment and machinery. No short-term impacts to park operations and management would occur, because DDOT would perform all of the temporary trail closings, maintenance of traffic, and rehabilitation of the trail.

Long-term maintenance of the trail would be conducted by the NPS. As a result of Alternative 2, some of the trail maintenance required of park service staff would be reduced. Currently, NPS maintenance activities include patching of the trail, and removal of sediment and debris. Resurfacing of the trail would address patching needs for the foreseeable future. Sediment and debris would be kept from the trail surface through the proposed grading, stabilization, and BMP installation throughout the trail. Overall, Alternative 2 would prevent many of the maintenance jobs required by the existing trail.

Although there would be some reductions in trail maintenance, other aspects of Alternative 2 would result in some small additional maintenance needs. New connections and sections would increase the overall amount of trail to be maintained. Additional lengths of trail would require snow removal during winter weather events. Under Alternative 2, stormwater management (bioretention facilities and/or bioswales) would be constructed.

Maintenance of the new facilities would be necessary and would be conducted by NPS. The overall effect of these additional maintenance needs would not have an appreciable impact on park operations.

Also, trail improvement under Alternative 2 would result in small, site specific trail maintenance needs. For instance, the two-foot vegetated buffer proposed between the Broad Branch/Grove 2 North parking area and trail would need to be trimmed separately from the larger grassed area that is mowed by a large tractor. Maintenance of the bridge over Rock Creek would occur in the form of spot improvements and snow removal, as needed. Striping at the Porter Street underpass would need to be replaced periodically, when worn down. Where raised pavement is installed to calm motorized traffic at trail crossings, the raised pavement would eventually wear down from usage and snow removal and would have to be replaced by NPS staff. Once incorporated into routine maintenance activities, these site specific needs would be addressed without an appreciable effect on park operations.

In sum, Alternative 2 would help to reduce some of the current maintenance needs of the Rock Creek Park multi-use trail. Other aspects of the trail improvement would add new maintenance needs including some site specific tasks. Overall, resurfacing of the trail would result in a long-term beneficial impact, because the effect of the new maintenance needs would not have a noticeable adverse impact on park operations.

### **Cumulative Impacts**

The Rock Creek Park GMP would have a beneficial impact on park operations and maintenance as the plan calls for rehabilitating deteriorated trail sections. In addition, the plan involves upgrades to facilities which would provide improved working conditions for park administrative staff and Park Police. Park operations would be disrupted during construction of upgrades, but in the long-term park maintenance and operations would largely benefit from the upgrades. The beneficial impact of Alternative 2 on park operations and maintenance would contribute to overall beneficial cumulative impacts in Rock Creek Park.

### **Conclusion**

Once constructed, there would be a reduction in the maintenance needed throughout the trail, resulting in a long-term beneficial impact on park operations and management. The cumulative impact of Alternative 2 combined with the impacts of regional projects would result in a long-term beneficial impact.

#### **4.13.2.2. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 3 (PREFERRED ALTERNATIVE): TRAIL RESURFACING AND WIDENING**

Alternative 3 proposes multiple improvements to rehabilitate and enhance the existing Rock Creek Park multi-use trail, including new connections to neighboring trails, drainage and erosion controls, improved bridge crossings and safety improvements. In addition to these improvements, Alternative 3 includes widening of the Rock Creek Park multi-use trail and the Piney Branch Parkway trail.

Construction throughout the Rock Creek Park multi-use trail would be conducted by DDOT. In order to construct trail improvements, detours and closings of the trail would be required. During the construction of road crossing improvements, maintenance of traffic would be required. DDOT would implement temporary traffic controls along the trail and at road crossings as needed. Overall, the construction *of the trail will* be relatively simple, will be completed by small groups of workers, and would require relatively small equipment and machinery. *Construction of the bridge will have short-term, minor adverse impacts.* DDOT will perform all of the temporary trail closings, maintenance of traffic, and rehabilitation of the trail. *During construction, short-term, minor adverse impacts to park operations and management will occur to NPS staff resources*

*under the selected alternative and options because of their participation in the planning and coordination efforts.*

Long-term maintenance of the trail would be conducted by the NPS. As a result of Alternative 3, some of the trail maintenance required of park service staff would be reduced. Currently, NPS maintenance activities include patching of the trail, and removal of sediment and debris. Resurfacing of the trail would address patching needs for the foreseeable future. Sediment and debris would be kept from the trail surface through the proposed grading, stabilization, and BMP installation throughout the trail. Overall, Alternative 3 would prevent many of the maintenance jobs required by the existing trail.

Although there would be some reductions in trail maintenance, other aspects of Alternative 3 would result in some small additional maintenance needs. Widening, new connections and sections would increase the overall amount of trail to be maintained. Additional lengths of trail would require snow removal during winter weather events. Under Alternative 3, stormwater management (bioretention facilities and/or bioswales) would be constructed. Maintenance of the new facilities would be necessary and would be conducted by NPS. The overall effect of these additional maintenance needs would not have an appreciable impact on park operations.

Also, trail improvement under Alternative 3 would result in small, site specific trail maintenance needs. For instance, the two-foot vegetated buffer proposed between the Broad Branch/Grove 2 North parking area and trail would need to be trimmed separately from the larger grassed area that is mowed by a large tractor. Maintenance of the bridge over Rock Creek would occur in the form of spot improvements and snow removal, as needed. Striping at the Porter Street underpass would need to be replaced periodically, when worn down. Where raised pavement is installed to calm motorized traffic at trail crossings, the raised pavement would eventually wear down from usage and snow removal and would have to be replaced by NPS staff. Once incorporated into routine maintenance activities, these site specific needs would be addressed without an appreciable effect on park operations.

In sum, Alternative 3 would help to reduce some of the current maintenance needs of the Rock Creek Park multi-use trail. Other aspects of the trail improvement would add new maintenance needs including some site specific tasks. Overall, resurfacing and widening of the trail would result in a long-term beneficial impact, because the effect of the new maintenance needs would not have a noticeable adverse impact on park operations.

### **Cumulative Impacts**

The Rock Creek Park GMP would have a beneficial impact on park operations and maintenance as the plan calls for rehabilitating deteriorated trail sections. In addition, the plan involves upgrades to facilities which would provide improved working conditions for park administrative staff and Park Police. Park operations would be disrupted during construction of upgrades, but in the long-term park maintenance and operations would largely benefit from the upgrades. The beneficial impact of Alternative 3 on park operations and maintenance would contribute to overall beneficial cumulative impacts in Rock Creek Park.

### **Conclusion**

Once constructed, there would be a reduction in the maintenance needed throughout the trail, resulting in a long-term beneficial impact on park operations and management. The cumulative impact of Alternative 3 combined with the impacts of regional projects would result in a long-term beneficial impact.

#### **4.13.2.3. PEIRCE MILL TRAIL SPUR OPTION B (*PREFERRED ALTERNATIVE*): EIGHT-FOOT PAVED TRAIL SPUR**

Option B proposes to pave the Peirce Mill trail spur. DDOT would construct the new trail, and maintain safe conditions for the duration of construction. Overall, the work to be done would be relatively simple, would be completed by small groups of workers, and would require relatively small equipment and machinery. Based on these factors, Option B would have no short-term impact on park operations and management.

Paving the trail would add a maintenance responsibility that currently does not exist as the unpaved social trail is not under NPS maintenance. Snow removal, spot improvements, and debris removal would be required for the new paved surface. Further, grass mowing using large tractors between the new trail spur and Rock Creek would no longer be possible, making grass and vegetation trimming slightly more time consuming for maintenance staff. Option B would have a long-term minor adverse impact on park operations and maintenance.

##### **Cumulative Impacts**

The Rock Creek Park GMP proposes to restore trails and facilities, providing an overall benefit to park operations and maintenance. Disruptions would occur during the construction of upgrades, but in the long-term park maintenance and operations would largely benefit from the upgrades. Peirce Mill Trail Spur Option B would contribute a minor adverse impact, by way of the increasing maintenance needs of the trail. When combined with the beneficial impacts of cumulative impact projects, the cumulative effect of the No Action Alternative would be a long-term negligible adverse impact.

##### **Conclusion**

Peirce Mill Trail Spur Option B would have long-term minor adverse impacts based on the increase in maintenance required by the new trail. Cumulative impacts of Option B and regional projects would be long-term negligible adverse impacts.

#### **4.13.2.4. ROSE PARK TRAIL OPTION B (*PREFERRED ALTERNATIVE*): SIX-FOOT RESURFACED TRAIL**

Under Rose Park Trail Option B, the existing trail would be resurfaced to a standard width of six feet, trail connections would be improved to P Street and M Street, and the social trail would be paved. DDOT would construct the new trail and conduct temporary trail closing and maintenance of traffic as needed. Because the trail rehabilitation would be conducted by DDOT, there would be no short-term impacts to park operations and management.

Resurfacing of the Rose Park trail would reduce the need for patching of the trail, and removal of sediment and debris. Also, the paving of new trail connections would add maintenance responsibilities that currently do not exist. Snow removal, spot improvement, and debris removal would be required for the new paved surfaces. Overall, the new maintenance needs would not have an appreciable effect on maintenance activities. Resurfacing of the trail would provide a long-term beneficial impact on park operations and maintenance.

##### **Cumulative Impacts**

The Rock Creek Park GMP proposes to restore trails and facilities, providing an overall benefit to park operations and maintenance. Disruptions would occur during the construction of upgrades, but in the long-term park maintenance and operations would largely benefit from the upgrades. Rose Park Trail Option B would contribute a beneficial impact, by way of the reducing maintenance needs of the trail. When combined with the

beneficial impacts of cumulative impact projects, the cumulative effect of the No Action Alternative would be a long-term beneficial impact.

### **Conclusion**

Rose Park Trail Option B would result in short-term moderate adverse impacts, based on construction periods. Long-term beneficial impacts would result from a resurfaced trail, which would reduce current maintenance needs. Cumulative impacts of Option B and regional projects would be long-term beneficial impacts.

#### **4.13.2.5. ROSE PARK TRAIL OPTION C: EIGHT-FOOT RESURFACED TRAIL**

Under Rose Park Trail Option C, the existing trail would be resurfaced to a standard width of eight feet, trail connections would be improved to P Street and M Street, and the social trail would be paved. DDOT would construct the new trail and conduct temporary trail closing and maintenance of traffic as needed. Because the trail rehabilitation would be conducted by DDOT, there would be no short-term impacts to park operations and management.

Widening and resurfacing of the Rose Park trail would reduce the need for patching of the trail, and removal of sediment and debris. Also, the paving of new trail connections would add maintenance responsibilities that currently do not exist. Snow removal, spot improvement, and debris removal would be required for the new paved surfaces. Overall, the new maintenance needs would not have an appreciable effect on maintenance activities. Widening and resurfacing of the trail would provide a long-term beneficial impact on park operations and maintenance.

### **Cumulative Impacts**

The Rock Creek Park GMP proposes to restore trails and facilities, providing an overall benefit to park operations and maintenance. Disruptions would occur during the construction of upgrades, but in the long-term park maintenance and operations would largely benefit from the upgrades. Rose Park Trail Option B would contribute a beneficial impact, by way of the reducing maintenance needs of the trail. When combined with the beneficial impacts of cumulative impact projects, the cumulative effect of the No Action Alternative would be a long-term beneficial impact.

### **Conclusion**

Rose Park Trail Option C would result in short-term moderate adverse impacts, based on construction periods. Long-term beneficial impacts would result from a widened and resurfaced trail, which would reduce current maintenance needs. Cumulative impacts of Option B and regional projects would be long-term beneficial impacts.

## **4.14. TRAFFIC AND TRANSPORTATION**

### **Methodology and Assumptions**

For traffic and transportation impacts, sources of information include analysis of current Rock Creek Park access conditions and traffic in the study area and a comparison of current trail use and traffic patterns to proposed post construction conditions. This section includes analysis of the proposed improvements to the Rock Creek Park multi-use trail and its impacts on trail use and connectivity, and the park roadway network and motorized traffic.

## Study Area

The project area includes a 3.7-mile section of the Rock Creek Park multi-use trail from Broad Branch Road to P Street, NW; a 4,300-foot (0.8 mile) section of the Piney Branch Parkway trail from Beach Drive to Arkansas Avenue, NW; **a 1,929-foot (0.4 mile) section of the Rose Park trail from P Street, NW to M Street, NW; and a 363-foot ramp connecting the Rose Park trail to P Street, NW.** The study area for traffic and transportation impacts includes the larger area of the Rock Creek Park. Traffic and Transportation encompasses vehicular traffic and trail use.

## Impact Thresholds

The following thresholds were used to determine the magnitude of impacts on transportation.

*Negligible:* Any change to travel time, convenience, or benefit would not be perceptible or would be barely perceptible by trail and roadway users.

*Minor:* The change to travel time, convenience, or benefit would be noticeable to a small number of trail and roadway users; however, the effect would be slight.

*Moderate:* The resulting change in travel time, convenience, or benefit would be noticeable for a large number of trail and roadway users.

*Major:* There would be a substantial and highly noticeable change in travel time, convenience, or benefit for a large number of trail and roadway users.

*Duration:* **Short-term** – would be immediate during implementation of the alternative; **Long-term** – would persist, following implementation of the alternative.

## 4.14.1. IMPACTS OF THE NO ACTION ALTERNATIVE AND OPTIONS

### 4.14.1.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 1: NO ACTION

The No Action Alternative represents a continuation of the current Rock Creek Park multi-use trail system. The system would continue to be maintained by the NPS, and would continue to be used by bicyclists, pedestrians and other park visitors. Under the No Action Alternative, several limiting aspects of the current system would remain.

The system would remain limited where high volumes of vehicle traffic are in proximity to the trail. These areas include the Broad Branch/Grove 2 North parking area, the Beach Drive tunnel, and the Beach Drive Bridge over Rock Creek. The existing Rock Creek Park multi-use trail system also includes multiple intersections between the trail and roadways which present potential user conflicts. Potential conflicts between trail users and motorists would remain at Broad Branch Road, Jewett Street, the National Zoo Entrance, Shoreham Drive, and P Street, NW. Under the No Action Alternative, the potential for disruptions or accidents between trail users and motorists would persist in these areas.

Connectivity is needed in order to maximize the use of the trail system as a transportation route. Current conditions in the project area include gaps between the trail and the overall bicycle and pedestrian network surrounding Rock Creek Park. Along the 3.7 miles of the Rock Creek Park multi-use trail, there are seven access points. Three of the access points are associated with vehicle parking areas, and one of the access points is closed regularly (the National Zoo Bridge). In addition many of the existing access points are unmarked and



unpaved. Due to these conditions, use of the trail as a transportation route would be impractical to a number of commuters living in the vicinity of Rock Creek Park. Under the No Action Alternative, there would be no changes to the overall connectivity of the trail system.

With no improvements to the Rock Creek Park multi-use trail, use of the trail as a transportation route would continue to present several limitations. Sections of the trail are in proximity to vehicle traffic, user conflicts persist at trail and roadway intersections, and connectivity of the trail with surrounding trail networks is limited. Based on these conditions, the No Action Alternative would result in a long-term moderate adverse impact on traffic and transportation.

### **Cumulative Impacts**

Proposed trail improvement projects within the vicinity would have beneficial effects on traffic and transportation throughout Rock Creek Park. Construction of the Blagden Avenue Hike/Biker trail would occur at the northern extents of the Rock Creek Park multi-use trail project area (NPS 2008). Construction of the Klinge Valley Trail would occur in the corridor of Klinge Creek, connecting with the Rock Creek Park multi-use trail at Porter Street and Rock Creek (DDOT 2010b). Implementation of these projects would enhance connectivity throughout Rock Creek Park, providing additional commuter options.

Proposed roadway improvement projects would also have beneficial effects throughout Rock Creek Park. Three rehabilitation projects are proposed in the vicinity of Rock Creek Park which would repair deteriorating roadway conditions; the projects are proposed for Oregon Avenue (DDOT 2011), Broad Branch Road, and Beach Drive and the RCPP (NPS 2006b). The rehabilitation projects would improve the overall road conditions of the region, providing traffic and transportation benefits.

In addition to these projects, regional management plans address the problems of traffic congestion due to the high volume of visitors to Rock Creek Park. The National Zoological Park Facilities Master Plan (Smithsonian 2008) calls for improvement of the National Zoo's road network, in order to accommodate high volumes of visitors. And, the Rock Creek GMP calls for traffic-calming and speed enforcement measures to maintain safe circulation throughout the Park (NPS 2007).

Overall, cumulative impact projects would result in beneficial impacts to Rock Creek Park. Proposed trail improvements, roadway improvements, and management plans are aimed at providing effective maintenance of traffic and transportation. The Rock Creek Park multi-use trail plays a critical role in transportation throughout Rock Creek Park. Under the No Action Alternative, the trail would continue to attract pedestrians and bicyclists. There would be an adverse incremental effect on the cumulative impact of regional projects, based on the limitations of the existing trail. Therefore, a cumulative long-term minor adverse impact on traffic and transportation would occur.

### **Conclusion**

The No Action Alternative would result in a long-term moderate adverse impact on traffic and transportation. Limiting conditions of the trail would persist including gaps in the trail, user conflicts at intersections, proximities of the trail to roadways, and poor connectivity to surrounding trail networks. A cumulative long-term minor adverse impact would occur.

#### **4.14.1.2. PEIRCE MILL TRAIL SPUR OPTION A: NO ACTION**

Peirce Mill Spur Option A proposes no changes to the existing social trail between Broad Branch Road and Peirce Mill. There would be no impacts to traffic and transportation under Option A.

**Cumulative Impacts**

The effect of cumulative impact projects is described under Alternative 1. Trail improvements, roadway improvements, and regional management plans would result in beneficial impacts to traffic and transportation. Because the Peirce Mill Trail Spur Option A would have no impacts, there would be no cumulative impacts.

**Conclusion**

No impacts to traffic and transportation would occur under Peirce Mill Trail Spur Option 1. There would be no cumulative impacts.

**4.14.1.3. ROSE PARK TRAIL OPTION A: NO ACTION**

Rose Park Option A proposes no changes to the existing trail conditions at Rose Park. Existing conditions require pedestrians and bicyclists to use an unpaved social trail to connect to M Street. The absence of a formal trail in this area contributes to the overall lack of connectivity throughout the trail system. As a result, continuation of the existing conditions at Rose Park would have a long-term minor adverse impact on traffic and transportation.

**Cumulative Impacts**

The effect of cumulative impact projects is described under Alternative 1. Trail improvements, roadway improvements, and regional management plans would result in beneficial impacts to traffic and transportation. The Rose Park Trail Option A would have an adverse incremental effect in combination with proposed regional projects. However, the adverse impact associated with existing conditions at Rose Park would be small due to the relative magnitude of Rock Creek Park and proposed regional projects. Therefore, a cumulative long-term negligible adverse impact would occur under Option A.

**Conclusion**

Rose Park Trail Option A would result in long-term minor adverse impacts, based on the existing lack of connectivity at Rose Park. There would be a cumulative long-term negligible adverse impact under Option A.

**4.14.2. IMPACTS OF THE ACTION ALTERNATIVES AND OPTIONS****4.14.2.1. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 2: TRAIL RESURFACING**

Alternative 2 proposes to rehabilitate the Rock Creek Park multi-use trail through resurfacing of the trail. The proposed actions also include improvement measures which would enhance the trail system as a transportation route.

Construction associated with the implementation of Alternative 2 would require detours and temporary road closures of trail sections and roadways. Advance notifications of temporary closures or changes in traffic patterns would be implemented. At various locations, such as the Beach Drive tunnel, work would be scheduled to avoid times of peak traffic volumes. Although these actions would mitigate the effects of construction, a large number of trail users and motorists would experience inconveniences such as extended travel times. Therefore, Alternative 2 would result in short-term moderate adverse impacts to traffic and transportation due to detours, and temporary trail and roadway closures.

Under Alternative 2, trail user and vehicular traffic separation improvements would be constructed at the Broad Branch/Grove 2 North parking area, the Beach Drive tunnel, and the Beach Drive Bridge over Rock Creek. Separation methods in these locations include paving of a social trail, widening of the trail, and installation of traffic barriers. Alternative 2 would also construct roadway crossing improvements where

existing conditions generate the potential for conflicts between trail users and motorists. Two new roadway crossings are proposed at Broad Branch Road, and P Street, NW. Existing roadway crossings at Jewett Street, the National Zoo entrance, and Shoreham Drive would be modified in order to provide enhanced safety and circulation. The proposed improvements would result in long-term beneficial impacts based on fewer conflicts between trail users and motorists.

Implementation of Alternative 2 includes construction of five new connections along the Rock Creek Park multi-use trail. Entirely new trail sections would connect the trail to Beach Drive north of Blagden Avenue, the Porter Street ramp, and P Street, NW. New connections are proposed at the Piney Branch Parkway Trail and Arkansas Avenue which would consist of paved trail surfaces in place of existing social trails. Based on the increase in connectivity provided by the proposed actions, the trail would provide more options to commuters living in the vicinity of Rock Creek Park. Because the trail would be enhanced as a transportation route, Alternative 2 would have long-term beneficial impacts.

Overall, Alternative 2 would reduce conflicts between trail users and motorists, and enhance the connectivity between the trail system and surrounding bicycle and pedestrian networks. Long-term beneficial impacts to traffic and transportation would result from better circulation throughout the trail system and additional options for commuters provided by the improvements.

### **Cumulative Impacts**

The effect of cumulative impact projects is described under Alternative 1. Trail improvements, roadway improvements, and regional management plans would result in beneficial impacts to traffic and transportation. Alternative 2 would provide a beneficial impact to the cumulative effect by reducing trail user and motorist conflicts and providing greater connectivity within Rock Creek Park. As a result, cumulative impacts would be beneficial under Alternative 2.

### **Conclusion**

Under Alternative 2, construction activities would result in short-term moderate adverse impacts to traffic and transportation. Once constructed, Alternative 2 would provide long-term benefits to Rock Creek Park by reducing user conflicts and enhancing connectivity. A cumulative long-term beneficial impact would occur.

#### **4.14.2.2. ROCK CREEK PARK MULTI-USE TRAIL ALTERNATIVE 3 (PREFERRED ALTERNATIVE): TRAIL RESURFACING AND WIDENING**

Alternative 3 proposes to rehabilitate the Rock Creek Park multi-use trail through resurfacing and widening of the trail. The proposed actions also include improvement measures which would enhance the trail system as a transportation route.

Construction associated with the implementation of Alternative 3 would require detours and temporary road closures of trail sections and roadways. Advance notifications of temporary closures or changes in traffic patterns would be implemented. At various locations, such as the Beach Drive tunnel, work would be scheduled to avoid times of peak traffic volumes. Although these actions would mitigate the effects of construction, a large number of trail users and motorists would experience inconveniences such as extended travel times. Therefore, Alternative 3 would result in short-term moderate adverse impacts to traffic and transportation due to detours, and temporary trail and roadway closures.

Under Alternative 3, trail user and vehicular traffic separation improvements would be constructed at the Broad Branch/Grove 2 North parking area, the Beach Drive tunnel, and the Beach Drive Bridge over Rock

Creek. Separation methods in these locations include paving of a social trail, widening of the trail, and installation of traffic barriers. Alternative 3 would also construct roadway crossing improvements where existing conditions generate the potential for conflicts between trail users and motorists. Two new roadway crossings are proposed at Broad Branch Road, and P Street, NW. Existing roadway crossings at Jewett Street, the National Zoo entrance, and Shoreham Drive would be modified in order to provide enhanced safety and circulation. The proposed improvements would result in long-term beneficial impacts based on fewer conflicts between trail users and motorists.

Implementation of Alternative 3 includes construction of five new connections along the Rock Creek Park multi-use trail. Entirely new trail sections would connect the trail to Beach Drive north of Blagden Avenue, the Porter Street ramp, and P Street, NW. New connections are proposed at the Piney Branch Parkway Trail and Arkansas Avenue which would consist of paved trail surfaces in place of existing social trails. Based on the increase in connectivity provided by the proposed actions, the trail would provide more options to commuters living in the vicinity of Rock Creek Park. Because the trail would be enhanced as a transportation route, Alternative 3 would have long-term beneficial impacts.

Overall, Alternative 3 would reduce conflicts between trail users and motorists, and enhance the connectivity between the trail system and surrounding bicycle and pedestrian networks. Long-term beneficial impacts to traffic and transportation would result from better circulation throughout the trail system and additional options for commuters provided by the improvements.

### **Cumulative Impacts**

The effect of cumulative impact projects is described under Alternative 1. Trail improvements, roadway improvements, and regional management plans would result in beneficial impacts to traffic and transportation. Alternative 3 would provide a beneficial impact to the cumulative effect by reducing trail user and motorist conflicts and providing greater connectivity within Rock Creek Park. As a result, cumulative impacts would be beneficial under Alternative 3.

### **Conclusion**

Under Alternative 3, construction activities would result in short-term moderate adverse impacts to traffic and transportation. Once constructed, Alternative 3 would provide long-term benefits to Rock Creek Park by reducing user conflicts and enhancing connectivity. A cumulative long-term beneficial impact would occur.

#### **4.14.2.3. PEIRCE MILL TRAIL SPUR OPTION B (*PREFERRED ALTERNATIVE*): EIGHT-FOOT PAVED TRAIL SPUR**

Option B proposes to pave the Peirce Mill trail spur. Construction activities would have no impacts to traffic and transportation, because this section of the trail is currently outside of the trail system. This option would have long-term beneficial impacts on traffic and transportation by providing trail users with added access to Rock Creek, within Rock Creek Park.

### **Cumulative Impacts**

The effect of cumulative impact projects is described under Alternative 1. Trail improvements, roadway improvements, and regional management plans would result in beneficial impacts to traffic and transportation. The Peirce Mill Trail Spur Option B would provide a small beneficial impact to the cumulative effect by providing trail users with added access to Rock Creek. As a result, cumulative impacts would be beneficial under Option B.

**Conclusion**

Peirce Mill Trail Spur Option B would have a long-term beneficial impact on traffic and transportation by providing trail users with added access to Rock Creek. A cumulative long-term beneficial impact would occur.

**4.14.2.4. ROSE PARK TRAIL OPTION B (PREFERRED ALTERNATIVE): SIX-FOOT RESURFACED TRAIL**

Option B would result in the resurfacing of the existing Rose Park trail and the construction of a new connection between the Rose Park trail and M Street. *Option B would also provide a new connection to the Rock Creek Trail at P Street.* Construction activities would result in short-term moderate adverse impacts to traffic and transportation due to detours and temporary trail and roadway closure. Option B would have long-term beneficial impacts on traffic and transportation by providing trail users with access to M Street.

**Cumulative Impacts**

The effect of cumulative impact projects is described under Alternative 1. Trail improvements, roadway improvements, and regional management plans would result in beneficial impacts to traffic and transportation. The Rose Park Trail Option B would provide a small beneficial impact to the cumulative effect by providing trail users with *improved* access to M Street *and the Rock Creek Trail*. As a result, a cumulative long-term beneficial impact would occur under Option B.

**Conclusion**

Under Rose Park Trail Option B, construction activities would result in short-term moderate adverse impacts to traffic and transportation. Option B would result in a long-term beneficial impact by providing access to M Street. A cumulative long-term beneficial impact would occur.

**4.14.2.5. ROSE PARK TRAIL OPTION C: EIGHT-FOOT RESURFACED TRAIL**

Option C would result in the resurfacing and widening of the existing Rose Park trail and the construction of a new connection between the Rose Park trail and M Street. *Option C would also provide a new connection to the Rock Creek Trail at P Street.* Construction activities would result in short-term moderate adverse impacts to traffic and transportation due to detours and temporary trail and roadway closure. Option C would have long-term beneficial impacts on traffic and transportation by providing trail users with access to M Street.

**Cumulative Impacts**

The effect of cumulative impact projects is described under Alternative 1. Trail improvements, roadway improvements, and regional management plans would result in beneficial impacts to traffic and transportation. The Rose Park Trail Option C would provide a small beneficial impact to the cumulative effect by providing trail users with *improved* access to M Street *and the Rock Creek Trail*. As a result, a cumulative long-term beneficial impact would occur under Option C.

**Conclusion**

Under Rose Park Trail Option C, construction activities would result in short-term moderate adverse impacts to traffic and transportation. Option C would result in a long-term beneficial impact by providing access to M Street. A cumulative long-term beneficial impact would occur.

#### 4.15. SECTION 4(F) OF THE U.S. DOT ACT OF 1966

Rock Creek Park is a national public park and as such, is afforded special protection by legislation including Section 4(f) of the U.S. DOT Act of 1966, the National Park Service Organic Act, and the 1890 Rock Creek Enabling Legislation.

Section 4(f) of the U.S. DOT Act states that, “special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. The Secretary of Transportation shall cooperate and consult with the Secretaries of the Interior, Housing and Urban Development, and Agriculture, and with the States in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of the lands traversed.” Furthermore, it states that the FHWA may not approve the use of land from a significant publically owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that there is no feasible and prudent alternative to the use of land from the property, and the action includes all possible planning to minimize harm to the property resulting from such use.

Section 4(f) (**23 CFR 774.17**) defines “use” of a protected resource in three ways:

- Land from a 4(f) site is permanently incorporated into a transportation facility;
- There is a temporary occupancy of land that is adverse in terms of the Section 4(f) statute's preservation purposes *as determined by the criteria in 23 CFR 774.13(d)*; or
- When there is a constructive use of land *as determined by the criteria in 23 CFR 774.15*.

*Although the Rock Creek Park Multi-Use Trail Rehabilitation Project will involve temporary occupancy of park resources, the project has been determined to have “No Adverse Effect under Section 106; therefore, it does not involve the use of a Section 4(f) resource. Moreover, the following exceptions to Section 4(f) approvals, as listed in 23 CFR 774.1, are applicable to the Rock Creek Park Multi-Use Trail Rehabilitation Project:*

- *Under 23 CFR 774.13(a), Section 4(f) approval is not required for the restoration, rehabilitation, or maintenance of transportation facilities that are on or eligible for the National Register, when:*
  - \* *The FHWA Administrator concludes, as a result of the consultation under 36 CFR 800.5, that such work will have no adverse effect on the historic qualities of the facility that caused it to be on or eligible for the National Register; and*
  - \* *The official(s) with jurisdiction over the Section 4(f) resources have not objected to the Administration conclusion of no adverse effect.*
- *Under 23 CFR 774.13(d), Section 4(f) approval is not required for temporary occupancies of protected resources so long as the following conditions are met:*
  - \* *Duration must be temporary and there should be no change in ownership of the land;*
  - \* *Scope of work must be minor;*
  - \* *There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;*
  - \* *The land being used must be fully restored to a condition which is at least as good as that which existed prior to the project; and,*
  - \* *There must be documented agreement of the officials with jurisdiction over the Section 4(f) resource regarding the above conditions.*

- ***Under 23 CFR 774.13(f), Section 4(f) approval is not required for certain trails, paths, bikeways, and sidewalks, in the following circumstances:***
  - \* ***Trail-related projects funded under the Recreational Trails Program, 23 U.S.C. 206(h)(2);***
  - \* ***National Historic Trails and the Continental Divide National Scenic Trail, designated under the National Trails System Act, with the exception of those trail sections that are historic sites as defined in 23 CFR 774.17;***
  - \* ***Trails, paths, bikeways, and sidewalks that occupy a transportation facility right-of-way without limitation to any specific location within that right-of-way, so long as the continuity of the trail, path, bikeway, or sidewalk is maintained; and***
  - \* ***Trails, paths, bikeways, and sidewalks that are part of the local transportation system and which function primarily for transportation.***

Rock Creek Trail is an existing trail and will continue to be owned and maintained by NPS. ***The trail is a contributing element to the Rock Creek Park and Rock Creek and Potomac Parkway historic district. For the Rock Creek Park Multi-Use Trail Rehabilitation Project, no land will be permanently incorporated into a transportation facility with either of the action alternatives, including the Preferred Alternative. Additionally, under the Section 106 evaluation and consultation, the project was determined to have no adverse effect on the historic Rock Creek Park and Rock Creek and Potomac Parkway.*** Furthermore, according to the 2004 Cooperative Agreement between the National Park Service, the DC Department of Transportation and the DC Department of Parks and Recreation for the rehabilitation of Rock Creek Park multi-use trail and the Rose Park trail, this project is funded through the Recreational Trails Program. ***Under 23 CFR 774.13 and 23 CFR 774.17, the Rock Creek Park Multi-Use Rehabilitation Project will not use a Section 4(f) resource and is applicable for an exception; therefore the project is legislatively exempt from the requirements of Section 4(f).***

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## CHAPTER 5: CONSULTATION AND COORDINATION

NEPA regulations require an “early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action.” To determine the scope of issues to be analyzed in depth in this plan, meetings were conducted with the lead agencies and the public.

### 5.1. PUBLIC INVOLVEMENT

Public scoping for the proposed action was originally initiated by NPS in 2006. A meeting was held on October 26 at Peirce Mill to give the public the opportunity to share ideas on the potential rehabilitation of the trail. Based on comments received during the 2006 scoping, a project to prepare an EA commenced in 2009. During this time, federal and local agencies, as well as community stakeholders, were invited to provide comments on the scope of the EA and the proposed action. Three letters were received from the public during the scoping period. A letter from Friends of Peirce Mill was received describing the restoration efforts underway at the Mill in 2009. The Friends of Rose Park commented on their preference to see the Rose Park trail renovated in its current location and at its current width. The Beall Court Condominium Association also commented that the Rose Park trail should not be widened. Prior to the release of the EA, the project was put on hold.

In November 2010, when funding again became available, the Rock Creek Park Multi-Use Trail Rehabilitation was reinitiated. In addition to an agency scoping period, a public scoping period was opened January 28, 2011 through February 28, 2011. During this time, the public was invited to provide comments on the proposed action and scope of the EA, and issues and concerns regarding natural, socioeconomic and cultural resources. Public notices were posted on the Planning, Environment, and Public Comment website (PEPC), the DDOT website and Facebook pages, and advertised in The Washington Post and The Current Newspapers. The project team also sent email notices or posted to listservs of Advisory Neighborhood Commissioners (ANCs), community groups, and potential stakeholders, including individuals and groups who previously expressed an interest in the project.

A public scoping meeting was held on February 23, 2011, at the National Zoological Park Visitor Center Auditorium, 3001 Connecticut Avenue, NW, Washington, DC. The purpose of this meeting was to solicit public input on the purpose, need, and objectives of the project, major issues, and alternatives. A total of fifty-four (54) people signed in to the meeting. The meeting was held in an open-house format followed by an open microphone session in which attendees could sign up to speak at a microphone. The open microphone session was recorded by a court reporter. In addition, attendees could comment in writing.

About six hundred (600) comments were received during the scoping period. In general, the comments articulated support for the action alternatives. The vast majority of commenters favored Rock Creek Park Trail Alternative 3, Peirce Mill Trail Spur Option B, and Rose Park Trail Option C. Many commenters commented that the portion of the Rock Creek Trail on the National Zoo property should remain open 24 hours-a-day or improvements should be made to the trail as it runs through the Beach Drive tunnel detour. Commenters articulated concern over trail detours during construction and stated that detours should be well marked and easy to use. Many commenters expressed safety concerns due to trail deterioration, poor visibility, and road crossings. Some commenters asked that signage be added to the trail indicating trail connections and distances. Other concerns included trail maintenance, natural resource protection, and stormwater management. Comments were received from the Friends of Rose Park stating preference for the Rose Park trail to be

resurfaced, but not moved or widened. Some commenters asked that speed control measures be used in Rose Park to slow bikers.

***In addition to public scoping, the project team held a meeting with the Friends of Rose Park on April 13, 2011. At the meeting, Rose Park Trail options were presented and comments were received. Comments received from the Friends of Rose Park expressed concerns regarding widening of the trail, the proximity of the trail to children's play areas, and the preservation of an oak tree adjacent to the trail at the Dumbarton Street playground area.***

***Following the release of the EA, DDOT held a public hearing on December 14, 2011. The meeting provided the public with an opportunity to review the Rock Creek Park Multi-Use Trail Rehabilitation EA and Section 106 Evaluation and provide formal comments. The majority of comments indicated Alternative 3 as the Preferred Alternative for the Rock Creek Park Multi-Use Trail Rehabilitation. No comments were received in support of Alternative 2. For the Rose Park Trail, the majority of hearing comments were in favor of Option B, C, or either option. However, comments were received questioning the safety of Options B and C, and the protection of vegetation in Rose Park.***

## 5.2. CONSULTATION

Coordination with local and federal agencies and various interest groups was conducted during the NEPA process to identify issues and/or concerns related to the proposed RCT rehabilitation. In accordance with Section 7 of the Endangered Species Act, consultation letters were sent from DDOT to DDOH, the USFWS, and the NPS Center for Urban Ecology on December 14, 2010 (See **Appendix A**). In a letter dated April 20, 2011, the USFWS confirmed that there are no known federally listed species or habitat within the project limits, and Section 7 consultation with USFWS for the project was complete. No additional responses have been received to date.

Scoping letters were sent on February 27, 2009 to several local and federal agencies to solicit comments on the proposed project. The NCPC responded via a letter dated March 23, 2009 and asked that NCPC be identified as a cooperating federal agency for NEPA. NCPC asked that the EA analyze elements of the *Comprehensive Plan for the National Capital*, stormwater management, impacts to forest corridors and buffers, and historic resources and attributes. The Smithsonian Institute (SI) responded by an email dated March 18, 2009 and commented that the National Zoo Property and the Holt House are both on the National Register of Historic Places (NRHP). SI also provided concerns that they would like to be addressed in the EA including Historic Districts, transportation issues regarding road crossings, protection of Rock Creek Valley, and analysis of visual and aesthetic features. The DC OP provided comments by letter dated March 25, 2009 discussing policies of the District's Comprehensive Plan that promote multi-modal accessibility to District neighborhoods and key destinations. DC OP also asked that the EA look at the impacts of the proposed trail rehabilitation on the adjacent communities.

Scoping letters were sent out on January 24, 2011 to local and federal agencies to solicit comments and to invite recipients to an Agency Scoping Meeting. The Agency Scoping Meeting was held on February 15, 2011 at the Rock Creek Park Maintenance Yard Conference Room, 5000 Glover Road, Washington, DC 20015. The purpose of the meeting was to obtain agency and elected officials feedback on the proposed action and scope of the EA and to present the preliminary project alternatives. Agencies attending the meeting included DC Water, CFA, NCPC, DDOE, and a representative of Councilmember Bowser. The attendees were supportive of the project and provided recommendations to refine the preliminary alternative concepts including

preliminary design and stormwater management concepts. The discussion also included suggestions for items to consider in the design phase of the project, such as materials selection and signage styles.

The project team met with National Zoo senior managers on June 1, 2011 to present the proposed action and alternatives, and discuss issues such as the Zoo gates to the north and south of the Beach Drive tunnel, and the deteriorating timber retaining wall within the perimeter fence. ***A second meeting was held with the National Zoo on January 24, 2013 to discuss design plans.*** The National Zoo staff explained that the outer perimeter fence and accompanying gates, as well as their timed closures, are required in order to maintain the National Zoo's accreditation by the American Zoological and Aquarium Association (AZA). After a presentation and discussion, the National Zoo senior management endorsed Rock Creek Park Trail Alternative 3: Trail Resurfacing and Widening, including trail widening from eight feet to 10 feet on National Zoo property.

### 5.3. SECTION 106 CONSULTATION

Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties. Section 106 consultation was initiated in 2009 for the previous EA effort. DC HPO replied on March 19, 2009. The 2009 letter stated that the project would occur within or immediately adjacent to the following sites listed on the NRHP or DC Inventory of Historic Sites: Rock Creek Park, Greystone Enclave, Piney Branch Parkway, National Zoological Park, and the Rock Creek and Potomac Parkway. The DC HPO also stated that the project may result in direct or indirect effects on the following historic districts: Mount Pleasant, Woodley Park, Kalorama Triangle, Sheridan-Kalorama, Massachusetts Avenue, Oak Hill Cemetery, Montrose Park, and Georgetown. The DC HPO stated the EA should evaluate the potential for direct and indirect effects such as visual and audible impacts within these historic districts, as appropriate.

With the continuation of the EA process and in accordance with the regulations implementing Section 106 of the NHPA, letters initiating the process were resent to the DC HPO and ACHP on December 14, 2010. No response was received from the ACHP as of the date of this EA and a response is not expected since it has been determined that the project would result in a Finding of No Adverse Effect. The consultation conducted with the DC HPO is described below.

In response to the initiation letter, the DC HPO replied on January 18, 2011 via a letter confirming that the project will occur within or adjacent to three historic districts listed in the NRHP; the Rock Creek Park, Rock Creek and Potomac Parkway, and the National Zoological Park Historic Districts. DDOT submitted a letter requesting concurrence on the APE on July 5, 2011 and DC HPO concurred with the APE on July 14, 2011. Since numerous archeology sites have been identified near the project area, the DC HPO recommended coordination with Dr. Ruth Troccoli and Dr. Stephen Potter (NPS Regional Archeologist) prior to ground disturbance. DDOT also coordinated archeological resource concerns with NPS and DC HPO as part of the archeological investigation, EA, and Section 106 processes. DDOT/FHWA then submitted an Assessment of Effect to the DC HPO on September 18, 2011 and received DC HPO concurrence on the Finding of No Adverse Effect on October 19, 2011. ***On May 21, 2014, FHWA submitted a formal letter to the DC SHPO, which outlined FHWA's determination of effects to historic resources from the project. On June 2, 2014, the DC SHPO responded and confirmed its concurrence to FHWA's determination of "No Adverse Effects".*** The aforementioned Section 106 documentation is provided in **Appendix D**.

#### **5.4. PUBLIC COMMENTS AND HEARING FOR THE EA**

*The public comment period closed on January 13, 2012. DDOT and NPS received comments through written letters, emails, and the NPS Planning, Environment, and Public Comment (PEPC) website (<http://parkplanning.nps.gov/RockCreekTrailRehab>), where the EA was publicly posted on the Internet. The PEPC database is a tool used by the NPS to manage official correspondence and analyze public comment in the planning process. Comments were reviewed and analyzed and changes to the EA provided in the Final EA.*

*DDOT held a Public Hearing at the Columbia Heights Education Campus on December 14, 2011 from 6:00 p.m. to 8:00 p.m. The hearing was set up in an Open House format from 6:00 – 6:30, with public comments from 6:30 p.m. – 8:00 p.m. The purpose of the public hearing was to give interested parties the opportunity to provide formal comments on the Draft EA and Section 106 Evaluation*

*Comments on the EA and responses to substantive comments can be found in Appendix E to this Final EA.*

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## GLOSSARY AND ACRONYMS

### GLOSSARY OF TERMS

**Affected Environment** — The existing environment to be affected by a proposed action and alternatives.

**Best Management Practices** — Methods that have been determined to be the most effective, practical means of preventing or reducing pollution or other adverse environmental impacts.

**Contributing Resource** — A building, site, structure, or object that adds to the historic significance of a property or district.

**Council on Environmental Quality** — Established by Congress within the Executive Office of the President with passage of the *National Environmental Policy Act* of 1969. CEQ coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives.

**Cultural Landscape** — Environments that include natural and cultural resources associated with a historical context.

**Cultural Resources** — Prehistoric and historic districts, sites, buildings, objects, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reason.

**Cumulative Impacts** — Under NEPA regulations, the incremental environmental impact or effect of an action together with the effects of past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions (40 CFR Part 1508.7).

**Endangered Species** — Any species that is in danger of extinction throughout all or a significant portion of its range. The lead federal agency for the listing of a species as endangered is the U.S. Fish and Wildlife Service, and it is responsible for reviewing the status of the species on a five-year basis.

**Endangered Species Act (16 U.S.C. 1531 et seq.)** — An Act which provides a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved and which provides a program for the conservation of such endangered species and threatened species.

**Environmental Assessment** — An environmental analysis prepared pursuant to the *National Environmental Policy Act* to determine whether a federal action would significantly affect the environment and thus require a more detailed environmental impact statement (EIS).

**Executive Order** — Official proclamation issued by the President that may set forth policy or direction or establish specific duties in connection with the execution of federal laws and programs.

**Floodplain** — The flat or nearly flat land along a river or stream or in a tidal area that is covered by water during a flood.

**Impairment**—Refers to a classification of poor water quality for a surface water body under the U.S. Clean Water Act.

**National Environmental Policy Act (NEPA)** — The Act as amended, articulates the federal law that mandates protecting the quality of the human environment. It requires federal agencies to systematically assess the environmental impacts of their proposed activities, programs, and projects including the “no build” alternative of not pursuing the proposed action. NEPA requires agencies to consider alternative ways of accomplishing their missions in ways which are less damaging to the environment.

**National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.)** — An Act to establish a program for the preservation of historic properties throughout the nation, and for other purposes, approved October 15, 1966 [Public Law 89-665; 80 STAT. 915; 16 U.S.C. 470 as amended by Public Law 91-243, Public Law 93-54, Public Law 94-422, Public Law 94-458, Public Law 96-199, Public Law 96-244, Public Law 96-515, Public Law 98-483, Public Law 99-514, Public Law 100-127, and Public Law 102-575].

**National Register of Historic Places (NRHP)** — A register of districts, sites, buildings, structures, and objects important in American history, architecture, archeology, and culture, maintained by the Secretary of the Interior under authority of Section 2(b) of the *Historic Sites Act* of 1935 and Section 101(a)(1) of the *National Historic Preservation Act* of 1966, as amended.

**Scoping** — Scoping, as part of NEPA, requires examining a proposed action and its possible effects; establishing the depth of environmental analysis needed; and determining analysis procedures, data needed, and task assignments. The public is encouraged to participate and submit comments on proposed projects during the scoping period.

**Threatened Species** — Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.



**ACRONYMS**

ABA	Architectural Barriers Act
ABAAS	Architectural Barriers Act Accessibility Standard
ADA	Americans with Disabilities Act
ACHP	Advisory Council on Historic Preservation
ANCs	Advisory Neighborhood Commissioners
APE	Area of Potential Effect
BMPs	Best Management Practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CRZ	critical root zone
CWA	Clean Water Act
Dbh	diameter at breast height
DCMR	District of Columbia Municipal Regulations
DCOP	District of Columbia Office of Planning
DCOS	District of Columbia Office of the Secretary
DDOE	District Department of the Environment
DDOH	District of Columbia Department of Health
DDOT	District Department of Transportation
DM	Departmental Manual
DO	Director's Order
DPR	District of Columbia Department of Parks and Recreation
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
Msl	mean sea level
MWCOG	Metropolitan Washington Council of Governments
NAAQS	National Ambient Air Quality Standards
National Zoo	National Zoological Park
NBS	National Biological Survey
NCPC	National Capitol Planning Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NPOMA	National Parks Omnibus Management Act
NPS	National Park Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
PEPC	Planning, Environment and Public Comment
PL	Public Law

PWA	Public Works Administration
SFHA	special flood hazard area
HPO	Historic Preservation Office
TMDL	Total Maximum Daily Load
TNC	the Nature Conservancy
Rock Creek Park GMP	Final Rock Creek Park and the Rock Creek and Potomac Parkway General Management Plan
SWDC	Special Waters of the District of Columbia
TMDLs	Total Maximum Daily Loads
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

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# APPENDICES



APPENDIX

A

AGENCY CONSULTATION AND COORDINATION









## United States Department of the Interior

NATIONAL PARK SERVICE  
National Capital Region  
Rock Creek Park  
3545 Williamsburg Lane, N.W.  
Washington, DC 20008-1207

August 16, 2011

Austina Casey  
Environmental Policy Analyst  
District Department of Transportation  
55 M St. SE, Suite 500  
Washington, DC 20003

Dear Ms. Casey:

The District Department of Transportation, working with the Federal Highway Administration and National Park Service, is preparing an Environmental Assessment in accordance with the National Environmental Policy Act for the rehabilitation of the existing Rock Creek Park Multi-Use Trail in Washington, DC.

As part of this process, we have identified the National Park Service's Preferred Alternative and related options for this project:

- Rock Creek Park Multi-Use Trail Alternative 3: Trail Resurfacing and Widening
- Peirce Mill Trail Spur Option B: 8-foot Paved Trail Spur
- Rose Park Trail Option B: 6-foot Resurfaced Trail

This determination is based on an initial analysis of environmental impacts, comments provided by the public and others, and the professional judgment of decision-makers guided by National Park Service management policies

If you have any questions, please contact Rock Creek Park's Environmental Protection Specialist, Michael Buckler, at 202-895-6076, or by email at [michael\\_buckler@nps.gov](mailto:michael_buckler@nps.gov).

Sincerely,

Tara Morrison  
Superintendent  
Rock Creek Park

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
DEPARTMENT OF TRANSPORTATION



Planning, Policy, & Sustainability Administration

December 14, 2010

Mr. Ira Palmer  
District of Columbia Department of Health  
Fish and Wildlife Division  
51 N Street, NE, Room 5002  
Washington, DC 20002

**RE: Request for species of concern information for the Rock Creek Multi-Use Trail  
Environmental Assessment, Washington, DC**

Dear Mr. Palmer:

The District of Columbia Department of Transportation (DDOT), in cooperation with the National Park Service and Federal Highway Administration, is preparing an Environmental Assessment (EA) to assess the potential effects of various alternatives to rehabilitate the existing Rock Creek Multi-Use Trail in Washington, DC. The project location is shown on the attached Project Area map. Rock Creek Park is a 2,100 acre park under the jurisdiction of the NPS. The park is located in the northwest portion of Washington, DC and extends from the Maryland state line south to Virginia Avenue, NW. The proposed action includes the rehabilitation of a 3.7-mile segment of the existing Rock Creek Trail and a 3,000-foot segment of the existing Rose Park Trail.

In compliance with Section 7 of the Endangered Species Act, we request a review of the District of Columbia's natural resources database to determine the potential presence of any district-listed plant or animal species of concern and/or any unique habitat that may occur in the project area. The co-lead agencies are aware of the presence of habitat for the Hayes Spring amphipod (*Stygobromus hayi*) within the project vicinity.

Greenhorne & O'Mara (G&O) is providing consulting services for this project. If you have any questions or need additional information regarding this request, please contact Ms. Sheila Mahoney, of G&O, at 410-683-5700 or via email at smahoney@g-and-o.com or me at 202-671-0494.

Respectfully,

Austina Casey  
Environmental Policy Analyst

Enclosures (2)

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
DEPARTMENT OF TRANSPORTATION



Planning, Policy, & Sustainability Administration

December 14, 2010

Mr. Leopoldo Miranda, Field Supervisor  
United States Fish and Wildlife Service  
Chesapeake Bay Field Office  
177 Admiral Cochrane Drive  
Annapolis, MD 21401

**RE: Request for species of concern information for the Rock Creek Multi-Use Trail  
Rehabilitation Environmental Assessment, Washington, DC**

Dear Mr. Miranda:

The District of Columbia Department of Transportation (DDOT), in cooperation with the National Park Service and Federal Highway Administration, is preparing an Environmental Assessment (EA) to assess the potential effects of various alternatives to rehabilitate the existing Rock Creek Multi-Use Trail in Washington, DC. The project location is shown on the attached Project Area map. Rock Creek Park is a 2,100 acre park under the jurisdiction of the NPS. The park is located in the northwest portion of Washington, DC and extends from the Maryland state line south to Virginia Avenue, NW. The proposed action includes the rehabilitation of a 3.7-mile segment of the existing Rock Creek Trail and a 3,000-foot segment of the existing Rose Park Trail.

In compliance with Section 7 of the Endangered Species Act, we request any information concerning federally-listed threatened or endangered plant or animal species and/or any unique habitat that may occur in the project area. The co-lead agencies are aware of the presence of habitat for the Hayes Spring amphipod (*Stygobromus hayi*) within the project vicinity.

Greenhorne & O'Mara (G&O) is providing consulting services for this project. If you have any questions or need additional information regarding this request, please contact Ms. Sheila Mahoney, of G&O, at 410-683-5700 or via email at smahoney@g-and-o.com or me at 202-671-0494.

Respectfully,

A handwritten signature in black ink that reads "Austina Casey".

Austina Casey  
Environmental Policy Analyst

Enclosures (2)

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
DEPARTMENT OF TRANSPORTATION



Planning, Policy, & Sustainability Administration

December 14, 2010

Mr. Dan Sealy, Deputy Chief  
National Park Service  
Center for Urban Ecology  
4598 MacArthur Boulevard, NW  
Washington, DC 20007

**RE: Request for species of concern information for the Rock Creek Multi-Use Trail  
Environmental Assessment, Washington, DC**

Dear Mr. Sealy:

The District of Columbia Department of Transportation (DDOT), in cooperation with the National Park Service and Federal Highway Administration, is preparing an Environmental Assessment (EA) to assess the potential effects of various alternatives to rehabilitate the existing Rock Creek Multi-Use Trail in Washington, DC. The project location is shown on the attached Project Area map. Rock Creek Park is a 2,100 acre park under the jurisdiction of the NPS. The park is located in the northwest portion of Washington, DC and extends from the Maryland state line south to Virginia Avenue, NW. The proposed action includes the rehabilitation of a 3.7-mile segment of the existing Rock Creek Trail and a 3,000-foot segment of the existing Rose Park Trail.

In compliance with Section 7 of the Endangered Species Act, we request a review of the District of Columbia's natural resources database to determine the potential presence of any district-listed plant or animal species of concern and/or any unique habitat that may occur in the project area. The co-lead agencies are aware of the presence of habitat for the Hayes Spring amphipod (*Stygobromus hayi*) within the project vicinity.

Greenhorne & O'Mara (G&O) is providing consulting services for this project. If you have any questions or need additional information regarding this request, please contact Ms. Sheila Mahoney, of G&O, at 410-683-5700 or via email at smahoney@g-and-o.com or me at 202-671-0494.

Respectfully,

A handwritten signature in black ink that reads "Austina Casey". The signature is fluid and cursive.

Austina Casey  
Environmental Policy Analyst

Enclosures (2)



IN REPLY REFER TO:

# United States Department of the Interior



## NATIONAL PARK SERVICE

National Capital Region  
Rock Creek Park  
3545 Williamsburg Lane, N.W.  
Washington, D.C. 20008-1207

L7619 (NCA-ROCR)

FEB 25 2009

Tim Buehner, Design Manager  
National Zoo  
3001 Connecticut Avenue, NW  
Washington, D.C. 20008

Re: Proposed Improvements to the Rock Creek Trail between Broad Branch Road and M Street

Dear Mr. Buehner:

The National Park Service, in collaboration with the District of Columbia Department of Transportation (DDOT) and the Federal Highway Administration, is preparing an Environmental Assessment (EA) for proposed improvements to the portion of the Rock Creek Trail between Broad Branch Road and M Street, as well as new connections to this trail. This EA evaluates the potential effects of the proposed improvements in accordance with National Environmental Policy Act of 1969 (NEPA) and the CEQ regulations for implementing NEPA (40 CFR 1500-1508) and in coordination with the actions required for compliance with Section 106 of the National Historic Preservation Act of 1966 and the implementing regulations of the Advisory Council on Historic Preservation's regulation (36 CFR 800). In accordance with these requirements, proposed actions on National Park Service lands must undergo an Environmental Assessment to identify impacts to existing natural, biological, cultural, and environmental resources prior to determining a preferred alternative concept.

The proposed action includes the rehabilitation of a 3.7-mile segment of the existing Rock Creek Trail between P Street and Broad Branch Road and a 3000-foot segment of the existing Rose Park Trail; construction of new trail along Piney Branch Parkway from Beach Drive to Arkansas Avenue at Taylor Street; and construction of a new trail and/or bicycle route adjacent to the exit/entrance ramp connecting P Street to the Rock Creek Parkway. The proposed rehabilitation of existing trails includes resurfacing, trail widening where environmentally feasible, modifications to the trail alignment and road crossings, and additional modifications to improve safety, erosion control and connections to and from the trail. The majority of the proposed improvements occur on National Park Service land, with some additional improvements located on District of Columbia land.

At this stage of the assessment, the National Park Service would appreciate your assistance in identifying important environmental and cultural resources within the project area that should be

addressed as part of the EA or that may be of concern to your agency, citizen group or you as an individual stakeholder. We ask that you please submit your written comments within 21 days of receiving this letter.

Please mail your comments by March 23, 2009 to the consultant preparing the assessment. Responses may be directed to the attention of Eric Feldman, Rhodeside & Harwell, Inc., 320 King Street, Suite 202, Alexandria, VA 22314 (or by email at [ericf@rhodeside-harwell.com](mailto:ericf@rhodeside-harwell.com)). If you have any questions regarding the proposed action, please contact Chris Holben at the District Department of Transportation at 202-671-4617.

Sincerely,

A handwritten signature in black ink, appearing to read 'Adrienne A. Coreman', written over a horizontal line.

Adrienne A. Coreman  
Superintendent, Rock Creek Park



401 9th Street, NW  
North Lobby, Suite 500  
Washington, DC 20004  
Tel 202 462-7200  
Fax 202 462-7272  
www.ncpc.gov

IN REPLY REFER TO:  
NCPC File No. 1200

March 23, 2009

Ms. Adrienne A. Coleman  
Superintendent, Rock Creek Park  
3545 Williamsburg Lane, NW  
Washington, DC 20008-1207

Dear Superintendent Coleman:

Thank you for your letter of February 27, 2009 requesting comments on the scoping phase of the National Park Service's proposed Environmental Assessment (EA) for improvements to a portion of the Rock Creek Trail between Broad Branch Road and M Street, NW. Our comments are based in the Commission's role as the central planning agency for the federal government in the National Capital and relate to our Commission's published plans, policies, and environmental procedures. The proposed trail improvements will also require formal review by the Commission in compliance with Section 8722(b)(1) and (d) of the National Capital Planning Act. As such, the National Capital Planning Commission should be identified in the EA as a cooperating federal agency for NEPA, in accordance with the Commission's submission guidelines.

In addition to studying a range of build alternatives in the EA that complement the Park's mission to preserve and perpetuate the ecological resources of Rock Creek valley, and to preserve its scenic value for the enjoyment of the public, please include the following:

Analysis relative to the *Comprehensive Plan for the National Capital*

Given that the project is a joint federal and District of Columbia effort in the National Capital, please consider in developing and analyzing alternatives the goals and objectives of both the federal and local elements of the *Comprehensive Plan for the National Capital*. On the federal side, these would include open space and park planning, transportation, recreation, visitor, and historic preservation elements.

Stormwater Management

Potential trail renovations or new construction within Rock Creek Park should be planned to allow for an adequate balance between constructed impervious areas and open space for stormwater run-off and retention. Site development should utilize best management procedures/practices to reduce the amount of cut and fill and disturbance within natural drainage



Superintendent Coleman  
Page - 2

areas for any trail improvement area. Such practices will help to mimic the natural or predevelopment condition, thereby maintaining surface water and groundwater quality, and minimizing the generation of off-site transport of pollutants.

#### Forest Corridors and Buffers

The landscape and open space setting of Rock Creek Park that is provided by trees and natural buffers should be protected and enhanced. The natural buffer areas along the trail act as natural barriers, and should be maintained. Additional wooded buffers should also be included to physically augment trail development if possible with the use of Low Impact Development techniques established where feasible. Care should be taken to maintain natural greenery where limited or diminished vegetation presently exists.

Forested streamside and drainage areas along the trail corridor function as critical elements in providing energy to streams in the form of dissolved carbon compounds and organic detritus. These materials are important to processes within the overall watershed itself. The streamside areas function as an important energy source for Rock Creek. Consequently, the removal of forest floor ground surface should be minimized or mitigated in streamside areas within 50 feet of the creek.

#### Historic Attributes

Existing Rock Creek stream valley corridor historic resources and attributes should be considered and potential impacts analyzed in the EA.

Please coordinate your efforts with the Smithsonian's National Zoological Park regarding access to the proposed Trail's pedestrian and bicycle circulation improvements. This coordination will improve not only the Zoo's connections to the adjacent city neighborhoods but to the whole of the Rock Creek Park to accentuate the visitor experience involving these recreation resources.

We appreciate your consideration of our comments and your consultation with us at this stage of the EA planning. If you have any questions about our comments, please contact Nancy Witherell of my staff at (202) 482-7239, who will coordinate this agency's review of any historic property issues, or Eugene Keller at (202) 482-7251, regarding the environmental assessment process or design review issues.

Sincerely,



David W. Levy, RA, AICP  
Director, Urban Design and Plan Review Division

cc: Mr. Eric Feldman  
Rhodeside & Harwell, Inc.

**Eric Feldman**

---

**From:** Rombach, Harry [ROMBAH@si.edu]  
**Sent:** Wednesday, March 18, 2009 4:19 PM  
**To:** Eric Feldman  
**Cc:** Adrienne A. Coleman; Chris.Holben@dc.gov; Tanner, Mary; Nauta-Rodriguez, Debra; Buehner, Tim; Passman, Jane; Park, Sharon; Ballard, Amy; Fillah, Chuck; Muller, Marc  
**Subject:** EA scoping comments re: Rock Creek Trail Improvements  
**Attachments:** 2009-02-25 NPS Bike Trail NEPA Notification.pdf

Dear Mr. Feldman,

Thank you for sending the subject notification and scoping letter to us. This project is of great interest to us because as you know a portion of the Rock Creek Trail runs through the National Zoological Park (NZN). We realize at this point you are only at a scoping phase in your NEPA and NHPA Section 106 processes, but if any conceptual plans or ideas for this project have been produced (especially in and around the NZN), or when they are produced in the future, we would appreciate a briefing as soon as practically possible. At this meeting we could address concerns and looks for coordination opportunities beyond the normal regulatory review processes. By copy of this email letter, we are making this request known to both NPS and DC Department of Transportation. Our input related to your future EA is reflected in the following:

Resources:

Regarding “identifying important environmental and cultural resources in the project area that should be address as part of the EA,” the entire National Zoo property is listed on the National Register of Historic Places. One exception is the Holt House, which is located on the Zoo grounds and is individually listed on the Register.

The Smithsonian recently completed a facilities master planning study, which included an Environmental Assessment. This EA included an Historic Preservation Report, an inventory and evaluation of architectural and landscape resources, and a listing of areas likely to include archeological resources at the National Zoo. The master plan, EA, and associated appendices can be made available and serve as a resource to you.

Concerns:

The following comments represent concerns that we feel should be addressed in your Environmental Assessment and ultimately in the implementation of this project

- As you undoubtedly know, Rock Creek Park and Parkway have been designated as Historic Districts, so historic and cultural resources should be thoroughly investigated in the future EA.
- Given Rock Creek Trail’s use by commuter and recreational bicyclist, hikers, and walkers, and given that these users must cross vehicular traffic at certain points, transportation issues should be extensively investigated. Existing and potential vehicular and user conflicts (and conflicts within the user groups) should be looked at. Along this line, as you may be aware, in the evenings and occasionally for security purposes, we must close the gates to the National Zoo. This has an impact on users of the Trail, especially those on bicycles. This impact and any resolution to it should be included in the EA analysis.
- The Rock Creek valley, through which the Trail traverses, is rich natural and ecological features, all of which need to be considered. At points the Trail comes very close to Rock Creek itself, so flood plain and wetland concerns will need to be an area of emphasis. Also, especially at the creek borders, erosion control and prevention concerns and issues will need to be emphasized.

3/18/2009

- Lastly, the area in which this project occurs is rich in visual and aesthetic features, such as buildings, bridges, and vistas. The effects of Trail improvements on these resources should be thoroughly analyzed.

I hope this input is helpful. If you have any questions on anything said here, please let me.

Sincerely,  
*Harry Rombach*



## Smithsonian Institution

**Harry Rombach, R.A.**

Associate Director for Facilities Master Planning

600 Maryland Avenue SW Suite 5001

PO BOX 37012 MRC 511

Washington DC 20013-7012

t: 202.633.6555

f: 202.633.6233



Office of the Director

March 25, 2009

Rhodeside & Harwell, Inc.  
c/o Eric Feldman  
320 King Street  
Suite 202  
Alexandria, Virginia 22314

RE: Proposed Improvements to the Rock Creek Trail between Broad Branch and M Street

Dear Mr. Feldman:

Thank you for contacting the Office of Planning (OP) regarding the above referenced undertaking. OP submits the following in response to your request for assistance in identifying important environmental and cultural resources in the project area that should be addressed as part of the Environmental Assessment (EA). We also want to raise additional points about the opportunity for this project to meet District priorities for connectivity and multi-modal transportation. In this context, OP submits additional comments on these issues for your consideration during the design and environmental assessment processes.

**Cultural & Historic Resources**

The State Historic Preservation Office (SHPO) has responded to this undertaking by providing separate comments to the National Park Service. Of particular concern to the SHPO and also to OP is the lack of detailed information regarding the project area. The NPS letter only included a written description of the approximately four-mile long project area. A project map(s) or more specific boundary description is necessary in order to fully assess the potential impacts on the rich historic and cultural resources of Rock Creek Park and surrounding historic districts. OP requests that additional project area information and maps are provided so that we can provide more specific comments in consultation with the SHPO.

**Connectivity & Transportation**

OP is committed to planning for and promoting multi-modal accessibility to District neighborhoods and key destinations. The proposed improvements to Rock Creek Trail provide a unique opportunity to address key policies outlined in the District's Comprehensive Plan. These include:

***Policy RCE-1.2.4: Rock Creek Park***

*Improve multi-modal access to Rock Creek Park by providing additional parking, public transit service, bicycle trails, and walking paths. Expand outdoor recreational activities at the park to better meet community needs. 2209.4*

***Policy T-2.3.1: Better Integration of Bicycle and Pedestrian Planning***

*Integrate bicycle and pedestrian planning and safety considerations more fully into the planning and design of District roads, transit facilities, public buildings, and parks. 409.8*



**Policy T-2.3.2: Bicycle Network**

*Provide and maintain a safe, direct, and comprehensive bicycle network connecting neighborhoods, employment locations, public facilities, transit stations, parks and other key destinations. Eliminate system gaps to provide continuous bicycle facilities. 409.9*

**Policy T-2.3.3: Bicycle Safety**

*Increase bicycle safety through traffic calming measures, provision of public bicycle parking, enforcement of regulations requiring private bicycle parking, and improving bicycle access where barriers to bicycle travel now exist. 409.10*

**Policy T-2.4.1: Pedestrian Network**

*Develop, maintain, and improve pedestrian facilities. Improve the city's sidewalk system to form a network that links residents across the city. 410.5*

Keeping these policies in mind, OP recommends that NPS and Rhodeside Harwell fully consider the following connectivity and transportation issues in the design and EA processes:

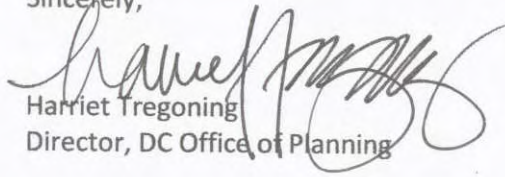
- *Trail Access:* The EA should fully study how users of the trail will access each improved facility and design the facility to encourage arrival by transit, walking and bicycling. The EA should consider visibility of trailheads, routes, crossings and signage from nearby transit stations/stops and bicycle routes. The EA should also assess ease of vehicular access to trail entrances, parking, and parking capacity. Traffic impacts from any changes to trail access on adjacent streets should also be fully studied.
- *Trail Promotion:* Promoting the trail as a transportation route into the central core of the District and viable alternative route for bicyclists currently using parallel roadways, such as 16<sup>th</sup> Street, is critical. An example of this could be using NPS or District websites to clearly indicate trailhead locations, directions and proximity from Metro stations/bus stops.
- *Linking Destinations:* Rock Creek Trail improvements should include clear connections and signage for reaching the National Zoo and other major destinations via the trail. Increasing visitation to the Zoo by transit, walking and bicycling became a priority during the development of the Zoo's updated Master Plan and 2008 EA.
- *Facilities:* Improved trail facilities should meet national best practice standards for a multi-use facility. Trail widths should accommodate diverse users, and adequate widths and sight lines should be preserved to reduce conflicts. Trail improvements should identify locations for and design of a bicycle parking. Where bikes are expected to be parked for a longer term (more than an hour), covered parking should be provided.
- *Design:* Trail improvements should include ample lighting and consideration of personal security concerns. Vegetation should not be added that will obstruct views of the trail.

**Neighborhood Impacts**

OP also advocates considering the impact of the rehabilitation and creation of new paths on the adjacent communities. With the potential for increased use of the trails, concern may arise about crime, lighting, loitering and trash; therefore the design process should explore and mitigate potential neighborhood impacts.

OP appreciates the opportunity to provide comments that will be studied in the EA. We welcome the opportunity to work with NPS and Rhodeside Harwell throughout in the next stages of this process. If you have questions, please do not hesitate to contact me, or Geraldine Gardner, Associate Director for Neighborhood Planning, at (202) 442-7600.

Sincerely,



Harriet Tregoning  
Director, DC Office of Planning

HT/ey/gg

cc: Adrienne Coleman, Superintendent, Rock Creek Park, National Parks Service

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
DEPARTMENT OF TRANSPORTATION



Planning, Policy, & Sustainability Administration

January 24, 2011

Mr. Joseph C. Lawson  
Division Administrator  
Federal Highway Administration,  
District of Columbia Division  
1990 K St. NW, Suite 510  
Washington, DC 20006

**RE: Scoping Process for the Rock Creek Park Multi-Use Trail Environmental Assessment, Washington, DC**

Dear Mr. Lawson:

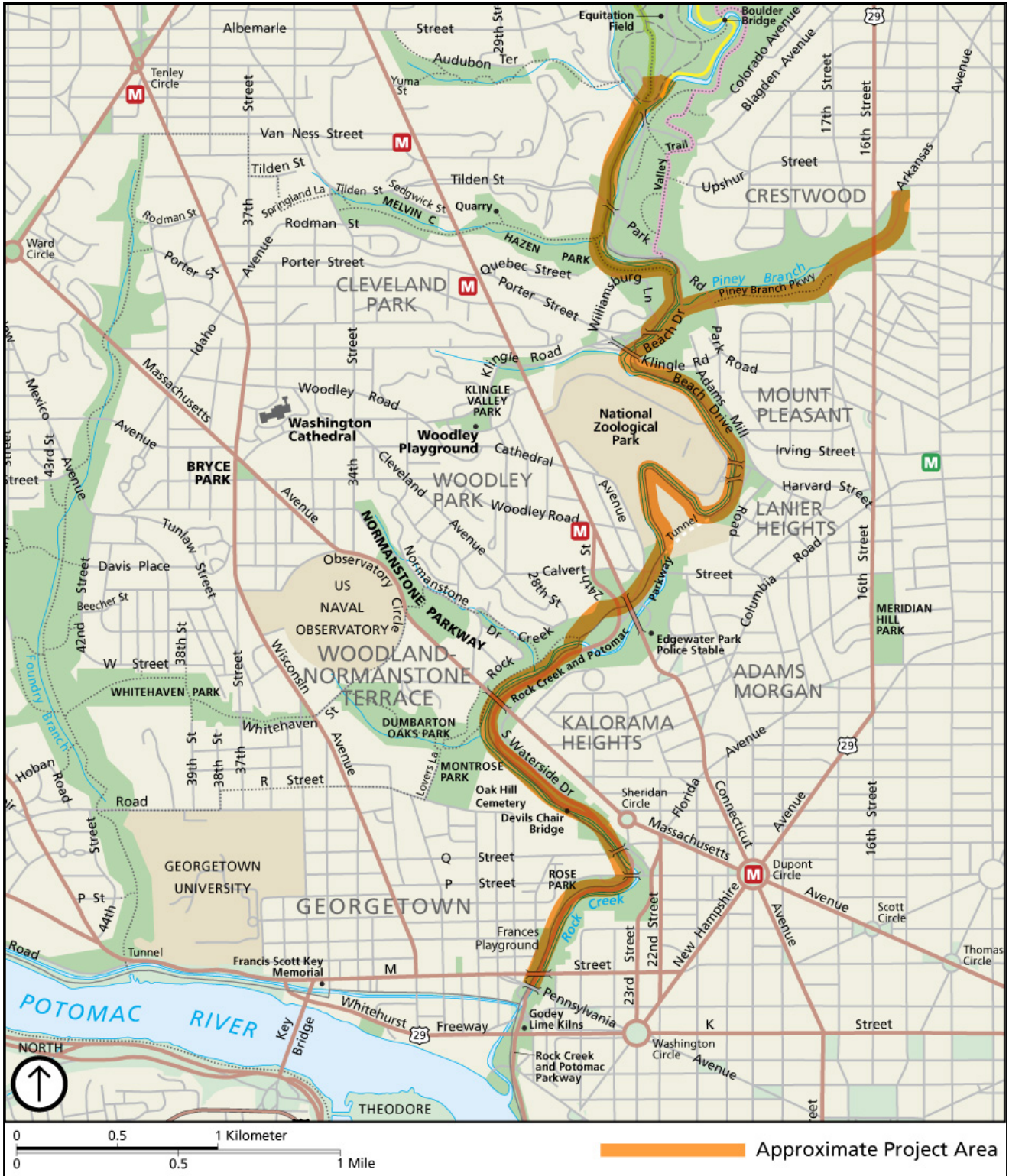
The District of Columbia Department of Transportation (DDOT), in cooperation with the National Park Service (NPS) and Federal Highway Administration (FHWA), is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (NHPA), NPS Director's Order #12: *Conservation Planning, Environmental Impacts Analysis and Decision-Making* (NPS 2001), incorporating components of FHWA Technical Advisory T6640.8a; to assess the potential effects of various alternatives to rehabilitate the existing Rock Creek Trail in Washington, DC (Figure 1). The purpose of this letter is to formally invite your agency to be a part of the scoping process for this project.

The proposed project area is located entirely within the Rock Creek Park, which is a 2,100 acre park under the jurisdiction of the NPS. The park is located in the northwest portion of Washington, DC and extends from the Maryland state line south to Virginia Avenue, NW. The proposed action includes the rehabilitation of a 3.7-mile segment of the existing Rock Creek Trail and a 3,000-foot segment of the existing Rose Park Trail; construction of a new trail along Piney Branch Parkway from Beach Drive to Arkansas Avenue at Taylor Street. Main elements of the project include:

- Resurfacing and trail widening of the existing facility at environmentally feasible locations;
- Modifications to the trail alignment and roadway crossings to improve user safety;
- Erosion control; and
- Connections to and from the trail.

Elements of this EA will include documentation of the purpose and need, identification of sensitive environmental resources; development of context sensitive alternatives; evaluation of impacts to cultural, natural, and socio-economic resources; agency and stakeholder coordination; effect to historic and archeological resources; and public involvement.

Figure 1: Project Area Map





The co-lead agencies are focused on identifying important environmental and cultural issues, developing project concepts for trail design, and identifying any concerns regarding the proposed project. We request your assistance in identifying any known environmental or cultural resources or any new, changing, or current environmental regulations that is under your agencies purview, which may be of concern to your agency. An **Agency Scoping Meeting** has been scheduled to provide an overview of the project, discuss the project Purpose and Need, and describe the preliminary alternatives. This meeting has been scheduled for:

**February 15, 2011**  
**1:00-3:00 p.m.**  
Rock Creek Park  
Maintenance Yard Conference Room  
5000 Glover Road  
Washington, DC 20015

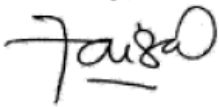
If you have any questions, please feel free to contact the DDOT Project Manager, Austina Casey, at 202-671-0494 or by email at [austina.casey@dc.gov](mailto:austina.casey@dc.gov).

Please mail your scoping comments within 30 days from the date on this letter to:

Austina Casey  
Planning, Policy, & Sustainability Administration  
District Department of Transportation  
2000 14<sup>th</sup> Street, NW, 7<sup>th</sup> Floor  
Washington, DC 20009

[Austina.casey@dc.gov](mailto:Austina.casey@dc.gov)

Respectfully,



Faisal Hameed,  
Chief, Project Development, Environment & Sustainability  
202-671-2326

cc: Nick Bartolomeo, Rock Creek Park  
Cynthia Cox, Rock Creek Park  
Austina Casey, DDOT  
Joel Gorder, NPS National Capital Region  
Michael Hicks, FHWA – DC Division

Mr. Joseph C. Lawson  
Division Administrator  
Federal Highway Administration,  
District of Columbia Division  
1990 K St. NW, Suite 510  
Washington, DC 20006

Mr. Peter May  
Associate Regional Director  
National Capitol Region  
National Park Service  
1100 Ohio Drive, SW  
Washington, DC 20242

Mr. Dennis W. Kelly, Director  
Smithsonian Institution  
National Zoological Park  
3001 Connecticut Avenue, NW  
Washington, DC 20008

Ms. Maria Teresi, Project Manager  
U.S. Army Corps of Engineers  
PO Box 1715  
Baltimore, MD 21203

Ms. Barbara Rudnick, NEPA Team Leader  
U.S. Environmental Protection Agency  
Region 3  
1650 Arch Street  
Philadelphia, PA 19103

Mr. Leopoldo Miranda, Supervisor  
Chesapeake Bay Field Office  
U.S. Fish and Wildlife Service  
177 Admiral Cochrane Drive  
Annapolis, MD 21404

Mr. Tom Luebke, Secretary  
Commission of Fine Arts  
401 F Street, NW, Suite 312  
Washington, DC 20001

Mr. Steven A. Saari  
Watershed Protection Specialist  
District Department of the Environment  
1200 First Street NE, 5<sup>th</sup> Floor  
Washington, DC 20002

Mr. Bryan King  
District Department of the Environment  
Fisheries and Wildlife Division  
51 N Street, NE  
Washington, DC 20002

Mr. Ronaldo Nicholson, Chief Engineer  
DC Department of Transportation  
Infrastructure Project Management Administration  
64 New York Avenue, NE  
Washington, DC 20002

Mr. Jesús Aguirre, Director  
DC Department of Parks and Recreation  
3149 16<sup>th</sup> Street, NW  
Washington, DC 20010

Mr. David Maloney  
State Historic Preservation Officer  
DC Office of Planning/State Historic Preservation Office  
1100 4<sup>th</sup> Street, SW, Suite E650  
Washington, DC 20024

Mr. Andrew Lewis  
Senior Historic Preservation Specialist  
DC Office of Planning/State Historic Preservation Office  
1100 4<sup>th</sup> Street, SW, Suite E650  
Washington, DC 20024

Mr. Ron Kirby  
Director of Transportation Planning,  
MWCOG  
Suite 300  
777 North Capitol Street, NE  
Washington, DC 20002

Mr. Marcel C. Acosta  
Executive Director  
National Capital Planning Commission  
401 9<sup>th</sup> Street NW  
North Lobby, Suite 500  
Washington, DC 20004

Mr. David Levy  
Director, Urban Design and Plan Review  
National Capital Planning Commission  
401 9<sup>th</sup> Street NW  
North Lobby, Suite 500  
Washington, DC 20004

Mr. Bill Dowd  
Director of Planning  
National Capital Planning Commission  
401 9<sup>th</sup> Street NW  
North Lobby, Suite 500  
Washington, DC 20004

Mr. Gerald Francis  
Deputy General Manager  
Washington Metropolitan Area Transit Authority  
600 5<sup>th</sup> Street, NW  
Washington, DC 20001

The Honorable Vincent Gray  
Mayor, District of Columbia  
Office of the Mayor  
1350 Pennsylvania Avenue, NW  
Washington, DC 20005

The Honorable Kwame R. Brown  
Chair, District of Columbia Council  
1350 Pennsylvania Avenue, NW, Suite 504  
Washington, DC 20004

The Honorable Muriel Bowser  
Ward 4 Councilmember  
1350 Pennsylvania Avenue, NW, Suite 110  
Washington, DC 20004

The Honorable Mary M. Cheh  
Ward 3 Councilmember  
1350 Pennsylvania Avenue, NW, Suite 108  
Washington, DC 20004

Mr. George S. Hawkins  
General Manager  
DC Water  
5000 Overlook Drive  
Washington, DC 20032

Mr. Robert Brown  
Potomac Electric Power Company  
3400 Benning Rd., N.E.  
Washington, DC 20019

Mr. Allan Melliza  
Washington Gas Co.  
6801 Industrial Road  
Springfield, VA 22151

Mr. Wilson Reynolds  
Commissioner Chair, ANC-1C  
1812 Calvert St., NW  
Washington, DC 20008

Mr. Gregg Edwards  
Commissioner Chair, ANC-1D  
1647 Lamont Street, NW, #201  
Washington, DC 20010

Ms. Rebecca Coder  
Commissioner Chair, ANC-2A  
2501 M Street, NW #721  
Washington, DC 20037

Mr. Will Stephens  
Commissioner Chair, ANC-2B  
9 Dupont Circle, NW  
Washington, DC 20036

Mr. Eric Lamarn  
Commissioner, ANC-2D  
2122 California St. NW #62  
Washington, DC 20008

Mr. Ron Lewis  
Commissioner Chair, ANC-2E  
3400 Reservoir Road  
Washington, DC 20007

Ms. Anne-Marie Bairstow  
Commissioner Chair, ANC-3C  
2802 27th Street NW  
Washington, DC 20008

Ms. Karen Perry  
Commissioner Chair, ANC-3F  
3003 Van Ness St., NW  
Washington, DC 20008

Ms. Gale Black  
Commissioner, ANC-4A  
1761 Crestwood Drive NW  
Washington, DC 20011

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
DEPARTMENT OF TRANSPORTATION



Planning, Policy, & Sustainability Administration

December 14, 2010

Mr. John M. Fowler, Executive Director  
Advisory Council on Historic Preservation  
Old Post Office Building  
1100 Pennsylvania Avenue, NW, Suite 803  
Washington, DC 20004

**RE: Rock Creek Park Multi-Use Trail: Environmental Assessment Scoping and Section 106 Consultation**

Dear Mr. Fowler:

The District of Columbia Department of Transportation (DDOT), in cooperation with the National Park Service and Federal Highway Administration, is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) to assess the potential effects of various alternatives to rehabilitate the existing Rock Creek Park Multi-Use Trail in Washington, DC (attached). The project will consider the effects to historic properties in accordance with the requirements of Section 106 of the National Historic Preservation Act (16 U.S.C. §470) and its implementing regulations, 36 CFR Part 800. The purpose of this letter is to formally invite the Advisory Council on Historic Preservation to be a part of the scoping process for this project and to initiate Section 106 consultation for this project.

The proposed project area parallels Rock Creek through the following Historic Districts located on the National Register of Historic Places: Rock Creek Park, Rock Creek and Potomac Parkway, and the National Zoological Park. These Historic Districts are located in the northwest portion of Washington, DC, and, together, extend from the Maryland state line south to Virginia Avenue, NW. The proposed action includes the rehabilitation of a 3.7-mile segment of the existing Rock Creek Park Multi-Use Trail and a 3,000-foot segment of the existing Rose Park Trail; construction of a new trail along Piney Branch Parkway from Beach Drive to Arkansas Avenue at Taylor Street; and the construction of a new trail and/or bicycle route adjacent to the exit/entrance ramp connecting P Street to the Rock Creek Parkway.

Main elements of the project include:

- Resurfacing and trail widening of the existing facility at environmentally feasible and historically appropriate locations;
- Modifications to the trail alignment and roadway crossings to improve user safety;
- Erosion control; and
- Connections to and from the trail.

Elements of this EA will include documentation of the purpose and need; identification of sensitive environmental resources; development of context sensitive alternatives; evaluation of impacts to cultural,

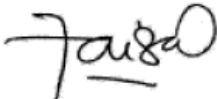
natural, and socio-economic resources; agency and stakeholder coordination; effects to historic and archeological resources; and public involvement.

Please forward your comments on the proposed Rock Creek Park Multi-Use Trail EA to Ms. Austina Casey at:

Austina Casey  
Environmental Policy Analyst  
Planning, Policy, & Sustainability Administration  
District Department of Transportation  
2000 14<sup>th</sup> Street, NW, 7<sup>th</sup> Floor  
Washington, DC 20009

Austina.casey@dc.gov

Sincerely,

A handwritten signature in black ink, appearing to read "Faisal", with a horizontal line underneath the name.

Faisal Hameed  
Chief, Project Development, Environment & Sustainability  
202-671-2326

Enclosures

cc: Nick Bartolomeo, Rock Creek Park  
Cynthia Cox, Rock Creek Park  
Steve Callcott, DC HPO  
Austina Casey, DDOT  
Joel Gorder, NPS National Capital Region  
Michael Hicks, FHWA – DC Division  
Carol Legard, ACHP  
Andrew Lewis, DC HPO

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
DEPARTMENT OF TRANSPORTATION



Planning, Policy, & Sustainability Administration

December 14, 2010

Mr. David Maloney  
District of Columbia Historic Preservation Office  
1100 4<sup>th</sup> Street, SW  
Suite E650  
Washington, DC 20024

**RE: Rock Creek Park Multi-Use Trail: Environmental Assessment Scoping and Section 106 Consultation**

Dear Mr. Maloney:

The District of Columbia Department of Transportation (DDOT), in cooperation with the National Park Service and Federal Highway Administration, is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) to assess the potential effects of various alternatives to rehabilitate the existing Rock Creek Park Multi-Use Trail in Washington, DC (attached). The project will consider the effects to historic properties in accordance with the requirements of Section 106 of the National Historic Preservation Act (16 U.S.C. §470) and its implementing regulations, 36 CFR Part 800. The purpose of this letter is to formally invite the District of Columbia Historic Preservation Office to be a part of the scoping process for this project and to initiate Section 106 consultation for this project.

The proposed project area parallels Rock Creek through the following Historic Districts located on the National Register of Historic Places: Rock Creek Park, Rock Creek and Potomac Parkway, and the National Zoological Park. These Historic Districts are located in the northwest portion of Washington, DC, and, together, extend from the Maryland state line south to Virginia Avenue, NW. The proposed action includes the rehabilitation of a 3.7-mile segment of the existing Rock Creek Trail and a 3,000-foot segment of the existing Rose Park Trail; construction of a new trail along Piney Branch Parkway from Beach Drive to Arkansas Avenue at Taylor Street; and the construction of a new trail and/or bicycle route adjacent to the exit/entrance ramp connecting P Street to the Rock Creek Parkway. Main elements of the project include:

- Resurfacing and trail widening of the existing facility at environmentally feasible and historically appropriate locations;
- Modifications to the trail alignment and roadway crossings to improve user safety;
- Erosion control; and
- Connections to and from the trail.

Elements of this EA will include documentation of the purpose and need; identification of sensitive environmental resources; development of context sensitive alternatives; evaluation of impacts to cultural,

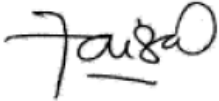
natural, and socio-economic resources; agency and stakeholder coordination; effects to historic and archeological resources; and public involvement.

Please forward your comments on the proposed Rock Creek Park Multi-Use Trail EA to Ms. Austina Casey at:

Austina Casey  
Environmental Policy Analyst  
Planning, Policy, & Sustainability Administration  
District Department of Transportation  
2000 14<sup>th</sup> Street, NW, 7<sup>th</sup> Floor  
Washington, DC 20009

Austina.casey@dc.gov

Sincerely,



Faisal Hameed  
Chief, Project Development, Environment & Sustainability  
202-671-2326

Enclosures

cc: Nick Bartolomeo, Rock Creek Park  
Cynthia Cox, Rock Creek Park  
Steve Callcott, DC HPO  
Austina Casey, DDOT  
Joel Gorder, NPS National Capital Region  
Michael Hicks, FHWA – DC Division  
Carol Legard, ACHP  
Andrew Lewis, DC HPO

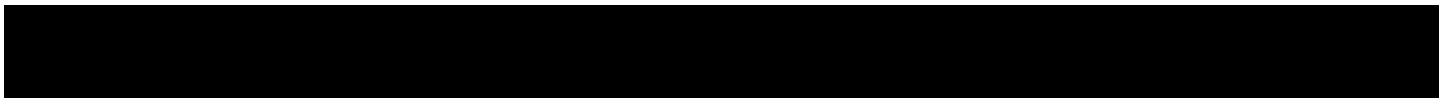




APPENDIX

B

DISTRIBUTION





## **Federal/Regional Agencies**

Mr. Joseph C. Lawson  
Division Administrator  
Federal Highway Administration,  
District of Columbia Division  
1990 K St. NW, Suite 510  
Washington, DC 20006

Mr. Peter May  
Associate Regional Director  
National Capitol Region  
National Park Service  
1100 Ohio Drive, SW  
Washington, DC 20242

Mr. Dennis W. Kelly, Director  
Smithsonian Institution  
National Zoological Park  
3001 Connecticut Avenue, NW  
Washington, DC 20008

Ms. Maria Teresi  
Project Manager  
U.S. Army Corps of Engineers  
PO Box 1715  
Baltimore, MD 21203

Ms. Barbara Rudnick  
NEPA Team Leader  
U.S. Environmental Protection Agency  
Region 3  
1650 Arch Street  
Philadelphia, PA 19103

Mr. Leopoldo Miranda  
Supervisor  
Chesapeake Bay Field Office  
U.S. Fish and Wildlife Service  
177 Admiral Cochrane Drive  
Annapolis, MD 21404

## **District Agencies**

Mr. Tom Luebke  
Secretary  
Commission of Fine Arts  
401 F Street, NW, Suite 312  
Washington, DC 20001

Mr. Bryan King  
District Department of the Environment  
Fisheries and Wildlife Division  
1200 First Street, NE 5th Floor  
Washington, DC 20002

Mr. Jesús Aguirre  
Director  
DC Department of Parks and Recreation  
3149 16<sup>th</sup> Street, NW  
Washington, DC 20010

Mr. Andrew Lewis  
Senior Historic Preservation Specialist  
DC Office of Planning/State Historic Preservation  
Office  
1100 4<sup>th</sup> Street, SW, Suite E650  
Washington, DC 20024

Mr. Steven A. Saari  
Watershed Protection Specialist  
District Department of the Environment  
1200 First Street NE, 5<sup>th</sup> Floor  
Washington, DC 20002

Mr. Ronaldo Nicholson  
Chief Engineer  
DC Department of Transportation  
Infrastructure Project Management Administration  
64 New York Avenue, NE  
Washington, DC 20002

Mr. David Maloney  
State Historic Preservation Officer  
DC Office of Planning/State Historic Preservation  
Office  
1100 4<sup>th</sup> Street, SW, Suite E650  
Washington, DC 20024

Mr. Ron Kirby  
Director of Transportation Planning, MWCOG  
Suite 300, 777 North Capitol Street, NE  
Washington, DC 20002

Mr. Marcel C. Acosta  
Executive Director  
National Capital Planning Commission  
401 9<sup>th</sup> Street NW  
North Lobby, Suite 500  
Washington, DC 20004

Mr. David Levy  
Director, Urban Design and Plan Review  
National Capital Planning Commission  
401 9<sup>th</sup> Street NW  
North Lobby, Suite 500  
Washington, DC 20004

Mr. Bill Dowd  
Director of Planning  
National Capital Planning Commission  
401 9<sup>th</sup> Street NW  
North Lobby, Suite 500  
Washington, DC 20004

Mr. Gerald Francis  
Deputy General Manager  
Washington Metropolitan Area Transit Authority  
600 5<sup>th</sup> Street, NW  
Washington, DC 20001

### **District Elected Officials**

The Honorable Vincent Gray  
Mayor, District of Columbia  
Office of the Mayor  
1350 Pennsylvania Avenue, NW  
Washington, DC 20005

The Honorable Muriel Bowser  
Ward 4 Councilmember  
1350 Pennsylvania Avenue, NW, Suite 110  
Washington, DC 20004

The Honorable Kwame R. Brown  
Chair, District of Columbia Council  
1350 Pennsylvania Avenue, NW, Suite 504  
Washington, DC 20004

The Honorable Mary M. Cheh  
Ward 3 Councilmember  
1350 Pennsylvania Avenue, NW, Suite 108  
Washington, DC 20004

### **Utilities**

Mr. George S. Hawkins  
General Manager  
DC Water  
5000 Overlook Drive  
Washington, DC 20032

Mr. Robert Brown  
Potomac Electric Power Company  
3400 Benning Rd., N.E.  
Washington, DC 20019

Mr. Allan Melliza  
Washington Gas Co.  
6801 Industrial Road  
Springfield, VA 22151

### **Advisory Neighborhood Commissions**

Mr. Wilson Reynolds  
Commissioner Chair, ANC-1C  
1812 Calvert St., NW  
Washington, DC 20008

Mr. Gregg Edwards  
Commissioner Chair, ANC-1D  
1647 Lamont Street, NW, #201  
Washington, DC 20010

Ms. Rebecca Coder  
Commissioner Chair, ANC-2A  
2501 M Street, NW #721  
Washington, DC 20037

Mr. Will Stephens  
Commissioner Chair, ANC-2B  
9 Dupont Circle, NW  
Washington, DC 20036

Mr. Eric Lamar  
Commissioner, ANC-2D  
2122 California St. NW #62  
Washington, DC 20008

Ms. Gale Black  
Commissioner, ANC-4A  
1761 Crestwood Drive NW  
Washington, DC 20011

Mr. Ron Lewis  
Commissioner Chair, ANC-2E  
3400 Reservoir Road  
Washington, DC 20007

Ms. Anne-Marie Bairstow  
Commissioner Chair, ANC-3C  
2802 27th Street NW  
Washington, DC 20008

Ms. Karen Perry  
Commissioner Chair, ANC-3F  
3003 Van Ness St., NW  
Washington, DC 20008



APPENDIX

C

COST ESTIMATES FOR THE ACTION ALTERNATIVES AND OPTIONS









ROCK CREEK PARK MULTI-USE TRAIL REHABILITATION  
**ALTERNATIVE 2: TRAIL RESURFACING**

**CONSTRUCTION COST ESTIMATE (Preliminary)**

CATEGORY	COST
TRAIL IMPROVEMENTS	\$ 999,814
MAINTENANCE OF TRAFFIC	\$ 100,000
STORMWATER MANAGEMENT IMPROVEMENTS	\$ 198,981
UTILITY IMPROVEMENTS	\$ 43,000
STRUCTURAL IMPROVEMENTS	\$ 990,000
LANDSCAPING	\$ 218,880
<b>SUB TOTAL</b>	\$ 2,550,675
	CONTINGENCY \$ 1,000,000
<b>SUB TOTAL</b>	<b>TOTAL DIRECT COST \$ 3,550,675</b>
	ENGINEERING DESIGN AND CONSTRUCTION SERVICES \$ 887,669
	TOTAL INCLUDING CONTINGENCY AND DESIGN/SERVICES \$ 4,438,344
	<b>TOTAL \$ 4,438,344</b>

PRELIMINARY ROUNDED TOTAL \$ 4,439,000



**ROCK CREEK PARK MULTI-USE TRAIL REHABILITATION  
ALTERNATIVE 2: TRAIL RESURFACING**

**CONSTRUCTION COST ESTIMATE (Preliminary Plan)**

Item	Description	Unit	Unit Cost	Quantity	Total Cost
<b>TRAIL IMPROVEMENTS</b>					
201030	CLASS 1 EXCAVATION	CY	\$52.50	200	\$10,500
202065	BORROW EXCAVATION	CY	\$63.00	100	\$6,300
	SELECT BACKFILL	CY	\$49.00	167	\$8,197
210025	REMOVAL OF EXISTING PAVEMENT	CY	\$91.00	167	\$15,222
504212	HOT MIX ASPHALT SUPERPAVE 12.5MM FOR BASE, PG 64-22, LEVEL 2 (2")	TON	\$75.00	244	\$18,300
520113	6 INCH GRADED AGGREGATE BASE (4 Lifts)	SY	\$38.15	8,296	\$316,492
504206	HOT MIX ASPHALT SUPERPAVE 12.5MM FOR SURFACE, PG 64-22, LEVEL 2 (4")	TON	\$85.00	4,877	\$414,569
614006	PCC Half-Section Curb Barrier	LF	\$120.00	812	\$97,440
609016	PCC Curb, 13 to 15 Inch Depth	LF	\$20.60	551	\$11,351
609020	PCC Circular Curb, 13 to 15 Inch Depth	LF	\$22.50	1,023	\$23,018
608004	PCC Sidewalk, 4 Inch	SF	\$5.00	3,018	\$15,090
402002	Superpave Base Course, 19 mm (Two 3.5" Lifts)	TON	\$75.00	37	\$2,759
209002	Aggregate Base Course (Two 6" Lifts)	CY	\$42.00	112	\$4,695
402010	Superpave Surface Course, 9.5 mm (One 2" Lift)	TON	\$85.00	246	\$20,882
	Aggregate for Drainage (Check Dams)	LS	\$35,000.00	1	\$35,000
<b>SUBTOTAL</b>					<b>\$999,814</b>
<b>MAINTENANCE OF TRAFFIC</b>					
		LS	\$100,000.00	1	\$100,000
<b>SUBTOTAL</b>					<b>\$100,000</b>
<b>STORMWATER MANAGEMENT IMPROVEMENTS</b>					
	10% of TRAIL and STRUCTURAL IMPROVEMENTS				\$198,981
<b>SUBTOTAL</b>					<b>\$198,981</b>
<b>UTILITY IMPROVEMENTS</b>					
	Remove and/or Reset Misc. Utilities	LS	\$43,000.00	1	\$43,000
<b>SUBTOTAL</b>					<b>\$43,000</b>
<b>STRUCTURAL IMPROVEMENTS</b>					
400000	Timber Retaining Wall	LF	\$500.00	40	\$20,000
400000	Stone Retaining Wall Restoration of Damaged Section (Piney Branch)	LF	\$2,500.00	65	\$162,500
400000	Stone Retaining Wall Repointing (Piney Branch)	LF	\$100.00	1,075	\$107,500
400000	Pedestrian Bridge Construction	SF	\$350.00	2,000	\$700,000
<b>SUBTOTAL</b>					<b>\$990,000</b>
<b>LANDSCAPING</b>					
	10% of TRAIL, STRUCTURAL, and SWM IMPROVEMENTS				\$218,880
<b>SUBTOTAL</b>					<b>\$218,880</b>
<b>SUB TOTAL</b>					<b>\$2,550,675</b>
<b>CONTINGENCY</b>					<b>\$1,000,000</b>
<b>SUB TOTAL DIRECT COST</b>					<b>\$3,550,675</b>
<b>ENGINEERING DESIGN AND CONSTRUCTION SERVICES</b>					<b>\$887,669</b>
<b>TOTAL INCLUDING CONTINGENCY AND DESIGN SERVICES</b>					<b>\$4,438,344</b>



ROCK CREEK TRAIL MULTI-USE TRAIL REHABILITATION  
**ALTERNATIVE 3: TRAIL RESURFACING AND WIDENING**

**CONSTRUCTION COST ESTIMATE (Preliminary)**

CATEGORY	COST
TRAIL IMPROVEMENTS	\$ 2,990,006
MAINTENANCE OF TRAFFIC	\$ 100,000
STORMWATER MANAGEMENT IMPROVEMENTS	\$ 398,001
UTILITY IMPROVEMENTS	\$ 43,000
STRUCTURAL IMPROVEMENTS	\$ 990,000
LANDSCAPING	\$ 437,801
<b>SUB TOTAL</b>	\$ 4,958,807
	CONTINGENCY \$ 1,000,000
<b>SUB TOTAL</b>	TOTAL DIRECT COST \$ 5,958,807
	ENGINEERING DESIGN AND CONSTRUCTION SERVICES \$ 1,489,702
	TOTAL INCLUDING CONTINGENCY AND DESIGN/SERVICES \$ 7,448,509
	<b>TOTAL \$ 7,448,509</b>

PRELIMINARY TOTAL \$ 7,449,000



**ROCK CREEK TRAIL MULTI-USE TRAIL REHABILITATION  
ALTERNATIVE 3: TRAIL RESURFACING AND WIDENING**

**CONSTRUCTION COST ESTIMATE (Preliminary Plan)**

Item	Description	Unit	Unit Cost	Quantity	Total Cost
<b>TRAIL IMPROVEMENTS</b>					
201030	CLASS 1 EXCAVATION	CY	\$52.50	2,641	\$138,653
202065	BORROW EXCAVATION	CY	\$63.00	3,602	\$226,926
	SELECT BACKFILL	CY	\$49.00	165	\$8,085
210025	REMOVAL OF EXISTING PAVEMENT	CY	\$91.00	165	\$15,015
504212	HOT MIX ASPHALT SUPERPAVE 12.5MM FOR BASE, PG 64-22, LEVEL 2 (2")	TON	\$75.00	1,366	\$102,453
520113	6 INCH GRADED AGGREGATE BASE (4 Lifts)	SY	\$38.15	46,445	\$1,771,889
504206	HOT MIX ASPHALT SUPERPAVE 12.5MM FOR SURFACE, PG 64-22, LEVEL 2 (4")	TON	\$85.00	6,079	\$516,751
614006	PCC Half-Section Curb Barrier	LF	\$120.00	812	\$97,440
609016	PCC Curb, 13 to 15 Inch Depth	LF	\$20.60	551	\$11,351
609020	PCC Circular Curb, 13 to 15 Inch Depth	LF	\$22.50	1,023	\$23,018
608004	PCC Sidewalk, 4 Inch	SF	\$5.00	3,018	\$15,090
402002	Superpave Base Course, 19 mm (Two 3.5" Lifts)	TON	\$75.00	37	\$2,759
209002	Aggregate Base Course (Two 6" Lifts)	CY	\$42.00	112	\$4,695
402010	Superpave Surface Course, 9.5 mm (One 2" Lift)	TON	\$85.00	246	\$20,882
	Aggregate for Drainage (Check Dams)	LS	\$35,000.00	1	\$35,000
<b>SUBTOTAL</b>					<b>\$2,990,006</b>
<b>MAINTENANCE OF TRAFFIC</b>					
		LS	\$100,000.00	1	\$100,000
<b>SUBTOTAL</b>					<b>\$100,000</b>
<b>STORMWATER MANAGEMENT IMPROVEMENTS</b>					
	10% of TRAIL and STRUCTURAL IMPROVEMENTS				\$398,001
<b>SUBTOTAL</b>					<b>\$398,001</b>
<b>UTILITY IMPROVEMENTS</b>					
	Remove and/or Reset Misc. Utilities	LS	\$43,000.00	1	\$43,000
<b>SUBTOTAL</b>					<b>\$43,000</b>
<b>STRUCTURAL IMPROVEMENTS</b>					
400000	Timber Retaining Wall	LF	\$500.00	40	\$20,000
400000	Stone Retaining Wall Restoration of Damaged Section (Piney Branch)	LF	\$2,500.00	65	\$162,500
400000	Stone Retaining Wall Repointing (Piney Branch)	LF	\$100.00	1,075	\$107,500
400000	Pedestrian Bridge Construction	SF	\$350.00	2,000	\$700,000
<b>SUBTOTAL</b>					<b>\$990,000</b>
<b>LANDSCAPING</b>					
	10% of TRAIL, STRUCTURAL, and SWM IMPROVEMENTS				\$437,801
<b>SUBTOTAL</b>					<b>\$437,801</b>
<b>SUB TOTAL</b>					<b>\$4,958,807</b>
<b>CONTINGENCY</b>					<b>\$1,000,000</b>
<b>SUB TOTAL DIRECT COST</b>					<b>\$5,958,807</b>
<b>ENGINEERING DESIGN AND CONSTRUCTION SERVICES</b>					<b>\$1,489,702</b>
<b>TOTAL INCLUDING CONTINGENCY AND DESIGN SERVICES</b>					<b>\$7,448,509</b>



ROCK CREEK PARK MULTI-USE TRAIL REHABILITATION  
**PEIRCE MILL TRAIL SPUR OPTION B: 8 FOOT PAVED TRAIL SPUR**

**CONSTRUCTION COST ESTIMATE (Preliminary)**

CATEGORY	COST
TRAIL IMPROVEMENTS	\$ 195,514
STORMWATER MANAGEMENT IMPROVEMENTS	\$ 19,551
LANDSCAPING	\$ 21,507
<b>SUB TOTAL</b>	\$ 236,572
	CONTINGENCY (40%) \$ 94,629
<b>SUB TOTAL</b>	<b>TOTAL DIRECT COST \$ 331,201</b>
	ENGINEERING DESIGN AND CONSTRUCTION SERVICES \$ 82,800
	TOTAL INCLUDING CONTINGENCY AND DESIGN/SERVICES \$ 414,001
	<b>TOTAL \$ 414,001</b>

PRELIMINARY ROUNDED TOTAL \$ 415,000



**ROCK CREEK PARK MULTI-USE TRAIL REHABILITATION  
PEIRCE MILL TRAIL SPUR OPTION B: 8 FOOT PAVED TRAIL SPUR**

**CONSTRUCTION COST ESTIMATE (Preliminary Plan)**

Item	Description	Unit	Unit Cost	Quantity	Total Cost
<b>TRAIL IMPROVEMENTS</b>					
504212	HOT MIX ASPHALT SUPERPAVE 12.5MM FOR BASE, PG 64-22, LEVEL 2 (2")	TON	\$75.00	127	\$9,509
520113	6 INCH GRADED AGGREGATE BASE (4 Lifts)	SY	\$38.15	4,311	\$164,452
504206	HOT MIX ASPHALT SUPERPAVE 12.5MM FOR SURFACE, PG 64-22, LEVEL 2 (4")	TON	\$85.00	254	\$21,553
<b>SUBTOTAL</b>					<b>\$195,514</b>
<b>STORMWATER MANAGEMENT IMPROVEMENTS</b>					
	10% of TRAIL IMPROVEMENTS				\$19,551
<b>SUBTOTAL</b>					<b>\$19,551</b>
<b>LANDSCAPING</b>					
	10% of TRAIL and SWM IMPROVEMENTS				\$21,507
<b>SUBTOTAL</b>					<b>\$21,507</b>
<b>SUB TOTAL</b>					<b>\$236,572</b>
<b>CONTINGENCY</b>					<b>\$94,629</b>
<b>SUB TOTAL DIRECT COST</b>					<b>\$331,201</b>
<b>ENGINEERING DESIGN AND CONSTRUCTION SERVICES</b>					<b>\$82,800</b>
<b>TOTAL INCLUDING CONTINGENCY AND DESIGN SERVICES</b>					<b>\$414,001</b>



ROCK CREEK PARK MULTI-USE TRAIL REHABILITATION  
**ROSE PARK TRAIL OPTION B: 6 FOOT RESURFACED TRAIL**

**CONSTRUCTION COST ESTIMATE (Preliminary)**

CATEGORY	COST
TRAIL IMPROVEMENTS	\$ 105,204
STORMWATER MANAGEMENT IMPROVEMENTS	\$ 10,520
LANDSCAPING	\$ 11,572
<b>SUB TOTAL</b>	\$ 127,297
	CONTINGENCY (40%) \$ 50,919
<b>SUB TOTAL</b>	TOTAL DIRECT COST \$ 178,216
	ENGINEERING DESIGN AND CONSTRUCTION SERVICES \$ 44,554
	TOTAL INCLUDING CONTINGENCY AND DESIGN/SERVICES \$ 222,770
	<b>TOTAL \$ 222,770</b>
	PRELIMINARY ROUNDED TOTAL \$ 223,000





**ROCK CREEK PARK MULTI-USE TRAIL REHABILITATION  
ROSE PARK TRAIL OPTION B: 6 FOOT RESURFACED TRAIL**

**CONSTRUCTION COST ESTIMATE (Preliminary Plan)**

Item	Description	Unit	Unit Cost	Quantity	Total Cost
<b>TRAIL IMPROVEMENTS</b>					
504212	HOT MIX ASPHALT SUPERPAVE 12.5MM FOR BASE, PG 64-22, LEVEL 2 (2")	TON	\$75.00	58	\$4,337
520113	6 INCH GRADED AGGREGATE BASE (4 Lifts)	SY	\$38.15	1,966	\$75,011
504206	HOT MIX ASPHALT SUPERPAVE 12.5MM FOR SURFACE, PG 64-22, LEVEL 2 (4")	TON	\$85.00	304	\$25,856
<b>SUBTOTAL</b>					<b>\$105,204</b>
<b>STORMWATER MANAGEMENT IMPROVEMENTS</b>					
	10% of TRAIL IMPROVEMENTS				\$10,520
<b>SUBTOTAL</b>					<b>\$10,520</b>
<b>LANDSCAPING</b>					
	10% of TRAIL and SWM IMPROVEMENTS				\$11,572
<b>SUBTOTAL</b>					<b>\$11,572</b>
<b>SUB TOTAL</b>					<b>\$127,297</b>
<b>CONTINGENCY</b>					<b>\$50,919</b>
<b>SUB TOTAL DIRECT COST</b>					<b>\$178,216</b>
<b>ENGINEERING DESIGN AND CONSTRUCTION SERVICES</b>					<b>\$44,554</b>
<b>TOTAL INCLUDING CONTINGENCY AND DESIGN SERVICES</b>					<b>\$222,770</b>



ROCK CREEK PARK MULTI-USE TRAIL REHABILITATION  
**ROSE PARK TRAIL OPTION C: 8 FOOT RESURFACED TRAIL**

**CONSTRUCTION COST ESTIMATE (Preliminary)**

CATEGORY	COST
TRAIL IMPROVEMENTS	\$ 180,245
STORMWATER MANAGEMENT IMPROVEMENTS	\$ 18,025
LANDSCAPING	\$ 19,827
<b>SUB TOTAL</b>	\$ 218,097
	CONTINGENCY (40%) \$ 87,239
<b>SUB TOTAL</b>	TOTAL DIRECT COST \$ 305,335
	ENGINEERING DESIGN AND CONSTRUCTION SERVICES \$ 76,334
	TOTAL INCLUDING CONTINGENCY AND DESIGN/SERVICES \$ 381,669
	<b>TOTAL \$ 381,669</b>
	PRELIMINARY ROUNDED TOTAL \$ 382,000



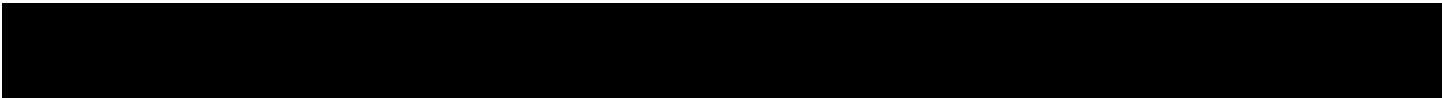
**ROCK CREEK PARK MULTI-USE TRAIL REHABILITATION  
ROSE PARK TRAIL OPTION C: 8 FOOT RESURFACED TRAIL**

**CONSTRUCTION COST ESTIMATE (Preliminary Plan)**

Item	Description	Unit	Unit Cost	Quantity	Total Cost
<b>TRAIL IMPROVEMENTS</b>					
504212	HOT MIX ASPHALT SUPERPAVE 12.5MM FOR BASE, PG 64-22, LEVEL 2 (2")	TON	\$75.00	106	\$7,966
520113	6 INCH GRADED AGGREGATE BASE (4 Lifts)	SY	\$38.15	3,611	\$137,764
504206	HOT MIX ASPHALT SUPERPAVE 12.5MM FOR SURFACE, PG 64-22, LEVEL 2 (4")	TON	\$85.00	406	\$34,516
<b>SUBTOTAL</b>					<b>\$180,245</b>
<b>STORMWATER MANAGEMENT IMPROVEMENTS</b>					
	10% of TRAIL IMPROVEMENTS				\$18,025
<b>SUBTOTAL</b>					<b>\$18,025</b>
<b>LANDSCAPING</b>					
	10% of TRAIL IMPROVEMENTS, and SWM IMPROVEMENTS				\$19,827
<b>SUBTOTAL</b>					<b>\$19,827</b>
<b>SUB TOTAL</b>					<b>\$218,097</b>
<b>CONTINGENCY</b>					<b>\$87,239</b>
<b>SUB TOTAL DIRECT COST</b>					<b>\$305,335</b>
<b>ENGINEERING DESIGN AND CONSTRUCTION SERVICES</b>					<b>\$76,334</b>
<b>TOTAL INCLUDING CONTINGENCY AND DESIGN SERVICES</b>					<b>\$381,669</b>

APPENDIX  
D

SECTION 106 DOCUMENTATION





GOVERNMENT OF THE DISTRICT OF COLUMBIA  
STATE HISTORIC PRESERVATION OFFICER



March 19, 2009

Ms. Adrienne A. Coleman  
Superintendent, Rock Creek Park  
National Park Service  
National Capital Region  
3545 Williamsburg Lane, NW  
Washington, DC 20008-1207

RE: Proposed Improvements to Rock Creek Trail and Rose Park Trail

Dear Ms. Coleman:

Thank you for contacting the DC State Historic Preservation Office (SHPO) regarding the above-referenced undertaking. We have reviewed the project information in accordance with Section 106 of the National Historic Preservation Act (NHPA) and are writing to provide our initial comments regarding effects on historic properties. We are also providing these comments in accordance with the National Environmental Policy Act (NEPA) to assist the National Park Service (NPS) in coordinating its review processes.

We understand that the NPS, the Federal Highway Administration, and the District of Columbia Department of Transportation are working collaboratively to develop an Environmental Assessment (EA) for the proposed improvements to Rock Creek and Rose Park Trails. These improvements include a variety of actions such as trail resurfacing and widening, road crossing modifications, new trail/bicycle route construction and erosion control measure implementation.

The NPS has requested SHPO assistance in identifying important cultural resources that should be addressed in the EA. We appreciate the early coordination and are pleased to provide general information relating to historic properties. On the other hand, the trail improvements are proposed within an area that extends approximately four-miles so we will be unable to provide specific comments until we receive additional information to define the project in much more detail.

Historic Built Environment:

Based upon our understanding of the project boundaries, it appears as if the majority of the trail improvements will be carried out directly within, or immediately adjacent to, the following historic districts: Rock Creek Park, Greystone Enclave, Piney Branch Parkway, National Zoological Park and Rock Creek and Potomac Parkway. All of these districts are all listed in the National Register of Historic Places and/or the DC Inventory of Historic Sites and many contain individually listed buildings and structures such as the Dumbarton Bridge and Peirce Mill.

Depending upon the proposed alignment and nature of improvements, the undertaking could also result in direct and/or indirect effects on the following historic districts: Mount Pleasant, Woodley Park, Kalorama Triangle, Sheridan-Kalorama, Massachusetts Avenue, Oak Hill Cemetery, Montrose Park and Georgetown. These historic districts are also listed in the National Register and/or the DC Inventory and contain individually listed buildings and structures. The EA should evaluate the potential for direct and indirect effects such as visual and audible impacts within these historic districts, as appropriate.

Archaeological Resources:

The project area and surrounding areas are very sensitive for both prehistoric and historic archaeological resources. Within Rock Creek Park, there are areas where archaeological identification survey has not yet occurred, so additional survey may be necessary depending on the alternative selected for the project. For example, there are 52 identified archaeological sites located within Rock Creek Park, excluding the smaller parks managed by the NPS Rock Creek Park Superintendent. There are 31 identified archaeological sites within 500 meters of the boundary of Rock Creek Park, and much more of that land has not been surveyed. Consequently the potential for all types of archaeological resources is very high for any area in or near the park. In short, additional archaeological surveys may be required for any ground disturbing activities that occur outside of the existing trail alignments.

We will provide further comments regarding historic properties as soon as we have an opportunity to review additional information such as maps, plans and detailed project descriptions that define the undertaking in more detail. In the meantime, please contact me at [andrew.lewis@dc.gov](mailto:andrew.lewis@dc.gov) or 202-442-8841 if you should have any questions or comments regarding the historic built environment. Questions or comments relating to archaeology should be directed to Ruth Troccoli at [ruth.troccoli@dc.gov](mailto:ruth.troccoli@dc.gov) or 202-442-8836. Thank you for providing this initial opportunity to review and comment.

Sincerely,



C. Andrew Lewis  
Senior Historic Preservation Specialist  
DC State Historic Preservation Office

09-041

cc: Chris Holben, DDOT  
Eric Feldman, Rhodeside & Harwell

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
DEPARTMENT OF TRANSPORTATION



Planning, Policy, & Sustainability Administration

December 14, 2010

Mr. David Maloney  
District of Columbia Historic Preservation Office  
1100 4<sup>th</sup> Street, SW  
Suite E650  
Washington, DC 20024

**RE: Rock Creek Park Multi-Use Trail: Environmental Assessment Scoping and Section 106 Consultation**

Dear Mr. Maloney:

The District of Columbia Department of Transportation (DDOT), in cooperation with the National Park Service and Federal Highway Administration, is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) to assess the potential effects of various alternatives to rehabilitate the existing Rock Creek Park Multi-Use Trail in Washington, DC (attached). The project will consider the effects to historic properties in accordance with the requirements of Section 106 of the National Historic Preservation Act (16 U.S.C. §470) and its implementing regulations, 36 CFR Part 800. The purpose of this letter is to formally invite the District of Columbia Historic Preservation Office to be a part of the scoping process for this project and to initiate Section 106 consultation for this project.

The proposed project area parallels Rock Creek through the following Historic Districts located on the National Register of Historic Places: Rock Creek Park, Rock Creek and Potomac Parkway, and the National Zoological Park. These Historic Districts are located in the northwest portion of Washington, DC, and, together, extend from the Maryland state line south to Virginia Avenue, NW. The proposed action includes the rehabilitation of a 3.7-mile segment of the existing Rock Creek Trail and a 3,000-foot segment of the existing Rose Park Trail; construction of a new trail along Piney Branch Parkway from Beach Drive to Arkansas Avenue at Taylor Street; and the construction of a new trail and/or bicycle route adjacent to the exit/entrance ramp connecting P Street to the Rock Creek Parkway. Main elements of the project include:

- Resurfacing and trail widening of the existing facility at environmentally feasible and historically appropriate locations;
- Modifications to the trail alignment and roadway crossings to improve user safety;
- Erosion control; and
- Connections to and from the trail.

Elements of this EA will include documentation of the purpose and need; identification of sensitive environmental resources; development of context sensitive alternatives; evaluation of impacts to cultural,



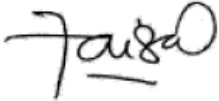
natural, and socio-economic resources; agency and stakeholder coordination; effects to historic and archeological resources; and public involvement.

Please forward your comments on the proposed Rock Creek Park Multi-Use Trail EA to Ms. Austina Casey at:

Austina Casey  
Environmental Policy Analyst  
Planning, Policy, & Sustainability Administration  
District Department of Transportation  
2000 14<sup>th</sup> Street, NW, 7<sup>th</sup> Floor  
Washington, DC 20009

Austina.casey@dc.gov

Sincerely,



Faisal Hameed  
Chief, Project Development, Environment & Sustainability  
202-671-2326

Enclosures

cc: Nick Bartolomeo, Rock Creek Park  
Cynthia Cox, Rock Creek Park  
Steve Callcott, DC HPO  
Austina Casey, DDOT  
Joel Gorder, NPS National Capital Region  
Michael Hicks, FHWA – DC Division  
Carol Legard, ACHP  
Andrew Lewis, DC HPO

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
STATE HISTORIC PRESERVATION OFFICER



January 18, 2011

Ms. Austina Casey, Environmental Policy Analyst  
Planning, Policy, & Sustainability Division  
District Department of Transportation  
2000 14<sup>th</sup> Street, NW, 7<sup>th</sup> Floor  
Washington, DC 20009

RE: Initiation of Section 106 Review; Rehabilitation of the Rock Creek Park Multi-Use Trail

Dear Ms. Casey:

Thank you for contacting the DC State Historic Preservation Office (SHPO) regarding the above-referenced undertaking. We understand that the Federal Highway Administration (FHWA), the District Department of Transportation (DDOT) and the National Park Service (NPS) will be cooperating to rehabilitate the Rock Creek Park Multi-Use Trail by resurfacing, widening and realigning select portions of the trail and by improving erosion control measures and connections to and from the trail. As indicated in your submittal, the proposed undertaking will be carried out within, or adjacent to the Rock Creek Park, Rock Creek and Potomac Parkway, and National Zoological Park Historic Districts. All three of these historic districts are listed in the National Register of Historic Places.

We look forward to reviewing the Environmental Assessment that is being prepared for the project and to assisting you in fulfilling the requirements of Section 106 of the National Historic Preservation Act for the undertaking. To that end, we would appreciate receiving a draft Area of Potential Effect (APE), initial list of consulting parties, and an outline of what is already known about historic properties that may be affected by the rehabilitation project. Additional information about the scope of work will also be necessary to finalize the APE, consulting parties list, and to identify potentially effected historic properties. The latter category is likely to require some effort to define since we suspect that many small trail elements such as retaining walls, bridges, and culverts may be affected by the project.

With regard to archaeology, Dr. Ruth Troccoli will provide your archaeological consultant with the identified archaeological resources that are likely to fall within the APE. Numerous archaeological sites have been identified in and near the project area, and much of the corridor has high potential for both prehistoric and historic sites. When the preferred alternative is selected, great care must be taken to avoid known sites and to test proposed locations that will be subject to ground-disturbing activities that have not been previously surveyed for archaeological sites. Coordination with both the NPS Regional Archeologist Dr. Stephen Potter, and Dr. Troccoli will be needed.

If you should have any questions or comments regarding the historic built environment, please contact me at [andrew.lewis@dc.gov](mailto:andrew.lewis@dc.gov) or 202-442-8841. Questions regarding archaeology should be directed to Ruth Troccoli at [ruth.troccoli@dc.gov](mailto:ruth.troccoli@dc.gov) or 202-442-8836. Otherwise, we look forward to receiving additional information as soon as it becomes available.

Sincerely,

C. Andrew Lewis  
Senior Historic Preservation Specialist  
DC State Historic Preservation Office  
10-518

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
STATE HISTORIC PRESERVATION OFFICER



March 24, 2011

Ms. Austina Casey  
Environmental Policy Analyst  
Planning, Policy, & Sustainability Division  
District Department of Transportation  
2000 14<sup>th</sup> Street, NW, 7<sup>th</sup> Floor  
Washington, DC 20009

RE: Additional Section 106 Comments Regarding the Rehabilitation of the Rock Creek Park Multi-Use Trail

Dear Ms. Casey:

The DC State Historic Preservation Office (SHPO) received the invitation to be a part of the scoping process for the above-referenced undertaking shortly after we forwarded our January 18, 2011 letter to you regarding the initiation of the Section 106 process.

In response to the scoping request, we examined our files and located a March 19, 2009 letter about the project that we had written to the National Park Service (NPS), one of the co-lead agencies for the undertaking. We are forwarding that letter to you for your information.

In addition, our files contain a survey of a variety of culverts and other small located within Rock Creek Park. These survey forms, which were provided to us by the NPS, include photographs, written descriptions and brief historical information related to the resources. Depending upon the location and type of the proposed rehabilitation work, these survey forms may prove very helpful in identifying historic properties that may be affected by the undertaking. We will be pleased to make this information available if it will be useful.

If you should have any questions or comments regarding the historic built environment, please contact me at [andrew.lewis@dc.gov](mailto:andrew.lewis@dc.gov) or 202-442-8841. Questions regarding archaeology should be directed to Ruth Troccoli at [ruth.troccoli@dc.gov](mailto:ruth.troccoli@dc.gov) or 202-442-8836. Otherwise, we look forward to working with all parties to complete the Section 106 review of this undertaking.

Sincerely,

A handwritten signature in blue ink, appearing to read "Andrew", is written over a light blue circular stamp.

C. Andrew Lewis  
Senior Historic Preservation Specialist  
DC State Historic Preservation Office

10-518

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
DEPARTMENT OF TRANSPORTATION



Planning, Policy, & Sustainability Administration

July 5, 2011

Mr. Andrew Lewis  
Senior Historic Preservation Specialist  
DC Historic Preservation Office  
1100 4<sup>th</sup> Street SW  
Suite E650  
Washington, DC 20024

RE: Rock Creek Park Multi-Use Trail Rehabilitation  
Area of Potential Effects

Dear Mr. Lewis:

The District Department of Transportation (DDOT), in cooperation with the Federal Highway Administration (FHWA) and National Park Service (NPS), is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) to assess the potential effects of various alternatives to rehabilitate the existing Rock Creek Park Multi-Use Trail in Washington, DC. The project will consider the effects to historic properties in accordance with the requirements of Section 106 of the National Historic Preservation Act (16 U.S.C. §470) and its implementing regulations, 36 CFR Part 800.

This letter describes and documents the proposed Area of Potential Effect (APE) for the proposed Rock Creek Park Multi-Use Trail Rehabilitation as revised and expanded based on your comments on May 13, 2011. The project area includes a 3.7-mile segment of the Rock Creek Park multi-use trail from Broad Branch Road to P Street, NW; a 4,300-foot (0.8 mile) segment of the Piney Branch Parkway trail from Beach Drive to Arkansas Avenue, NW; a 1,250-foot segment of social trail from Blagden Avenue to the Peirce Mill parking lot (referred to as the Peirce Mill Trail Spur); and a 2,600-foot (0.5 mile) segment of the Rose Park trail from P Street, NW to M Street, NW. The proposed action includes resurfacing, trail widening where environmentally feasible, modifications to the trail alignments and road crossing, and connections to and from the trails to other pedestrian and bicycle facilities. The majority of the proposed improvements are located on NPS land within Rock Creek Park, with some improvements located within District of Columbia right-of-way. A segment of the trail also passes through National Zoological Park property. A map showing the location of the proposed improvements is presented in Figure 1.

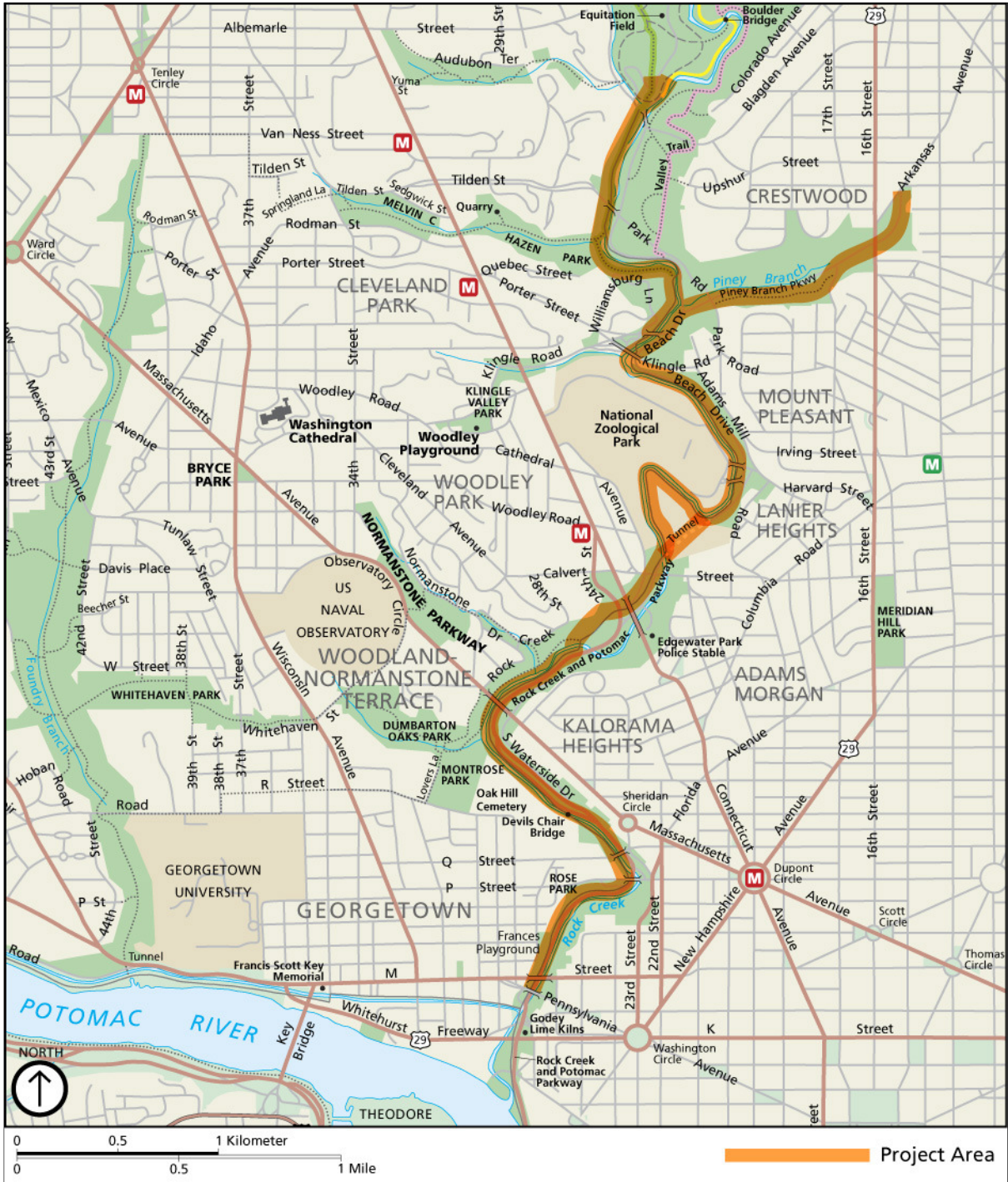


Figure 1. Rock Creek Park Multi-Use Trail Rehabilitation Project Area

## **PROPOSED IMPROVEMENTS**

The EA will analyze a No Action Alternative (Alternative 1) along with two Action Alternatives (Alternative 2 and Alternative 3) for the Rock Creek Park Multi-Use Trail Rehabilitation. Under the Alternative 1, NPS would continue its current trail maintenance activities and no new construction would occur. Under Alternative 2, the Rock Creek Park multi-use trail would be resurfaced along its current alignment and at its current width, which varies throughout the trail. Under Alternative 3, the Rock Creek Park multi-use trail would be resurfaced along its current alignment and widened to a minimum of 6 feet and a maximum of 10 feet, depending on physical and environmental constraints. The project also includes spot improvements along the trail to enhance safety and visitor experience, as well as new connections to Rock Creek Park from the existing pedestrian and bicycle networks in the neighborhoods surrounding the park.

In addition to the Action Alternatives, two Options for the visitor-made “social” trail from Blagden Avenue to Peirce Mill (Peirce Mill Spur), and three Options for the Rose Park trail will be analyzed. Under Peirce Mill Trail Spur Option A, the trail would remain unchanged. Under Option B, the current social trail would be resurfaced to an 8-foot width.

Under Rose Park Trail Option A, NPS would continue its current maintenance practices and no new construction would occur. Under Option B, the Rose Park trail would be resurfaced at its current location to a standard 6-foot width. Under Option C, the Rose Park trail would be resurfaced at its current location to a standard 8-foot width.

Overview maps of the Alternatives and options are included as Attachment A.

## **AREA OF POTENTIAL EFFECT**

According to the Section 106 Regulations (36 CFR 800), an APE is defined as “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.” The determination of an APE is an initial step in the Section 106 process that facilitates the identification of historic properties and an assessment of the potential impacts of the proposed undertaking on those properties.

In compliance with the Advisory Council on Historic Preservation’s regulation implementing Section 106, a proposed APE for historic properties was determined to be a 200-foot band flanking the trail, expanded as appropriate to capture key adjacent historic properties. Due to the dense vegetation and topography of the project area, as well as the minimal visual qualities of the proposed improvements, impacts to historic views and vistas will be limited. For the purposes of evaluation, the proposed APE for historic resources includes the area from which the project site is readily visible, as well as resources that could be impacted due to changes in the character of the area.

The APE for archaeological resources comprises the Limit of Disturbance (LOD) as identified by project planners for the various proposed construction-related activities that will result in ground disturbance.

Detailed maps outlining the proposed APE for historic structures and archaeological sites are enclosed with this letter (Attachment B).

## IDENTIFICATION OF HISTORIC RESOURCES

DDOT consultants, Greenhorne & O'Mara, Inc. and Robinson & Associates, Inc., developed the proposed APE through site visits, fieldwork, historic map research, discussions with consulting parties (Attachment C), and examinations of existing studies. Existing studies consulted include the National Register of Historic Places documentation, Historic American Buildings Survey and Historic American Engineering Record (HABS/HAER) documentation, Historic Resources studies, Cultural Landscape inventories, and the D.C. Inventory of Historic Sites.

The proposed APE for historic resources and archaeological sites traverses both the Rock Creek Park, the Rock Creek and Potomac Parkway, and Georgetown historic districts, listed in the National Register of Historic Places (NRHP). The proposed APE also includes 14 individually landmarked properties or individual properties determined potentially eligible for landmark designation, and 33 resources identified as contributing elements of designated historic districts within the APE. These historic resources are identified below.

### Historic Districts

#### **Rock Creek Park Historic District**

The Rock Creek Park Historic District, defined as US Reservation 339, was established by Congress in September 1890 for the scenic and recreational enjoyment of the people of the United States. The park boundaries are roughly defined as 16<sup>th</sup> Street NW on the east, Oregon Avenue and Branch Road NW on the west, Klinge Road NW to the south, and the District line and Parkside Drive NW on the north. Rock Creek Park was listed as a historic district in the NRHP in 1991, and comprises approximately 1,754 acres of predominantly forested valley with sloping hills and meadows. The park meets National Register Criteria A, B, and C as possessing areas of significance for architecture, community planning and development, conservation, entertainment and recreation, industry, landscape architecture, military and horticulture. Significant persons associated with the history of the park include Joshua Peirce and landscape architects Frederick Law Olmsted, Jr., and John C. Olmsted. According to the NRHP nomination, the park exhibits a high degree of integrity of design, workmanship, location, feeling, association, and setting, which continues to reflect its development as a public landscape between 1831 and 1941. *D.C. Inventory of Historic Sites, 8 November 1964, National Register of Historic Places 23 October 1991*

#### Contributing Elements of the Rock Creek Park Historic District within the APE:

##### *Sites/Designed Landscape:*

1. Peirce-Klinge Mansion Landscape

##### *Buildings:*

1. Peirce Barn
2. Peirce Mill

##### *Structures:*

1. Beach Drive
2. Bluffs Bridge
3. Culverts

4. Jules J. Jusserand Memorial
5. Peirce Mill Bridge
6. Peirce Mill (Park) Road
7. Piney Branch Parkway
8. Retaining Walls
9. 16<sup>th</sup> Street Bridge
10. Trail network

### **Rock Creek and Potomac Parkway Historic District**

Rock Creek and Potomac Parkway, US Reservation 360, occupies the gorge and rim of the lower Rock Creek Valley and a stretch of land along the Potomac River waterfront. The district comprises approximately 173 acres in the northwest quadrant of Washington, D.C. Plans for the parkway were initiated as early as 1867, but did not gain momentum until the Senate Park Commission included the reservation in its 1901 plans for the National Mall and surrounding environs. In 1913, the parkway was officially authorized to provide a landscaped connection between the Mall and Potomac Park (later renamed East and West Potomac Parks) and the already established Rock Creek Park and National Zoo. The parkway comprises a major component of the District's comprehensive park system developed following City Beautiful ideals during the early twentieth century. Originally built for horse-drawn carriages, horseback riders, pedestrians, and the occasional automobile, the Rock Creek and Potomac Parkway was one of the earliest parkways in the nation and the first federally funded road. The parkway experienced numerous design changes to facilitate growing automobile use during the early 1900s; however, brindle paths continued to be an integral part of the original trail network design and equestrians used the park through the 1950s. The Rock Creek and Potomac Parkway is listed in the NRHP by the NPS as a historic district under the multiple property listing "Parkways of the National Capital Region, 1913-1965." The parkway is significant under Criteria A and C in the areas of community planning and development, landscape architecture, architecture, and recreation during the period 1791 to 1951. *D.C. Inventory of Historic Sites, 8 November 1964; National Register of Historic Places 4 May 2005*

Most of the lower Rock Creek Valley (the area south of the National Zoo) remained in its natural state throughout the eighteenth century and the first half of the nineteenth century. Starting in 1831, a system of trails and roads began to develop throughout the area that became the park, and continued to evolve through the twentieth century. The circulation network, comprising the historic roads and trails, is a contributing resource to both the Rock Creek Park Historic District and the Rock Creek and Potomac Parkway Historic District. Although the NRHP documentation cites the trail network as significant, it does not specifically determine which trails are contributing resources.

The NPS National Capital Region is currently developing a cultural landscape report for the historic trails in the park. This documentation and planning effort will be completed in FY 2012. As part of the Section 106 undertaking related to the Rock Creek Park Multi-Use Trail Rehabilitation Project, a preliminary evaluation of the historic alignments of the trails within the project area was conducted by Robinson & Associates, Inc. Using the park's archival resources and historic mapping, as well as evaluating other key maps at local archival repositories, a



composite map was created to illustrate the evolution of the historic alignments throughout the project area and to better define the historic resource (Figure 2).

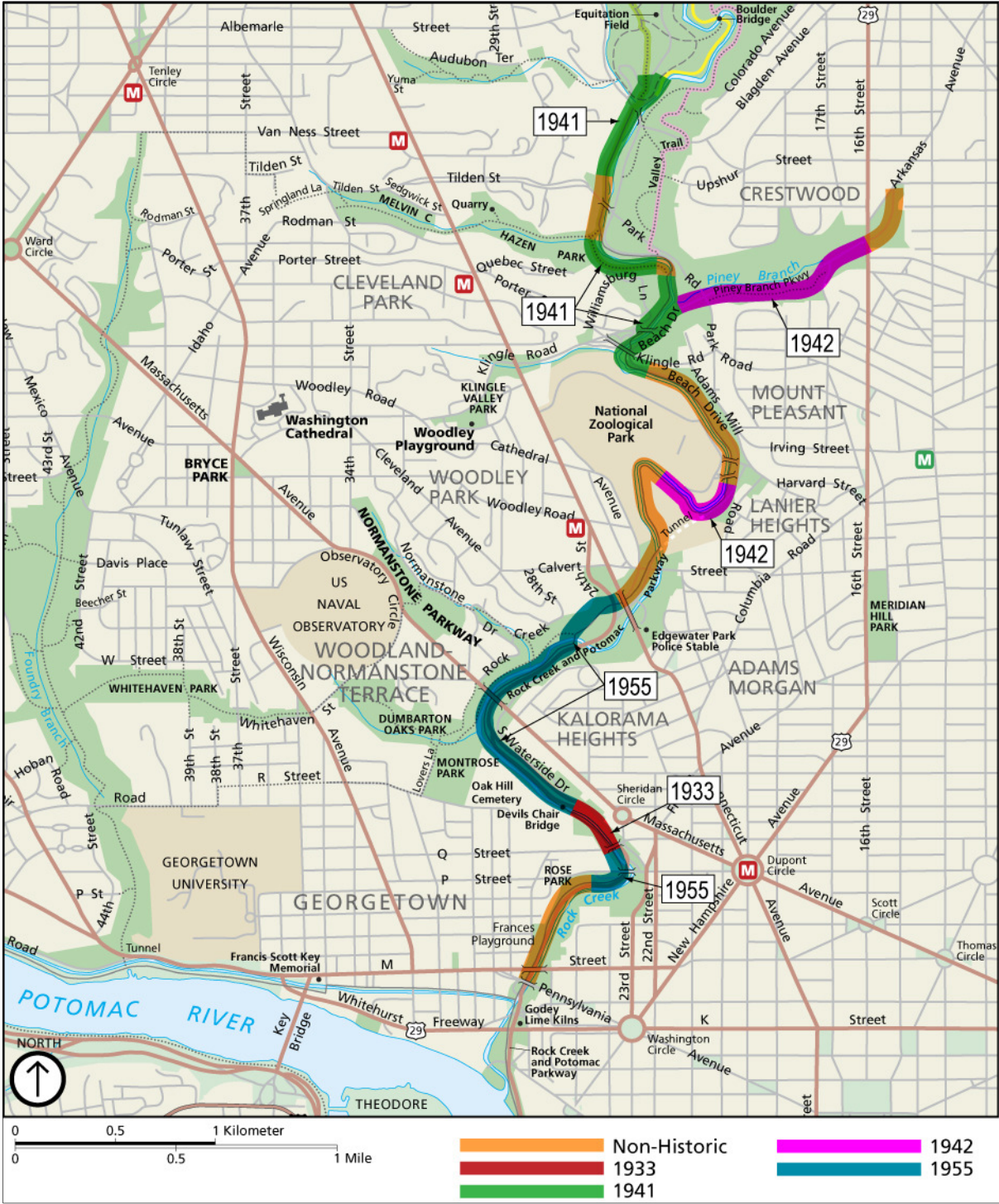


Figure 2. Rock Creek Park Trail: Current Alignments following Historic Alignments

Contributing Elements of the Rock Creek and Potomac Parkway Historic District within the APE:

*Sites/Designed Landscape:*

1. Median
2. Parkway Ending / Road Trace
3. Rock Creek
4. Shoreham Hill
5. Woodley Lane Bridge Abutments

*Buildings:*

1. Washington City Tunnel Storage Shed

*Structures:*

1. Connecticut Avenue Bridge (William H. Taft Memorial Bridge)
2. Culverts
3. Duke Ellington Bridge (Calvert Street Bridge)
4. Dumbarton Bridge (Buffalo Bridge)
5. Lyons Mill Footbridge (Devil's Chair Footbridge)
6. M Street Bridge
7. Massachusetts Avenue Bridge (Charles C. Glover Memorial Bridge)
8. P Street Bridge
9. P Street Road Bridge Rock Creek and Potomac Parkway
10. Saddle Club Footbridge (Shoreham Hill Footbridge)
11. South Waterside Drive Overpass
12. Shoreham Hill Road Bridge
13. Trail Network

**Georgetown Historic District**

Georgetown was founded by an Act of the Maryland Assembly in 1751, and incorporated with an elected government in 1789. It became part of the District of Columbia upon the District's establishment in 1791, remaining a separate jurisdictional entity within the city until Congress revoked its independent charter in 1871. Congress abolished Georgetown as a legal entity in 1895. The Georgetown district is a remarkably intact example of a complete historic town with a rich variety of residential, commercial, institutional, and industrial buildings spanning several centuries. The building inventory includes a wide range of houses from simple frame dwellings to spaciouly landscaped mansions. Architectural styles are also varied and include Federal, Greek Revival, Italianate, Queen Anne, Romanesque, and Classical Revival examples, as well as numerous vernacular structures. Georgetown includes many of city's oldest buildings and its narrow grid streets establish intimate scale, in contrast to L'Enfant's Plan of the City of Washington. *D.C. Inventory of Historic Places, 8 November 1964; National Historic Landmark*

*and National Register of Historic Places, 28 May 1967; period of significance expanded 27 February 27 2003*

Contributing Elements of the Georgetown Historic District within the APE:

*Sites/Designed Landscape:*

1. Rose Park<sup>1</sup>

**Historic Sites**

**Greystone Enclave**

This property is comprised of four dwellings and their associated outbuildings, as well as the setting in which they are located. Greystone Enclave includes Linnaean Hill, built 1823; Greystone, built 1913 and designed by architect Waddy B. Wood; Gearing Bungalow, built 1914 and designed by architect Nicholas R. Grimm; and Pine Crest Manor, built 1929 and designed by architect Gordon B. MacNeil. *2323, 2325, and 2329 Porter Street, NW; 3445 Williamsburg Lane, N.W.; D.C. Inventory of Historic Sites, 21 June 1989*

**Montrose Park**

This 16-acre public park, established in 1911, is located in the northern section of Georgetown, adjacent to Dumbarton Oaks, Dumbarton Oaks Park, and the Oak Hill Cemetery. The historic character of Montrose Park is largely the work of two skilled landscape architects for the D.C. Office of Public Buildings and Grounds, George E. Burnap and Horace W. Peaslee. The park is also important as an early-twentieth century example of the adaption of a country estate as a community park. *R Street between 30<sup>th</sup> and 31<sup>st</sup> streets, N.W.; D.C. Inventory of Historic Sites, 3 March 1979; National Register of Historic Places, 28 May 1967*

**Mount Zion Cemetery**

Established in 1809, the cemetery comprises the Old Methodist Burying Ground and the Female Union Band Society Graveyard. In 1842, the cemetery was established as a benevolent association to provide burial for free blacks. The property connotes the association between black Americans and the development of Georgetown. *Mill Road, N.W.; D.C. Inventory of Historic Sites, 19 April 1975; National Register of Historic Places, 6 August 1975*

**National Zoological Park**

Established in 1889 and expanded in 1921 and 1923, the National Zoo is a major achievement of the late nineteenth-century conservation movement, created for the preservation of endangered animals indigenous to the US. The property is a major component of the park system in the Rock Creek valley and is also significant as an important work of noted landscape architect Frederick Law Olmsted, with alterations by F.L. Olmsted, Jr. Major scientific investigations including experiments in zoology, anatomy, and aerodynamics were conducted on the site. The zoo's spacious and picturesque location was a significant innovation in zoo design that also influenced the layout of the curvilinear street pattern in the surrounding area. *3000 Connecticut Avenue, N.W.; D.C. Inventory of Historic Sites, 8 November 1964; National Register of Historic Places, 11 April 1973*

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<sup>1</sup> Although the Georgetown Historic District nomination does not include an inventory of contributing resources, the State Historic Preservation office considers Rose Park to be one.

## **Oak Hill Cemetery**

Established in 1848 as a garden park cemetery by W.W. Corcoran, a banker and founder of what is now Riggs National Bank. Oak Hill is an example of the nineteenth century Romantic Movement. The cemetery is bounded by Rock Creek Park on the north and east. *30<sup>th</sup> and R streets N.W.; D.C. Inventory of Historic Sites, 8 November 1964*

## **Historic Buildings**

### **Jackson Hill (Holt House)**

Holt House is located on the grounds of the National Zoological Park grounds, to the east of the main zoo. Constructed by 1827, the dwelling is one of the few remaining examples of a five-part Georgian plan in the District. Alterations were made to the house by Glenn Brown, W.R. Emerson, and Hornblower and Marshall from 1890-1901, when the building became the administrative offices for the zoo. *Adams Mill Road; D.C. Inventory of Historic Sites, 8 November 1964; National Register of Historic Places, 24 April 1973*

### **Oak Hill Cemetery Chapel**

The chapel was designed by James Renwick in 1850 and sits on the highest ridge of the cemetery. The chapel is the only known example of Renwick's Gothic Revival church design in the District. *30<sup>th</sup> and R streets N.W.; D.C. Inventory of Historic Sites, 8 November 1964, National Register of Historic Places, 16 March 1972*

### **Peirce Barn**

Built by Isaac Peirce circa 1810, the building is a two-and-one-half story vernacular stone barn with a rectangular ground plan. The barn was restored in 1935-1936, and in 1971 was modernized for use as an art barn/gallery. *2400 block Tilden Street, N.W.; National Register of Historic Places, 25 October 1973*

### **Peirce-Klingling House (Linnaean Hill)**

This property comprises the Peirce-Klingling House, Peirce-Klingling Utility House and Potting Shed, Peirce-Klingling Stable/Garage. The dwelling is a three-story, ten-room farmhouse constructed of blue and grey granite in 1823 by Joshua Peirce, a nurseryman who supplied the first ornamental plantings for the White House, the Capitol and other government buildings. In its time, Linnaean Hill was a gathering place for Washington society. *3545 Williamsburg Lane N.W.; D.C. Inventory of Historic Sites, 8 November 1964; National Register of Historic Places, 10 October 1973*

### **Peirce Mill**

The mill was built by Isaac Peirce in either 1820 or 1829 and is the last known extant grist mill in the District. Peirce Mill is the principle relic of the Peirce plantation and a unique symbol of the milling industry that once flourished along Rock Creek. *Tilden Street and Beach Drive N.W.; D.C. Inventory of Historic Sites, 8 November 1964; National Register of Historic Places, 24 March 1969*

## **Historic Structures**

### **Connecticut Avenue Bridge (William H. Taft Memorial Bridge)**

The bridge, designed by George S. Morison, was built between 1897 and 1906. When it was completed, it was the largest bridge in the world. It is also significant for its method of construction, consisting of unreinforced concrete poured inside a frame of precast concrete panels. In 1931 it was renamed after the former president and Supreme Court chief justice William Howard Taft. *Connecticut Avenue, N.W.; D.C. Inventory of Historic Sites, 8 November 1964; National Register of Historic Places, 3 July 2003*

### **Duke Ellington Bridge (Calvert Street Bridge)**

Designed by Paul Cret, the bridge was constructed between 1933 and 1935. The Calvert Street Bridge replaced an 1891 iron trestle bridge and was designed to accommodate streetcars. *Calvert Street N.W.; D.C. Inventory of Historic Sites, 8 November 1964*

### **Dumbarton Bridge (Buffalo Bridge)**

The bridge, designed by father and son architectural team of Glenn and Bedford Brown and inspired by Roman aqueducts, was erected between 1912-1915, before the parkway legislation was enacted. The creek, the road, and the trail pass through separate arches. The four corners of the bridge are marked by monumental bronze bison designed by sculptor Alexander Phimister Proctor, giving the bridge its name. *Q Street, N.W.; D.C. Inventory of Historic Sites, 8 November 1964; National Register of Historic Places, 16 July 1973*

### **Van Ness Mausoleum**

Designed by George Hadfield and constructed from 1823-24, the mausoleum stands on a high knoll in the Oak Hill Cemetery. Hadfield's design for the circular temple combined classical Greek and Roman elements. The mausoleum was moved from H Street, N.W. to its present location in 1872-73. *D.C. Inventory of Historic Sites, 8 November 1964; National Register of Historic Places, 17 December 1982*

## **IDENTIFICATION OF ARCHAEOLOGICAL SITES**

The most comprehensive archaeological project conducted within the APE, among numerous other smaller projects, was performed in portions of Rock Creek Park by The Louis Berger Group, Inc. between 2002 and 2006 (Fiedel et al. 2008). The archaeological survey was conducted using varying field methods, including pedestrian walkover and shovel test pit excavations, and varying intensities, including 10 m, 20 m, and judgmental intervals. The survey identified 51 new sites and 11 previously identified sites. These sites include precontact Native American quarries and camps and Historic period mills, tenancies, farmsteads, and Civil War-related sites. Portions of the proposed Rock Creek Park Multi-Use Trail archaeological APE were surveyed for archaeological resources by The Louis Berger Group, Inc. (Fiedel et al. 2008), as well as by other projects (such as Inashima 1985; Michaud et al. 2002; Fehr 1981, among others). The archaeological survey resulted in the location of four archaeological sites within the Rock Creek Park Multi-Use Trail archaeological APE. However, additional unrecorded sites are likely present within areas not investigated by The Louis Berger Group, Inc. The four recorded archaeological sites are discussed below.

### **51NW001**

Site 51NW001, or the Piney Branch Quarry site, located within the Piney Branch segment of the Rock Creek Multi-use Trail, has a long history of archeological investigation. This site was initially investigated by William Henry Holmes of the Smithsonian Institution during 1889 and 1890. Holmes excavated a number of trenches that distinguished discrete episodes of artifact deposition in a stratified sequence, described by Fiedel et al. (2008:50) as consisting of “great piles of quartzite cobbles and chipping debris.” Fiedel et al. (2008) examined the Holmes collections and suggest that a wide range of quarrying and tool making activities were conducted at this site. Temporally diagnostic stone tools suggest that much of the material dates to the Late Archaic period. In the mid-1980s, Inashima (1985:287) recommended that any construction-related activities associated with an NPS erosion control and bank stabilization project be monitored due to the proximity of the Piney Branch Quarry site (51NW001), located south of Piney Branch. Finally, this site has been investigated as part of the Berger Section 110 Rock Creek Park survey sponsored by the NPS (Fiedel et al. 2008). Fiedel et al. (2008) report on efforts to locate and reevaluate the integrity of the Piney Branch Quarry site. Investigation techniques employed during the Berger investigations consisted of a pedestrian reconnaissance walkover along trails and at the Piney Branch Quarry archaeological site (51NW001) and the excavation of shovel test pits in selected areas in and near 51NW001. Fiedel et al. (2008:49) characterize 51NW001 as the most important archaeological site in Rock Creek Park. A walkover reconnaissance of the site by Berger field crews indicates that the site remains much as it had been at the conclusion of the Holmes excavations, although the construction of an apartment building has apparently destroyed a few small quarry areas. This site has been listed in the NRHP.

### **51NW008**

Also known as the Bladgen Mill Site, this location is a nineteenth century bone and flour mill that was investigated during a 1981 New York University archaeological field school. The investigations were reported in a September 18, 1981 two-page letter from Bert Salwen and Susan Mayer to the NPS. Test excavations located a structural wall and floor associated with the bone mill and a trace of a raceway that was shared by the bone and flour mills. Aside from bone, nineteenth and twentieth century glass and ceramics were recovered. This site has not been evaluated for listing in the NRHP.

### **51NW154**

This site consists of the area surrounding the extant Peirce Mill structure located along Tilden Street. The cornerstone of the standing mill indicates construction in 1829, although the Samuel Beall’s Mill, perhaps dating as early as 1760, may also have stood at this location. Artifacts dating from the eighteenth through the twentieth centuries were found during the site survey. However, the archaeological field investigation suggests that much of the area surrounding the extant mill structure has been disturbed (Fiedel et al. 2008:183-186). While the site is unevaluated for listing in the NRHP, Fiedel et al. (2008:224) indicate that the entire complex is “almost certainly” eligible. As noted earlier in this letter, the Pierce Mill has been listed in the NRHP on 24 March 1969. More recently, The Louis Berger Group, Inc. completed additional investigations within the Peirce Mill site in advance of proposed parking lot and bus turnaround improvements (Bedell and Shellenhamer 2010). No intact archaeological deposits were found

within the area of impact. However, the report recommends that areas of subsurface impacts within the Peirce Mill site area be investigated.

### **51NW216**

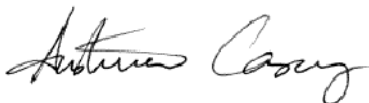
Site 51NW216 is located within the Walter B. Peirce Community Park and is the location of the former Colored Union Benevolent Association Cemetery and an adjacent Quaker Cemetery. The cemetery was in use between ca. 1870 and 1890 and research indicates that over 7,500 individuals were buried at this location, of which less than 200 have been disinterred and relocated. The cemetery was located when graves eroded into the adjacent Rock Creek. Currently, research on this cemetery is being undertaken by Howard University and members of the Kalorama Citizens Association. The cemetery is located in the south portion of the park to the east of Rock Creek.

### **NEXT STEPS**

The APE for the Rock Creek Park Multi-Use Trail Rehabilitation project has been revised and expanded to include adjacent historic resources as appropriate. DDOT will use the map and the identification of historic properties to inform the forthcoming evaluation of the potential effects of the Rock Creek Park Multi-Use Trail undertaking on historic and cultural resources.

If you agree with the determination of the Area of Potential Effects as presented in this revised document and maps, please sign the concurrence line below and return a copy of this letter to my address given below. Please do not hesitate to contact me with any questions you may have regarding the proposed APE and the identification of historic properties for the Rock Creek Park Multi-Use Trail Rehabilitation project.

Sincerely,



Austina Casey  
Environmental Policy Analyst  
Planning, Policy, & Sustainability Administration  
District Department of Transportation  
55 M Street, SE, Suite 500  
Washington, DC 20003

Enclosures: Alternatives Mapping  
Map of Area of Potential Effect  
Consulting Parties

I concur with the Area of Potential Effect as presented for the Rock Creek Park Multi-Use Trail Rehabilitation project:



July 14, 2011

---

Andrew Lewis  
Senior Historic Preservation Specialist  
DC Historic Preservation Office

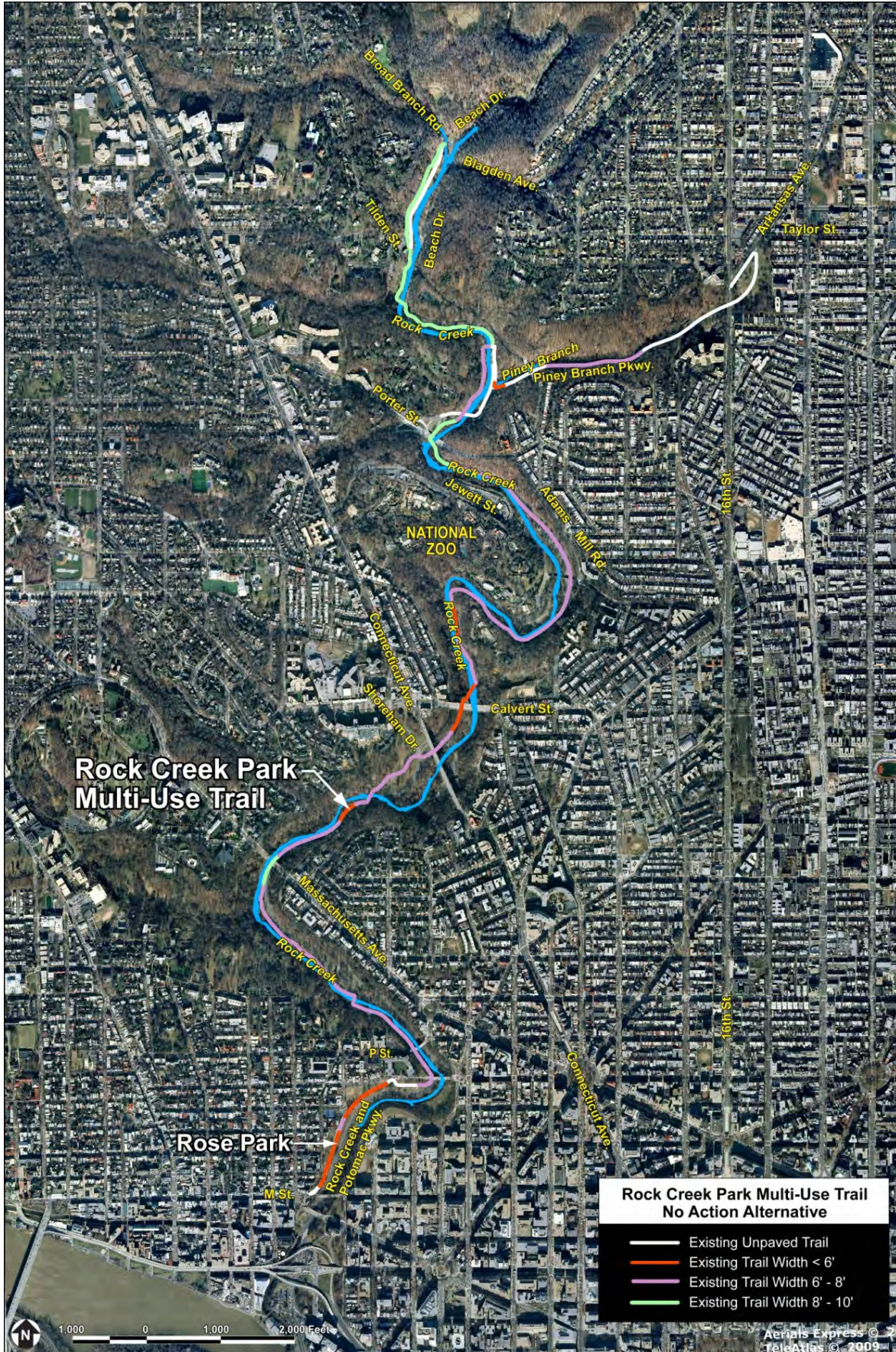
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Date

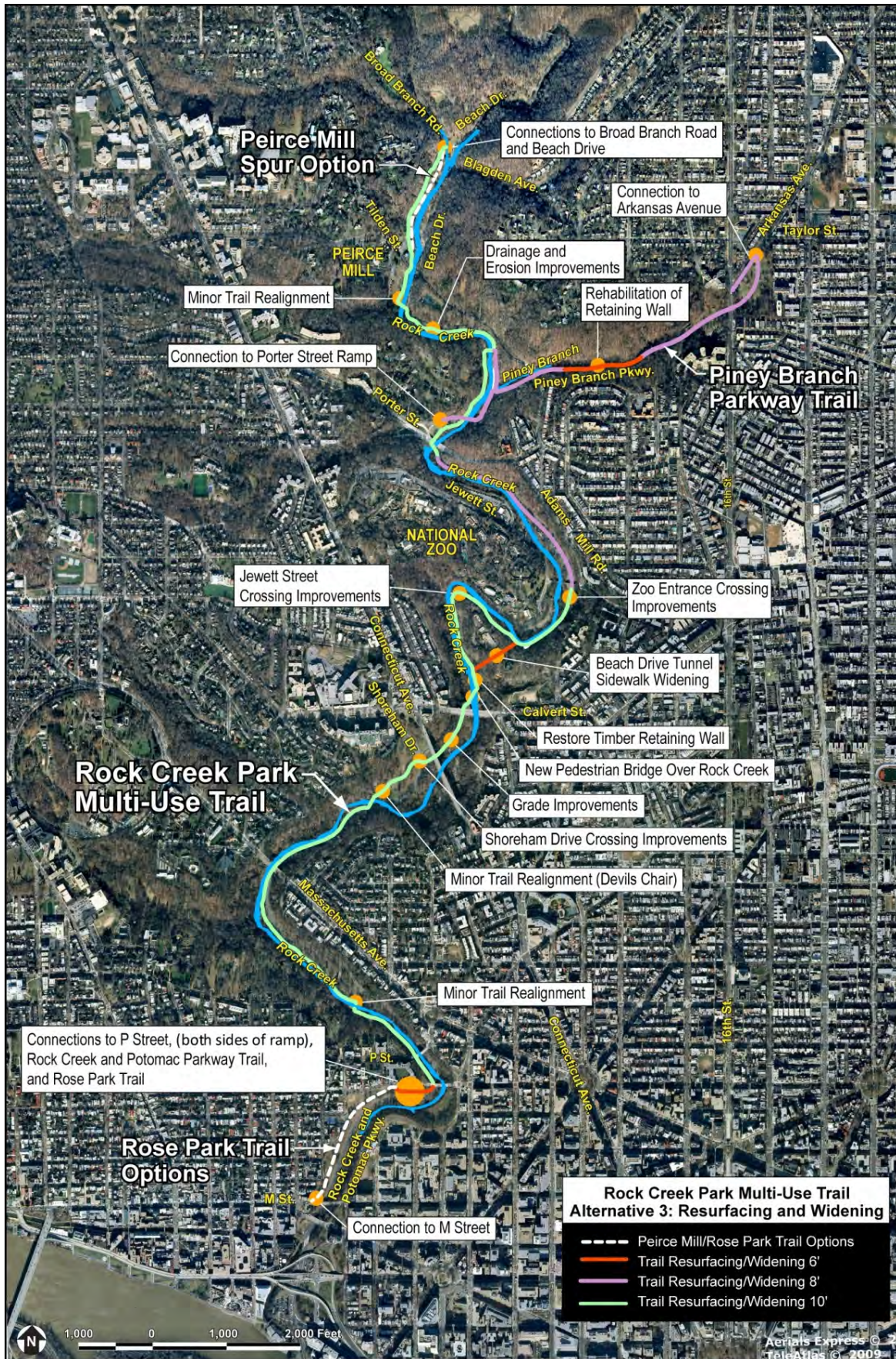
cc: Ruth Troccoli, DC HPO  
Nick Bartolomeo, Rock Creek Park  
Cynthia Cox, Rock Creek Park  
Joel Gorder, NPS National Capital Region  
Michael Hicks, FHWA – DC Division

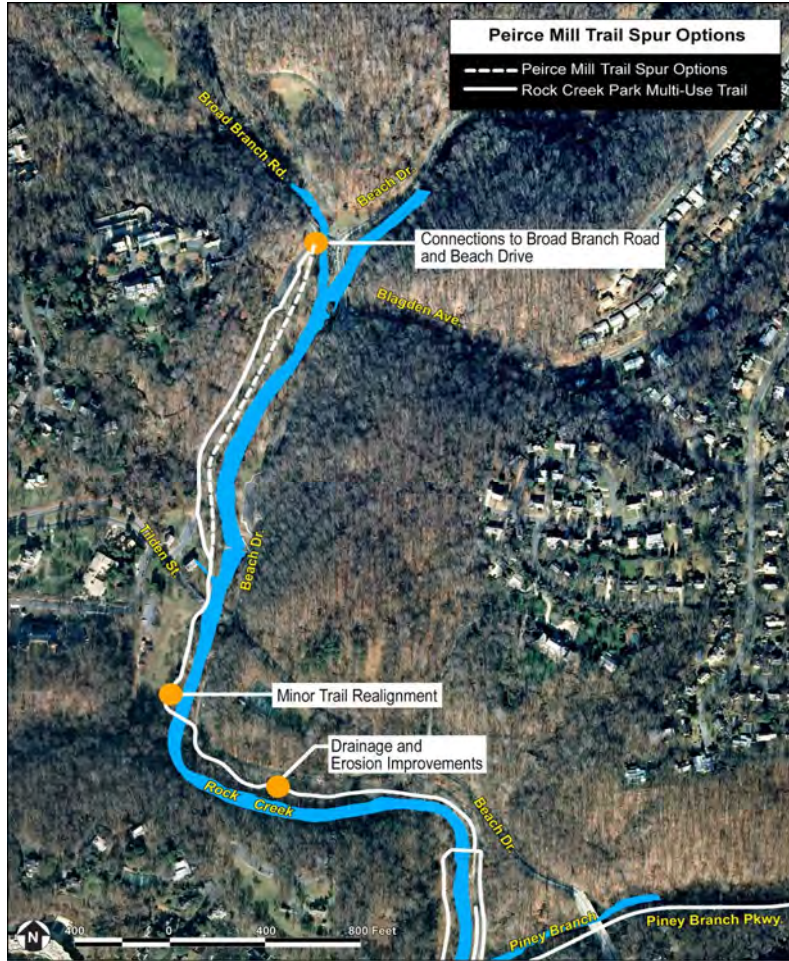


**Attachment A**  
**Alternatives Mapping**





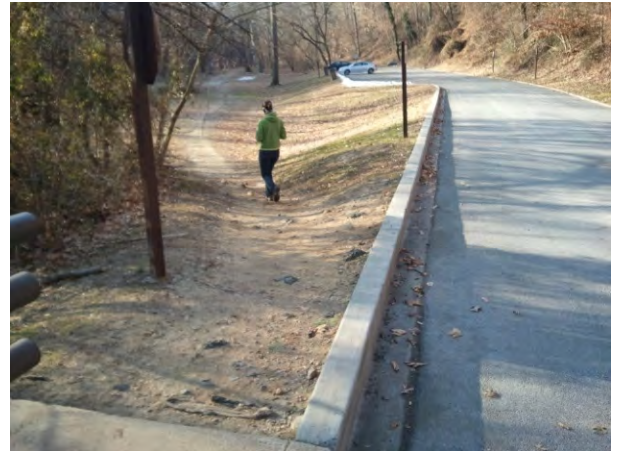




**Peirce Mill Trail Spur Options**

**Option A: No Action**

**Option B: 8-Foot Paved Trail Spur**



**Rose Park Trail Options**

**Option A: No Action**

**Option B: 6-Foot Resurfaced Trail**

**Option C: 8-Foot Resurfaced Trail**

## **Attachment B**

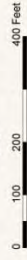
### **Proposed Area of Potential Effect**





Sheet 2 of 6  
**Rock Creek Park Multi-Use Trail Rehabilitation**

- LEGEND
- Area of Potential Effects for Historic Properties
  - Area of Potential Effects for Archeology



MATCH TO SHEET 3

MATCH TO SHEET 1

Rock Creek Dr. 15 West Rock Creek Dr. Shoreham Hill (Saddle Club) Footbridge Shoreham Hill Bridge (Culvert No. 25) Rock Creek Belmont Rd 24th St Rock Creek

Massachusetts Ave. Bridge Rock Creek Potomac Parkway Washington City Tunnel Storage Shed Rock Creek and Potomac Parkway Massachusetts Ave. California St. Waterside Dr. Rock Creek

Georgetown Historic District Boundary Montrose Park Oak Hill Cemetery





Sheet 3 of 6

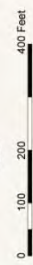
Rock Creek Park Multi-Use Trail Rehabilitation

- LEGEND
- Area of Potential Effects for Historic Properties
  - Area of Potential Effects for Archeology



Sheet 4 of 6  
**Rock Creek Park Multi-Use Trail Rehabilitation**

- LEGEND
- Area of Potential Effects for Historic Properties
  - Area of Potential Effects for Archeology



MATCH TO SHEET 5

MATCH TO SHEET 6

MATCH TO SHEET 3

Greystone Enclave

National Zoological Park Historic District Boundary

National Zoological Park

Piney Branch

Park Rd.

Piney Branch Pky

Rock Creek

Beach Dr.

Frontier St.

Rosemount Ave.

Pierce Mill Rd.

Adams Mill Rd.

Beach Dr.

Rock Creek

Rock Creek

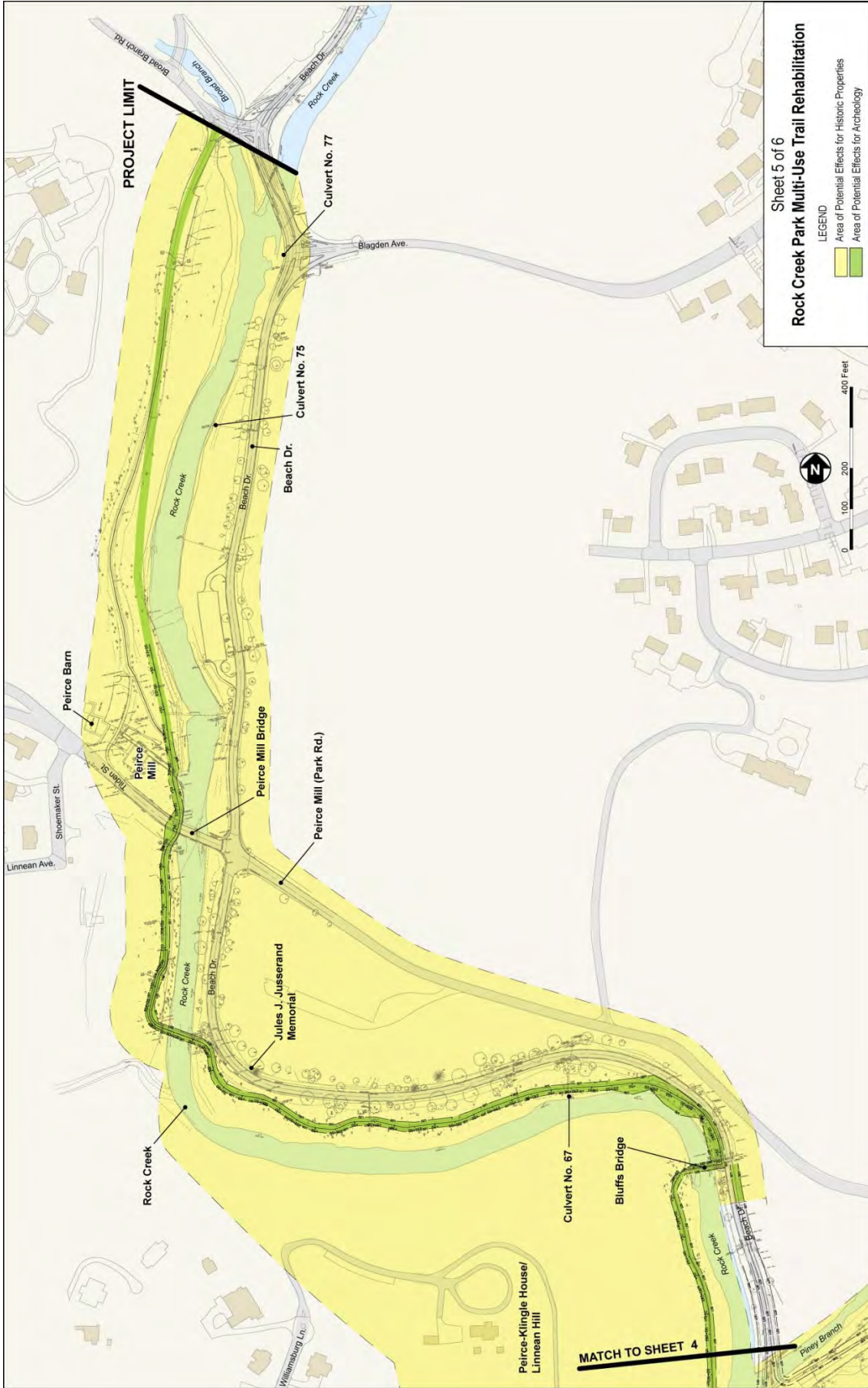
Amont St.

Waibridge Pl.

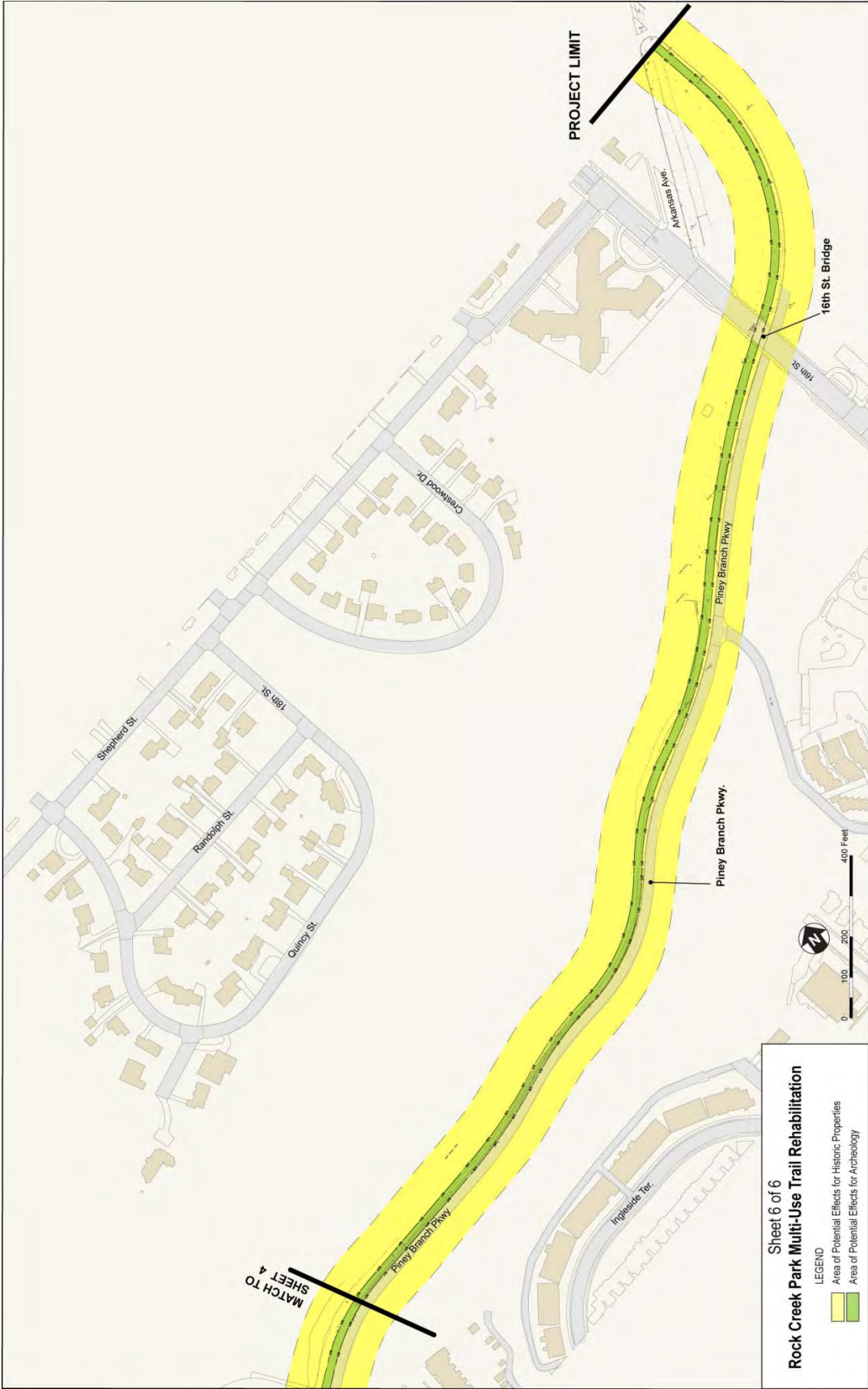
Adams Mill Rd.

Beach Dr.

Adams M



Sheet 5 of 6  
**Rock Creek Park Multi-Use Trail Rehabilitation**



**Sheet 6 of 6**  
**Rock Creek Park Multi-Use Trail Rehabilitation**

**LEGEND**

- Area of Potential Effects for Historic Properties
- Area of Potential Effects for Archeology

**Attachment C**  
**Consulting Parties**

**Federal/Regional Agencies**

Mr. Joseph C. Lawson  
Division Administrator  
Federal Highway Administration,  
District of Columbia Division  
1990 K St. NW, Suite 510  
Washington, DC 20006

Mr. Peter May  
Associate Regional Director  
National Capitol Region  
National Park Service  
1100 Ohio Drive, SW  
Washington, DC 20242

Mr. Dennis W. Kelly, Director  
Smithsonian Institution  
National Zoological Park  
3001 Connecticut Avenue, NW  
Washington, DC 20008

Ms. Maria Teresi  
Project Manager  
U.S. Army Corps of Engineers  
PO Box 1715  
Baltimore, MD 21203

Ms. Barbara Rudnick  
NEPA Team Leader  
U.S. Environmental Protection Agency  
Region 3  
1650 Arch Street  
Philadelphia, PA 19103

Mr. Leopoldo Miranda  
Supervisor  
Chesapeake Bay Field Office  
U.S. Fish and Wildlife Service  
177 Admiral Cochrane Drive  
Annapolis, MD 21404

**District Agencies**

Mr. Tom Luebke  
Secretary  
Commission of Fine Arts  
401 F Street, NW, Suite 312  
Washington, DC 20001

Mr. Steven A. Saari  
Watershed Protection Specialist  
District Department of the Environment  
1200 First Street NE, 5<sup>th</sup> Floor  
Washington, DC 20002

Mr. Bryan King  
District Department of the Environment  
Fisheries and Wildlife Division  
51 N Street, NE  
Washington, DC 20002

Mr. Ronaldo Nicholson  
Chief Engineer  
DC Department of Transportation  
Infrastructure Project Management  
Administration  
64 New York Avenue, NE  
Washington, DC 20002

Mr. Jesús Aguirre  
Director  
DC Department of Parks and Recreation  
3149 16<sup>th</sup> Street, NW  
Washington, DC 20010

Mr. David Maloney  
State Historic Preservation Officer  
DC Office of Planning/State Historic  
Preservation Office  
1100 4<sup>th</sup> Street, SW, Suite E650  
Washington, DC 20024

Mr. Andrew Lewis  
Senior Historic Preservation Specialist  
DC Office of Planning/State Historic  
Preservation Office  
1100 4<sup>th</sup> Street, SW, Suite E650  
Washington, DC 20024

Mr. Ron Kirby  
Director of Transportation Planning, MWCOG  
Suite 300, 777 North Capitol Street, NE  
Washington, DC 20002

Mr. Marcel C. Acosta  
Executive Director  
National Capital Planning Commission  
401 9<sup>th</sup> Street NW  
North Lobby, Suite 500  
Washington, DC 20004

Mr. David Levy  
Director, Urban Design and Plan Review  
National Capital Planning Commission  
401 9<sup>th</sup> Street NW  
North Lobby, Suite 500  
Washington, DC 20004

401 9<sup>th</sup> Street NW  
North Lobby, Suite 500  
Washington, DC 20004

Mr. Bill Dowd  
Director of Planning  
National Capital Planning Commission

Mr. Gerald Francis  
Deputy General Manager  
Washington Metropolitan Area Transit Authority  
600 5<sup>th</sup> Street, NW  
Washington, DC 20001

**District Elected Officials**

The Honorable Vincent Gray  
Mayor, District of Columbia  
Office of the Mayor  
1350 Pennsylvania Avenue, NW  
Washington, DC 20005

The Honorable Muriel Bowser  
Ward 4 Councilmember  
1350 Pennsylvania Avenue, NW, Suite 110  
Washington, DC 20004

The Honorable Kwame R. Brown  
Chair, District of Columbia Council  
1350 Pennsylvania Avenue, NW, Suite 504  
Washington, DC 20004

The Honorable Mary M. Cheh  
Ward 3 Councilmember  
1350 Pennsylvania Avenue, NW, Suite 108  
Washington, DC 20004

**Advisory Neighborhood Commissions**

Mr. Wilson Reynolds  
Commissioner Chair, ANC-1C  
1812 Calvert St., NW  
Washington, DC 20008

2122 California St. NW #62  
Washington, DC 20008

Mr. Gregg Edwards  
Commissioner Chair, ANC-1D  
1647 Lamont Street, NW, #201  
Washington, DC 20010

Mr. Ron Lewis  
Commissioner Chair, ANC-2E  
3400 Reservoir Road  
Washington, DC 20007

Ms. Rebecca Coder  
Commissioner Chair, ANC-2A  
2501 M Street, NW #721  
Washington, DC 20037

Ms. Anne-Marie Bairstow  
Commissioner Chair, ANC-3C  
2802 27th Street NW  
Washington, DC 20008

Mr. Will Stephens  
Commissioner Chair, ANC-2B  
9 Dupont Circle, NW  
Washington, DC 20036

Ms. Karen Perry  
Commissioner Chair, ANC-3F  
3003 Van Ness St., NW  
Washington, DC 20008

Mr. Eric Lamar  
Commissioner, ANC-2D

Ms. Gale Black  
Commissioner, ANC-4A  
1761 Crestwood Drive NW  
Washington, DC 20011

Interested Parties

Friends of Rose Park  
Mr. David L. Abrams  
1410 26<sup>th</sup> Street, N.W., No. 1  
Washington, D.C.  
jake.chase@juno.com

Citizens Association of Georgetown  
Ms. Jennifer M. Altemus, President  
[cagmail@cagtown.org](mailto:cagmail@cagtown.org)  
Email: [cagmail@cagtown.org](mailto:cagmail@cagtown.org)  
Website: <http://www.cagtown.org/index.html>

Cleveland Park Citizens Association  
Ms. Susie Taylor, President  
[tayfish@aol.com](mailto:tayfish@aol.com)

Cleveland Park Historical Society  
P.O. Box 4862  
[staff@ClevelandParkHistoricalSociety.org](mailto:staff@ClevelandParkHistoricalSociety.org);

Crestwood Citizens Association – Listserv  
[crestwoodwdc@lists.crestwood-dc.org](mailto:crestwoodwdc@lists.crestwood-dc.org)

Crestwood Neighborhood League  
[clethridge@juno.com](mailto:clethridge@juno.com)  
<http://www.crestwoodcommunity.org/index.html>

National Association for Olmsted Parks  
1111 16th Street NW, Suite 310  
Washington, DC 20036  
[info@naop.org](mailto:info@naop.org)

Friends of Peirce Mill  
4305 38<sup>th</sup> St. NW  
Washington, DC 20016  
Email: [Abbott1229@verizon.net](mailto:Abbott1229@verizon.net)  
Website: <http://www.peircemill-friends.org/>

Friends of Rock Creek's Environment  
Ms. Beth Mullin, Executive Director  
PO Box 42680  
Washington, DC 20015  
Email: [force@friendsofrockcreek.org](mailto:force@friendsofrockcreek.org)  
Website: <http://www.friendsofrockcreek.org/>

Friends of Rose Park  
Mr. David Dunning, President  
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Washington, DC 20009  
Email: [djs@alum.mit.edu](mailto:djs@alum.mit.edu)  
Website: <http://www.roseparkdc.org/>

Mount Pleasant Neighborhood Alliance  
Post Office Box 21554  
Washington, DC 20009  
Email: [admin@mtpalliance.org](mailto:admin@mtpalliance.org)  
Website: <http://www.mtpalliance.org/>

Sierra Club  
Washington, DC Chapter  
2437 15th St., NW  
Washington, DC 20009  
[melatar@yahoo.com](mailto:melatar@yahoo.com) (Lisa Swanson)

Washington Area Bicyclist Association  
1803 Connecticut Ave. NW, 3rd floor  
Washington, DC 20009  
Email: [Barbarak@waba.org](mailto:Barbarak@waba.org)  
Website: <http://www.waba.org/index.php>

DC Preservation League  
401 F Street, NW, Room 324  
Washington, D.C. 20001  
E-Mail: [info@dcpreservation.org](mailto:info@dcpreservation.org)

Committee of 100  
1317 G Street NW  
Washington, DC 20005  
Email: [info@Committeeof100.net](mailto:info@Committeeof100.net)



GOVERNMENT OF THE DISTRICT OF COLUMBIA  
STATE HISTORIC PRESERVATION OFFICER



October 19, 2011

Ms. Austina Casey  
Environmental Policy Analyst  
Planning, Policy, & Sustainability Division  
District Department of Transportation  
2000 14<sup>th</sup> Street, NW, 7<sup>th</sup> Floor  
Washington, DC 20009

RE: Review of Report: *Rock Creek Park Multi-Use Trail Rehabilitation, Assessment of Effects*

Dear Ms. Casey:

Thank you for providing the DC State Historic Preservation Office (DC SHPO) with the above-referenced report. We have carefully reviewed the document and are writing to provide our comments regarding effects on historic properties in accordance with Section 106 of the National Historic Preservation Act.

Historic Built Environment:

As you are aware, the DC SHPO concurred with the proposed Area of Potential Effect (APE) for the project on July 14, 2011. The report provides detailed information about the historic properties located within that APE as well as a thorough analysis of the likely effects of the three alternatives that are under consideration. Those alternatives consist of 1.) No Action, 2.) Trail Resurfacing, and 3.) Trail Resurfacing and Widening. The effects of a variety of other actions are also evaluated in the report. These actions include paving “social trails,” minor alterations to trail alignments, the rehabilitation of a deteriorated historic retaining wall, the construction of a new footbridge, the removal of limited amounts of vegetation, cross walk improvements and similar improvements.

While many of the trails within the Rock Creek Park and Rock Creek and Potomac Parkway Historic Districts still follow historic alignments, the report establishes that all of the trails have continually undergone relatively minor updates and improvements such as the ones currently proposed. In addition, the rehabilitation of the retaining wall will be carried out in accordance with the *Secretary’s Standards* and we understand that the National Park Service will be involved in selecting the materials that will be used for the paving of trails.

In our view, the alterations that are currently proposed will continue the tradition of relatively minor updates and improvements that are necessary to maintain a functional and efficient trail system. We do believe that any of the proposed work will substantially diminish the integrity of any historic property within the APE. Therefore, we concur with the recommended determinations of “no adverse effect” for all of the proposed alternatives as they relate to the historic built environment.

Ms. Austina Casey  
*Rock Creek Park Multi-Use Trail Rehabilitation, Assessment of Effects*  
October 19, 2011  
Page 2

Archaeology:

With regard to archaeology, we also concur with the determinations of “no adverse effect” for all of the proposed alternatives because archaeological survey will be conducted in all locations where ground-disturbance in previously unsurveyed areas is proposed. We look forward to being kept informed of the results of the survey, as appropriate.

If you should have any questions or comments regarding the historic built environment, please contact me at [andrew.lewis@dc.gov](mailto:andrew.lewis@dc.gov) or 202-442-8841. Questions regarding archaeology should be directed to Ruth Troccoli at [ruth.troccoli@dc.gov](mailto:ruth.troccoli@dc.gov) or 202-442-8836. Otherwise, thank you for providing this opportunity to review and comment.

Sincerely,



C. Andrew Lewis  
Senior Historic Preservation Specialist  
DC State Historic Preservation Office

10-518



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

**District of Columbia Division  
(202) 219-3570 FAX 219-3545**

**1990 K Street, NW  
Suite 510  
Washington, DC 20006-1103**

**MAY 21 2014**

In Reply Refer To: HDA-DC

Mr. David Maloney  
District of Columbia State Historic Preservation Office  
1100 4th Street, SW  
Suite E650  
Washington, DC 20024

Dear Mr. Maloney:

The Federal Highway Administration (FHWA) and District Department of Transportation (DDOT) with the cooperation of the National Park Service (NPS) and the National Capital Planning Commission (NCPC) proposes to rehabilitate the Rock Creek Park multi-use trail. Federal funds are participating in the project; therefore, the requirements of Section 106 of the National Historic Preservation Act (36 CFR §800) are applicable. FHWA and DDOT have continuously consulted with your office regarding the effects of the project on historic properties; therefore, the purpose of this letter is to provide background for a determination of effects to historic properties from this project.

The Rock Creek Park Multi-Use Trail Rehabilitation Project is located in Northwest Washington, DC. The purpose of this project is to improve the overall condition and connectivity of the deteriorating Rock Creek Park multi-use trail system in order to enhance visitor use and experience within Rock Creek Park. The project area includes a 3.7-mile segment of the Rock Creek Park multi-use trail from Broad Branch Road to P Street, NW; a 4,300-foot (0.8 mile) segment of the Piney Branch Parkway trail from Beach Drive to Arkansas Avenue, NW; a 1,247-foot (0.2 mile) segment of social trail from Broad Branch Road to Peirce Mill (referred to as the Peirce Mill trail spur); a 1,929-foot (0.4 mile) segment of the Rose Park trail from P Street, NW to M Street, NW; and a 363-foot ramp connecting the Rose Park trail to P Street, NW.

The proposed action includes resurfacing; trail widening where environmentally feasible; modifications to the trail alignments and road crossings; directional and interpretive signage; and connections to and from the trails to other pedestrian and bicycle facilities. Rock Creek Park and the Rock Creek and Potomac Parkway are under the jurisdiction of the NPS; however, implementation of the proposed action will be administered by DDOT and funded by FHWA. The majority of the proposed improvements are located on NPS land, with some improvements located within the District of Columbia right-of-way. A segment of the trail also passes through National Zoological Park property.


After considering the criteria of adverse effect and potential effects of the build alternatives on the integrity of each property and consultation with your (SHPO) office, FHWA has determined that this project will have "no adverse effect" on historic properties and archaeological resources as defined by 36 CFR 800.

Consistent with the request of your office in the letter dated March 19, 2019 (enclosed), FHWA and DDOT also agree to carry out the following:

1. SHPO will be provided an opportunity to review and comment on the additional information such as maps, plans,, and detailed project descriptions that defined the undertaking in more details; and
2. In consultation with the SHPO, DDOT shall conduct archaeological survey in all locations where ground disturbance in previously unsurveyed areas is proposed and any locations warrant testing for the presence of potentially significant archaeological resources.

Based on your letter to DDOT dated October 19, 2011 (enclosed), we understand that your office has also determined that this project will have "No Adverse Effect" and concur with our determinations on these properties as defined by 36 CFR 800.

Sincerely,

  
For Joseph C. Lawson  
Division Administrator

Enclosure

Cc: Faisal Hameed, DDOT  
Austina Casey, DDOT  
Andrew Lewis, DC SHPO  
Carol Legard, ACHP

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
STATE HISTORIC PRESERVATION OFFICER



June 2, 2014

Mr. Joseph C. Lawson  
Division Administrator  
U.S. Department of Transportation  
Federal Highway Administration  
District of Columbia Division  
1990 K Street, NW, Suite 510  
Washington, DC 20006-1103

RE: Section 106 Determination of Effect for Rehabilitation of the Rock Creek Park Multi-Use Trail

Dear Mr. Lawson:

Thank you for your recent letter to the DC State Historic Preservation Office (DC SHPO) regarding the above-referenced Section 106 review. Based upon our review of your letter and earlier project-related submittals from the National Park Service and DDOT, we are writing to reiterate our comments regarding effects on historic properties in accordance with Section 106 of the National Historic Preservation Act.


As you are aware, we provided initial comments on the undertaking to the National Park Service in a letter dated March 19, 2009. Subsequently, we reviewed an assessment of effects report and wrote to DDOT on October 19, 2011 to document our concurrence with the report's findings – specifically that the undertaking would have “no adverse effect” on historic properties.

In reviewing our 2011 letter again, we noted that there was one error which we now wish to correct. The last paragraph on page one incorrectly states that: “We do believe that any of the proposed work will substantially diminish the integrity of any historic property within the APE.” (emphasis added). That sentence should have read: “We do not believe that any of the proposed work will substantially diminish the integrity of any historic property within the APE.”

Therefore, we also concur with FHWA's finding that rehabilitation of the Rock Creek Park Multi-Use Trail will have “no adverse effect” on historic properties – including archaeological resources. If any revisions or additional ground disturbance are proposed for the project, please notify us as soon as possible. Otherwise, we do not believe that any further review or comment by the DC SHPO will be necessary.

Please contact me at [andrew.lewis@dc.gov](mailto:andrew.lewis@dc.gov) or 202-442-8841 if you have any further questions or comments regarding the historic built environment. Questions regarding archaeology should be directed to Ruth Troccoli at [ruth.troccoli@dc.gov](mailto:ruth.troccoli@dc.gov) or 202-442-8836. Thank you for providing this additional opportunity to comment.

Sincerely,

  
C. Andrew Lewis  
Senior Historic Preservation Specialist  
DC State Historic Preservation Office

10-518



APPENDIX

E

COMMENT ON THE EA AND RESPONSES







PEPC Correspondence  
Keep Private: Yes  
Date Received: 12/2/11

Any chance you could add a bike trail the extends from Arkansas down Piney Branch Pkwy at least to Beach Drive, where we can pick up the Rock Creek Trail into the city? I regularly commute that and must ride into oncoming traffic since there is typically a long line of cars, no shoulder, and no consistent bike trail for commuting bicycles.

01-01

Many thanks!

***Response to 01-01***

The preferred alternative would involve restriping of Piney Branch Parkway and widening of the Piney Branch Parkway trail to a width of six to eight feet. The proposed trail would include ADA-compliant ramps to connect the trail with Arkansas Avenue and the Rock Creek Park Multi-Use Trail.

***Response to 02-01***

Thank you for your interest and response. Your comments will be included as part of the public record for the project. A purpose of the project is to improve visitor safety and experience.

PEPC Correspondence  
Keep Private: Yes  
Date Received: 12/2/11

Thank you for the opportunity to comment on the proposed improvements to the Rock Creek Trail. This trail is very well used by city and region residents. The trail is crowded, especially on the weekends and can be dangerous at its narrower areas for pedestrians and bicyclists. The proposed changes are an excellent step in the right direction to improving the trail for public use and enjoyment. I hope NPS will continue to support improvements like these on Rock Creek Trail and other areas within the District of Columbia.

02-01

PEPC Correspondence  
Keep Private: No  
Name: Aaron Stainthorp  
Address: 1723 Webster Street, NW Washington DC, 20011  
Email: Sublaaron@gmail.com  
Date Received: 12/2/11

I wanted to endorse the idea to improve the portion of the Rock Creek Trail that runs through the zoo. My understanding is the preferred alternative includes repaving and widening many portions of the trail, providing an 8 ft. spur trail to Peirce Mill, repaving the Rose Park Trail, and creating a pathway through the zoo tunnel.

As a cyclist who regularly rides in the park that section has needs to be widened to improve safety. Additionally during the times when the gates to the bike path near the zoo are closed bicyclists must travel through the tunnel and the current passageway is too narrow and unsafe.

I want to support this preferred alternative and thank NPS for making these recommendations

03-01

PEPC Correspondence  
Keep Private: Yes  
Date Received: 12/2/12

The Rock Creek Park trail, particularly the area around the zoo, has needed improvement for many years now. Expanding the width of the trail should help accommodate the heavy use that it receives between the zoo and M St. I have used the trail at least 3 days per week since 2004 as both cyclist and runner, and have noted the increased traffic on it, including from pedestrians, cyclists, roller bladers and more. At the same time, the trail has gotten progressively worse, becoming increasingly uneven on account of trail roots, etc. Correspondingly, many of the professional and more competitive cyclists have taken to Rock Creek Park Road to avoid the uneven characteristics of the trail.

One other area which needs drastic improvement is increasing the width of the sidewalk through the tunnel by the zoo. The space is extremely narrow to traverse on bike when the zoo is closed, and the potential for cyclist-motor vehicle fatalities is very high.

Please consider adopting these improvements to Rock Creek Park Trail.

04-01

***Response to 03-01***

Thank you for your interest and response. Your comments will be included as part of the public record for the project. A purpose of the project is to improve visitor safety and experience.

***Response to 04-01***

The comment of widening the trail is consistent with the preferred alternative. Additionally, as described on page 29 of the EA, the sidewalk along the west wall of the Beach Drive tunnel is proposed to be widened from 2 feet to approximately 4 feet.

PEPC Correspondence  
Keep Private: No  
Name: Rumen V. Buzatov  
Address: 1530 Ogden Street, NW Washington DC, 20010  
Email: buzi@buzistudio.com  
Date Received: 12/3/11

I have felt the need to access Rock Creek Park via Piney Branch Parkway by foot or bicycle for long time. The current absence of a bike lane and especially a sidewalk, are major inconvenience for pedestrians and riders. The entrance on Arkansas Avenue, NW should also be connected to 16th Street, NW via bike lane and a sidewalk. Thank you for this long overdue initiative.

05-01

PEPC Correspondence  
Keep Private: No  
Name: Kenneth P. Cantor  
Address: 708 Bonifant st., Silver Spring MD, 20910  
Email: kencantor@earthlink.net  
Date Received: 12/3/11

As an occasional recreational bicycle user of the Rock Creek Trail, I strongly support the preferred alternative modifications to the trail. I am especially pleased that the section of the trail between Pierce Mill and Connecticut Ave. is to be improved. I often ride a loop South on Rock Creek Trail from East-West Highway in Silver Spring to K Street, DC, then ride over to the Crescent Trail, and on the Crescent Trail back to Jones Bridge Rd. where I pick up the Rock Creek Trail, going South to my origination point. In this full 20+ mile loop, by far the part of the Rock Creek Trail most difficult, challenging, and most dangerous to navigate is between Pierce Mill and Connecticut Ave. Improvements to this section of the trail are especially welcome.

I offer a suggestion that could possibly save some construction funds: My travel on the Rock Creek Trail is always during daylight hours, and I bypass the National Zoo tunnel by going around the hill through the Zoo, which of course is open during the hours when I typically travel the route. I understand that, at present, the Zoo gate at Rock Creek Parkway is closed after dark, making this travel option unavailable after sunset. Would it be possible to re-design the Zoo entrance, fencing, and trail route in this area to permit 24-hour travel around the tunnel but through Zoo property? This would avoid the necessity of redesigning and reconstructing the tunnel roadway and adjacent trail, which, no doubt, is one of the more expensive elements of this project.

06-01

Again, I am enthusiastic about the proposed improvements to the Rock Creek Park Trail and look forward to enjoying the rebuilt Trail. Congratulations and thanks to the NPS and all others involved.

K. Cantor

### ***Response to 05-01***

The preferred alternative would involve restriping of Piney Branch Parkway and widening of the Piney Branch Parkway trail to a width of six to eight feet. The proposed trail would include ADA-compliant ramps to connect the trail with Arkansas Avenue and the Rock Creek Park Multi-Use Trail. As described in Chapter I of the EA, the NEPA process involves public agency involvement early in the project development to identify the scope of issues to be addressed and the project area. Based on the early coordination and public outreach, connections to 16<sup>th</sup> Street, NW were determined to be outside of the scope of the trail rehabilitation.

### ***Response to 06-01***

As described on page 40 of the EA, National Zoo security requires this gate to be closed from dusk to dawn, and on days when the National Zoo holds special events. The gate and its scheduled closure are required in order for the National Zoo to maintain its accreditation by the Association of Zoos and Aquariums (AZA). The AZA standards specify a requirement for a perimeter fence. The fence must be constructed so that it protects the animals in the facility by restricting animals outside the facility and unauthorized persons from going through it or under it and having contact with the animals in the facility, and so that it can function as a secondary containment system for the animals in the facility (AZA 2013). As a result, leaving the National Zoo gate open was dismissed from the study.

PEPC Correspondence  
Keep Private: Yes  
Date Received: 12/4/11

Dear Sirs:

I strongly applaud the recommendations put forth in the EA for the Rock Creek Multi-use Trail Rehabilitation.

Three proposed actions recommended in the EA are crucially important:

1. the widening of the pedestrian/cyclist path in the tunnel located east of the zoo.
2. the new pedestrian/cyclist bridge proposed just south of the aforementioned tunnel.
3. widening of the path where feasible.

07-01

All three are essential for public safety. I have tried to ride (and then walked) my bike through the tunnel after the zoo path has been closed. It has been a frightening experience and I was surprised that bike riders were not killed.

The existing walkway on the bridge south of the tunnel is a serious accident waiting to happen. The new alternative will obviate this.

Finally, the overall widening of the path will allow better coexistence between walkers and cyclists.

I applaud the report for formulating these recommendations.

Sincerely,

PEPC Correspondence  
Keep Private: No  
Name: Scott A. Remley  
Address: 1662 Hobart St., NW Washington DC 20009  
Email: scott\_remley@yahoo.com  
Date Received: 12/5/11

I strongly support NPS' preferred alternative for the RCP trail, and applaud their diligent effort to accommodate stakeholders while remaining respectful of their mission to create a cohesive transportation plan and preserve open space for all members of the public to enjoy.

One suggestion would be to incorporate some kind of periodic reflective marker in the Rock Creek Park trail - cat-eyes every 20 yards, dashed line or something like that. In the dark, especially during the fall, it becomes very challenging to see the contours of the trail. An occasional marker would be very helpful, especially to cyclists like me.

08-01

***Response to 07-01***

Thank you for your interest and response. Your comments will be included as part of the public record for the project. A purpose of the project is to improve visitor safety and experience.

***Response to 08-01***

New lighting elements were considered by the project team but dismissed based on standard NPS policy. As described on page 41 of the EA, "Rock Creek Park is closed from dusk to dawn. Furthermore, according to NPS Management Policies (NPS 2006), the NPS seeks to preserve, to the greatest extent possible, the natural lightscapes of parks."

PEPC Correspondence  
Keep Private: No  
Name: Brian E. Moore  
Address: 6707 Rannoch Rd.  
Email: brianem@yahoo.com  
Date Received: 12/5/11

Thank you for considering improving the existing hike trail in Rock Creek park. However, the current trail is poorly suited for use by cyclists, either recreational or those attempting to commute to jobs by bicycle rather than car. The trail is poorly lit overall, has many twists, turns, blind spots, root-heaves, and worst of all soil overwashes from storm events. Even "spruced-up" as envisioned in this plan, it will remain poorly suited for anyone other than occasional recreational riders- and even then without dedicated maintenance, only until storm events start covering sections with slippery mud.

09-01

Rather than band-aid attention to the long neglected and inadequate hiking trail that runs through Rock Creek park I strongly urge you to consider permanently segregating, out of the existing 4 car lanes, a separate bike lane on the roadway.

09-02

Leave the remaining car lanes contraflow (that is all three in-bound in the mornings and out bound in the evenings.) The wildly successful beach drive weekend closures show how much interest there is in having a safe recreational and bicycle commuter route in the center of DC. Having a direct, suitable and safe bicycle alternative would serve many popular and important interests in the communities along and above Rock Creek Park.

PEPC Correspondence  
Keep Private: No  
Name: N/A  
Address: Washington DC, 20008  
Email:  
Date Received: 12/5/11

I am a frequent user of this trail. I am very pleased with the prospect of the trail repaving. It is not currently in good condition and is far too narrow in many sections, posing a major hazard to its many users.

10-01

I am concerned with the plan to fit the trail into the tunnel. While the proposed plan is certainly better than the status quo, a 5 foot trail is not wide enough for two way traffic. This is especially true when there will be a wall to one side and two way car traffic in narrow lanes to the other. My question is: why can the section of the trail through the zoo grounds not be open 24/7? I understand that the zoo grounds close in the evenings. Presumably a gate could be erected on the bridge on Jewett street, thereby eliminating after hours access to the zoo from the multi-use path. This way, the path could remain open and users can always bypass the tunnel. I believe this is a much safer option and I am confident that NPS can find a way to work with Smithsonian to make this happen if NPS finds it a compelling solution.

10-02

### ***Response to 09-01 and 10-01***

Trail rehabilitation design would be developed in accordance with standards provided in DDOT's *Bicycle Facility Design Guide*. Additional design guidance will be provided by AASHTO's *Guideline for the Development of Bicycle Facilities* and the Americans with Disabilities Act. To the extent feasible, the trail will be designed to avoid right angles and blind corners while protecting the Park's environmental resources. The preferred alternative would also include raising the vertical profile of the trail as necessary to eliminate ponding and slope stabilization to improve soil erosion conditions.

### ***Response to 09-02***

Retrofit of the existing roadways to include bike lanes would require a reduction in the number of lanes for vehicles, or widening of the road. Further, inclusion of bike lanes could result in conflicts between bicyclists and motorists. Based on these considerations, restriping the roadways to include bike lanes was determined to be outside of the scope of the trail rehabilitation.

### ***Response to 10-02***

As described on page 40 of the EA, National Zoo security requires this gate to be closed from dusk to dawn, and on days when the National Zoo holds special events. The gate and its scheduled closure are required in order for the National Zoo to maintain its accreditation by the Association of Zoos and Aquariums (AZA). The AZA standards specify a requirement for a perimeter fence. The fence must be constructed so that it protects the animals in the facility by restricting animals outside the facility and unauthorized persons from going through it or under it and having contact with the animals in the facility, and so that it can function as a secondary containment system for the animals in the

PEPC Correspondence  
Keep Private: Yes  
Date Received: 12/6/12

I use this area of the trail 3-4 times per week to run along and this proposed trail rehabilitation would be a great improvement on a heavily-used pedestrian and bicycle path. As the report details, the trail needs to be widened where possible for increased safety between pedestrians and bicyclists and the current segment from Beach St. up Piney Branch Ave. is treacherous at various points and needs a proper running trail.

11-01

PEPC Correspondence  
Keep Private: Yes  
Date Received: 12/7/11

I'm not opposed to improvements. The flooding on the path can get very bad around the basketball court, but I just hope these upgrades don't take forever to construct. This is an important thoroughfare for many people who work in Georgetown and if the path is closed for an extended period of time, then it could cause a major inconvenience.

12-01

facility (AZA 2013). As a result, leaving the National Zoo gate open was dismissed from the study.

The preferred alternative would widen the path to a four foot width. Due to the constraints of the tunnel, construction of a pathway greater than four feet wide would not be feasible. To enhance safety for trail users within the tunnel, trail user/vehicle separation structures such as railways or bollards would be constructed.

***Response to 11-01***

User safety is a key component of the project. The preferred alternative would include widening, trail user/vehicle separation structures, and roadway crossing safety improvements to promote safety.

***Response to 12-01***

During construction, the preferred alternative would include logical detours around trail segments and road areas under construction. The work would be completed in segments, with no two adjacent segments under construction simultaneously. Construction segments would be .25 to .50 miles in length. In advance of construction periods, trail users and drivers would be notified of closures or detours. Notifications could include electronic signage, postings to the Rock Creek Park and DDOT websites and social network pages, and email blasts to interested parties identified during the planning process.

PEPC Correspondence  
Keep Private: No  
Name: Jeffrey D. Kohn  
Address: 7391 Buffalo Ave., Takoma Park MD, 20912  
Email: jeffandsue@rcn.com  
Date Received: 12/9/11

I live in Takoma Park and commute via bike as often as I can to downtown, to constitution and 14th. While it is more direct to bike directly down 14th street, the bike lane is dangerous when you pass through columbia heights with it's crazy traffic and the bike lane is nonexistent downtown south of K street when I need it the most! Therefore, I go an extra 4 miles in my commute to travel through Rock Creek Park. It is far safer, with fewer opportunities to interact with car traffic. However, I don't enjoy the commute ~~right now~~.

- 1. The trail is so pock-marked that I can't comfortably ride. 13-01
- 2. Riding down piney branch parkway is difficult and often dangerous because I have to ride on the road and traffic has to get around me. The small bit of paved trail is too discontinuous to want to use for the 30 seconds that it exists. 13-02
- 3. The bridge just south of the zoo tunnel is impossible to navigate for more than 1 person at a time. 13-03
- 4. The trail is too narrow at times to accommodate runners, walkers, and bikers. This is especially true of the zoo area. (I also agree with the report's issue with sight lines, but I manage this by going very slowly at key points in the trail.)

Alternative 1 is wrong wrong wrong. Even if you improve the smoothness of the trail, you only solve one of my pressing problems and I will still have a stressful commute. I am utterly against alternative 1 and I will fight hard to change the NPS minds if it goes through, including by getting my congressional members involved.

Alternative 2 is a massive improvement. It solves my issue with Piney Branch Parkway and the bridge over the water south of the zoo tunnel. However, it would not help with the multiple uses the trail sees and I have seen frustrated bikers use the road because they don't feel comfortable sharing the narrow trail. As I said before, this is most prevalent in the range of the zoo, but also from woodley south to P st.

I agree with the EA authors that Alternative 3 is the most people and environment friendly. It would transform our beautiful park into a destination for people to enjoy nature. Walkers would not need to be as constantly vigilant of bikers and runners. It would serve the park well for many years. 8 million seems like a lot, but given the possible ramifications and the additional number of people that I'm sure will flock to the new facilities, it doesn't seem like that much when viewed from a per capita utility basis.

Thanks and I hope you are able to get started very soon. The current trail is in really sad shape and I would love to continue to use it again very soon!

Jeff Kohn

### ***Response to 13-01 and 13-03***

The preferred alternative involves the resurfacing of the trail, which would result in a smoother riding surface for users. Proposed rehabilitation of the trail would include widening of the Piney Branch Parkway trail to 6- to 8-foot widths, and widening of the Rock Creek Park Multi-Use Trail to 6 to 10 foot widths, depending on environmental and physical constraints.

### ***Response to 13-02***

The preferred alternative includes a new bridge to accommodate trail users. As described on page 29 of the EA, the proposed structure would allow for a 10-foot trail clearance and would be constructed within 5 feet of the existing bridge abutment.

PEPC Correspondence  
Keep Private: Yes  
Date Received: 12/14/11

It is very good to learn that this work on the Rock Creek Park trail may soon actually begin after years and years of discussion as the trail disintegrates and its use increases exponentially.

Your website on which this response appears lacks both the entire environmental impact report describing exactly what is to be done and a map, so I cannot comment on the details of the proposed work.

14-01

However, the ENTIRE trail on which I bike from Nevada Avenue to the Watergate needs work. It is dangerously narrow, the surface is rough, pitted and the edges often crumble and it is too winding with blind curves.

14-02

But the two most dangerous parts of the trail which I use are (1) the one mile stretch from Nevada Avenue to Pierce Mill, where trail users and cars use the same narrow, curving roadway which lacks shoulders, and (2) the bridge over Rock Creek just south of the Zoo which bikes must cross on a very narrow sidewalk.

14-03

I look forward to a rapid beginning of the work to be done.

### ***Response to 14-01***

The EA can be found on the NPS Planning, Environment, and Public Comment website found here:

<http://parkplanning.nps.gov/RockCreekTrailRehab>

Once at the site, click the "Document List" link on the left side of the page under "Project Links". Several downloadable documents are provided including project mapping and a copy of the EA.

### ***Response to 14-02***

Trail rehabilitation design will be developed in accordance with standards provided in DDOT's *Bicycle Facility Design Guide*. Additional design guidance will be provided by AASHTO's *Guideline for the Development of Bicycle Facilities* and the Americans with Disabilities Act. To the extent feasible, the trail will be designed to avoid right angles and blind corners while protecting the Park's environmental resources.

### ***Response to 14-03***

As described in Chapter 1 of the EA, the NEPA process involves public agency involvement early in the project development to identify the scope of issues to be addressed and the project area. Based on the early coordination and public outreach, trail segments north of the intersection of Broad Branch Road and Beach Drive were determined to be outside of the scope of the trail rehabilitation. From Peirce Mill to Broad Branch Road, the existing trail would be widened from 6- to 10 feet based on physical and environmental constraints. Also, a social trail between the Peirce Mill parking area and the Broad Branch/Grove 2 North parking area would be paved. Just south of the zoo, a new bridge is proposed which would accommodate trail users. As described on page 29 of the





ENVIRONMENTAL ASSESSMENT AND SECTION 106 EVALUATION  
PUBLIC HEARING – MEETING #2  
DECEMBER 14, 2011

COMMENT FORM

Thank you for participating in tonight's meeting. The project team value your feedback in planning the Rock Creek Trail Rehabilitation, and would like to capture as much of your input as possible. Please write your comments and questions below, and leave your form in the comment box. You can also submit comments electronically at the National Park Service's Planning, Environment, and Public Comment website (<http://parkplanning.nps.gov/RockCreekTrailRehab>).

I am encouraged that NPS is finally looking at widening Rock Creek Park Trail and paths into the park. The trail is heavily used and is much too narrow for the volume of cyclists, runners, walkers, etc who use the trail. To ~~deally~~ <sup>avoid</sup> the trail would be 10 ft wide, would impinge on the roadway (effectively a super highway for commuters) where more real-estate is needed. Nonetheless, even getting NPS to talk about widening the trail is far more than we've gotten out of NPS for decades. Widen as much as possible wherever you can. Maintain the trail. Design the trail to avoid the right angles and blind corners. my preference w/ proposed alternatives  
Alternative 3 repave  
Option B Pierce Mill  
Option C Rose Park

PM-01

PM-02

EA, the proposed structure would allow for a 10-foot trail clearance and would be constructed within 5 feet of the existing bridge abutment.

**Response to PM-01**

Thank you for your interest and response. Your comments will be included as part of the public record for the project.

**Response to PM-02**

Trail rehabilitation design will be developed in accordance with standards provided in DDOT's *Bicycle Facility Design Guide*. Additional design guidance will be provided by AASHTO's *Guideline for the Development of Bicycle Facilities* and the Americans with Disabilities Act. To the extent feasible, the trail will be designed to avoid right angles and blind corners while protecting the Park's environmental resources.

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Rock Creek Park Trail Rehab. Meeting 12-14-2011

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1 P R O C E E D I N G S

2 MS. CASEY: Good evening. My name is Austina  
3 Casey and this is the meeting on the Rock Creek Park  
4 Multi-Use Rehabilitation and we're also doing a Section  
5 106 evaluation as part of the EA. So when you comment,  
6 please make sure you comment on that as well.

7 The purpose of tonight's meeting is to give  
8 you an opportunity to comment on the proposed action  
9 and the alternatives that are in the EA, as well as the  
10 Section 106 evaluation that's also present in the EA.

11 This evening's meeting is presented in two  
12 parts, where we first have an Open House. Hopefully  
13 you've had the chance to look at the boards that talk  
14 about or describes the alternatives, our purpose and  
15 our need for the project and it kind of guides you  
16 through what you would find in the EA.

17 The EA was released on December 2nd. So if  
18 you haven't had a chance to get a copy of it, it's on  
19 the website that's listed on the paper. After my  
20 presentation, we will have the formal comment period.  
21 If you want to leave a comment in front of everyone,  
22 then please make sure you register at the front desk.

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1 Everybody's comment is limited to two minutes.

2           If you don't feel comfortable commenting on  
3 the mic tonight, there are several other ways to  
4 comment. You can fill out a form. I believe we have  
5 some out front. You can visit the website and post  
6 comments there. You can talk to the court reporter who  
7 is out in the hallway, or you can mail your comment to  
8 our offices.

9           The comment period ends on January 13, 2012.  
10 If anyone received the EA, we made a slight error in  
11 the date, but I'm sure everybody understood what we  
12 were trying to say. I apologize for that.

13           Let me give you some project background. The  
14 reason why we're going through this NEPA process is  
15 because the construction, the EA, and the design will  
16 be federally funded. NPS and FHWA are the federal  
17 agencies, lead agencies that are proposing to  
18 rehabilitate the Rock Creek Park Multi-Use Trail.

19           The project area involves 3.7-mile segment of  
20 the Rock Creek Park Multi-Use Trail from Broad Branch  
21 Road to P Street in Northwest, and .8-mile segment of  
22 Piney Branch Parkway trail from Beach Drive to Arkansas

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1 Avenue, Northwest; .2 section of a social trail from  
2 Broad Branch Road to Peirce Mill, which we are  
3 referring to as the Peirce Mill Trail Spur in the EA,  
4 and then, of course, .5 segment of the trail from P  
5 Street to M Street, Northwest.

6           The proposed action includes resurfacing,  
7 trail widening, where it will be environmentally  
8 feasible; modification to the trail alignment and road  
9 crossings. We will put up a directional and  
10 interpretive signage and have connections to and from  
11 the trails for pedestrians and bicycle facilities in  
12 the area.

13           The majority of the proposed improvement is  
14 located on NPS's land, and that's why they're one of  
15 the lead agencies that's playing a big part of it.  
16 There will be some improvement within DDOT's right-of-  
17 way. A segment of the trail also passes through the  
18 National Zoo, for those of you who are familiar with  
19 it.

20           The purpose of the trail is to improve the  
21 overall condition and connectivity of the deteriorating  
22 Rock Creek trail in order to enhance visitor use and

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1 the experience within Rock Creek Park. The purpose of  
2 project is to address the specific issues, including  
3 safety, as some of the trails current width may not  
4 meet certain safety standards. The issues that created  
5 the need for this project were soil compaction and  
6 erosion and vegetation damage in the area, because of  
7 deterioration of pavement along the social trails that  
8 have been formed as well.

9           Also, we wanted to make sure that we have  
10 consistent connectivity; pavement gaps to be repaired  
11 and the lack of access to Rock Creek Park was the  
12 determining factor for the system that we're trying to  
13 achieve. Also, we want to improve visitor use and  
14 experience. We want to support the current diverse  
15 users that are currently using the trail, including  
16 walkers, runners, and bicyclists so that they can  
17 continue to enjoy the trail and not stop using it.

18           This is where we are in the NEPA process. We  
19 initiated the project. Another slide will give you  
20 some dates linked to these, but basically we've gone  
21 through all of that and right now we are at the public  
22 review of the EA.

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1           Again, the comment period ends January 13,  
2 2012. So as much as you can, provide us with feedback  
3 on what you think of the assessment in the EA to make a  
4 final documentation. We would really appreciate that.  
5 If nothing major comes up, no significant impacts, then  
6 we will produce a finding of No Significant Impact, in  
7 addition to the final EA.

8           As I mentioned before, we're also doing a  
9 Section 106 evaluation as part of this, under the  
10 requirement of the National Historic Preservation Act.  
11 We consulted with D.C. HPO on October 19th. We got a  
12 concurrent with a finding of no adverse affect, which  
13 is also the assessment -- it's in the appendix in the  
14 EA. So that's the document. If you want to comment on  
15 Section 106, that's the document you want to focus on.

16           Archeological surveys will be conducted in  
17 all areas of disturbance that have not been previously  
18 surveyed as we go through the construction. Consulting  
19 parties, which we've sent letters to -- or if any of  
20 you are here, if you wish to comment on the finding of  
21 no adverse affect, you can do so.

22           In the EA, these were the alternatives and

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1 options that we analyzed. For the Rock Creek Multi-Use  
2 Trail, we looked at no action, which is a requirement  
3 for NEPA. Alternative 2 was resurfacing the trail.  
4 Alternative 3 was resurfacing the trail and widening in  
5 parts where it's needed.

6 For the Peirce Mill Spur option, we looked at  
7 two options: no action and widening two eight-foot  
8 paved trails. For the Rose Park Trail option, we  
9 looked at three: no action, six feet or eight feet.  
10 We also looked at alternatives, but because of several  
11 reasons, as discussed in the EA, they were dismissed  
12 right off the bat. They didn't go through the entire  
13 analysis, and these include making a continuous 10-foot  
14 trail throughout the Rock Creek Park trail. This was  
15 dismissed because of resource impact. There would be  
16 areas where there would be a tree, and we didn't want  
17 to have to cut down a tree to get a 10-foot trail going  
18 through.

19 We also looked a continuous eight-foot paved  
20 trail with two feet of soft shoulders. Again, that was  
21 dismissed for the same reason. We looked at  
22 rehabilitating Rose Park trail to its current width,

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1 which we dismissed that because of the narrowness of  
2 that trail. Also, when you go out and look at the  
3 trail, you can see that because of its current width,  
4 people would have to use the side of it and kind of  
5 compact the side of it. So it seemed that some things  
6 had to be wider than some areas.

7           Also, from comments that came in on the draft  
8 -- I'm sorry. -- during the public scoping period back  
9 in February, a lot of commenters voiced a concern about  
10 going through the zoo and was asking if we could have  
11 the zoo gate opened at all times so that they wouldn't  
12 have to have that closed off. In speaking to zoo  
13 personnel, we found out that we couldn't look at that  
14 option. So because of safety reasons concerning the  
15 animals, they have a certain level of protection they  
16 have to adhere to.

17           Another thing we looked at was Beach Drive  
18 Bridge over Rock Creek. We were looking at putting a  
19 (inaudible) to expand the width for the trail of that  
20 bridge, but because of the structural integrity of  
21 drilling into the bridge; we didn't know if that would  
22 -- we were concerned about the safety of the bridge if

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10

1 we go through that. So we came up with another  
2 alternative, which we discussed in the EA.

3 UNIDENTIFIED SPEAKER: Can I just ask? Which  
4 location of that bridge are you talking about?

5 Beach Drive crosses the creek in a number of  
6 places.

7 MR. WISER: Just south of the zoo tunnel.

8 MS. CASEY: Yeah. Thanks. Of course, we  
9 looked at other options that had to deal with the main  
10 connection, like curb streets, lighting options,  
11 bicycle parking. I mean, bicycle parking is not really  
12 a dismissed option because, you know, it's always  
13 available and we will always make sure we have parking  
14 available for bicycles, but it didn't require a  
15 detailed analysis in the EA. So that's why we had that  
16 on there.

17 We had a list of options that were common to  
18 all alternatives, regardless of the -- the build  
19 alternative, not the no action alternative. So  
20 regardless of which ones are chosen, we will still do  
21 these, and that includes several new connections and  
22 several spot improvements, including separating trail-

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1 users and vehicles, roadway crossing safety improvement  
2 and drainage and slope stabilization, et cetera. Those  
3 things were underlying issues that regardless of what  
4 we do, we need to do those in order to fulfill the  
5 trail sustainability, I guess.

6           In discussions with NPS and FHWA, the third  
7 alternative that we came up with in the EA for the  
8 trail was Alternative 3, which includes resurfacing and  
9 widening where appropriate. We will go from a minimum  
10 of six feet in certain places to 10 feet in others.  
11 Piney Branch Trail will be resurfaced from six to eight  
12 feet.

13           For Peirce Mill, we went with Option B.  
14 Right now we have eight to 10 feet of what we're  
15 calling social trail issues where the soil has been  
16 compacted and people just naturally use at this point.  
17 Our plan is to go to eight feet for that trail.

18           For the Rose Park option, the existing  
19 condition of the trail between P Street and M Street  
20 are narrow, five to six feet. In some cases they were  
21 less than five feet. So we decided, as I mentioned  
22 earlier, it has compacted soil. It shows that people

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1 have been using it in order to pass or for whatever  
2 reason. It has been compacted six feet. So we're  
3 going to that width for that trail.

4 In the EA, these were the topics we analyzed.  
5 Of course, we looked at soil, water quality, the three  
6 Section 106 topics there: historical  
7 structures in district, cultural landscaping and  
8 archeology. We looked at human health and safety, park  
9 operations and of course, traffic and transportation.  
10 There's a board out there that kind of summarizes what  
11 the impacts are and they are detailed, obviously, in  
12 the EA. We welcome your comments on all of those.

13 The next step, as I said, this slide has the  
14 dates. As you can see it's been over a year we've been  
15 working on this and we are happy to be at this point.  
16 We are very close to completing the NEPA process. So  
17 with the public hearing today, we hope to get all of  
18 your comments in by January 13th and then we will  
19 incorporate them. If we need to reevaluate our  
20 analysis based on major revelations, then we will do  
21 so, but we hope to have, you know, if we don't have  
22 anything, if there are no major issues that come up, we

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1 will then release -- well, we hope that Federal Highway  
2 and NPS will agree to a finding of no significant  
3 impact. The federal agencies have then look at the  
4 final analysis and all of the comments that have come  
5 in and then make that determination. DDOT will then  
6 publish that. We're hoping to do that in early 2012.  
7 So we appreciate you getting in your comments to  
8 facilitate that.

9           Well, that's it. I guess we can begin the  
10 comment section. John is going to give some ground  
11 rules and then we'll start. Thank you.

12           MR. WISER: Thank you, Austina. Just one  
13 point of clarification -- and Tina, correct me if I'm  
14 wrong -- this is a hybrid process, working with Federal  
15 Highway and the National Park Service. The next  
16 document will be a finding of no significant impact,  
17 which will address your comments. Hopefully, we're  
18 going to do a final EA. The typical process -- because  
19 this is a joint effort, the document was actually  
20 prepared in both Federal Highway and Park Service  
21 formats. I just want a point of clarification.

22           MS. CASEY: Yes, that's correct.

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1 MS. WISER: Okay. At this point, we're going  
2 to start our public comment session. I'm just going to  
3 explain some ground rules.

4 First off, with the mics, you got to get real  
5 close to them to be able to hear. Prior to the start  
6 of the oral comment period for the hearing, DDOT would  
7 like to review some general guidelines for the conduct  
8 at the hearing.

9 We want to emphasize that the public hearing  
10 is an opportunity for the public to provide oral  
11 comments about the project, the environmental  
12 assessment, which will aide our project team, both the  
13 Park Service that's here tonight, Federal Highway and  
14 DDOT in the planning process of this project.

15 I'm going to explain how it works. All  
16 individuals who wish to speak have registered, using  
17 the sheet that was made available at the welcome  
18 station. If you would now like to speak and you  
19 haven't signed up, we can sign you up.

20 Each speaker will be allowed two minutes to  
21 state their views and ideas about the project. I'll  
22 give you a little heads-up when you have 10 seconds

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1 left so you can close. Speakers should come to the  
2 microphone to speak. Speakers are requested to speak  
3 into the microphone and give your name and address  
4 before giving your comment. Please keep your comments  
5 short and avoid repetition of what other speakers have  
6 said. Each individual may speak only once at the  
7 hearing.

8           DDOT will take all comments into  
9 consideration in the next part of this process, which  
10 is developing the finding of no adverse affect, if  
11 that's applicable. Typically, the response to comments  
12 is provided in that document. DDOT will accept  
13 comments in writing as well, up until the end of the  
14 comment period.

15           General rules for the conduct of the hearing,  
16 please be considerate to your fellow speakers. There  
17 should be no applause, booing or other audible  
18 disruptions during the hearing. All comments should be  
19 directed to DDOT and Federal Highway, not to the  
20 audience or an individual. Note that this is a public  
21 hearing and not a debate.

22           Lastly, DDOT will not tolerate personal

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1 attacks by anyone or any participants in the  
2 proceedings. Anyone who violates that guideline will  
3 be asked to leave.

4 With that said, we'd like to thank you for  
5 taking the time to come here tonight, providing us with  
6 your comments because it does help us in developing the  
7 best project we can.

8 I'm going to call an individual down to make  
9 their comment. We do have a clock up here with the two  
10 minutes. Please speak directly into the microphone.

11 The first commenter is Shalom Flank.

12 MR. FLANK: Good evening. I'm Shalom Flank.  
13 I live in Woodley Park. I thank you for an excellent  
14 job on the draft EA. It's thorough and professional.  
15 I strongly support the finding of no significant impact  
16 in the Section 106, no adverse affect.

17 I strongly support Alternative 3, including  
18 the occasional narrowing of the trail to avoid cutting

19 down the trees. I would ask again that you look at a  
20 staircase from the Harvard Street Bridge. I support

21 Option A for the Peirce Mill Trail Spur, and Option B  
22 or C for Rose Park.

PM-  
03

***Response to PM-03***

Construction of a Harvard Street Bridge staircase could result in adverse impacts to soils and vegetation, historic structures, cultural landscapes, aesthetics and viewsheds. In addition, the proposed staircase could require mitigative measures to attain ADA compliance. Based on these considerations, construction of the staircase was determined to be outside of the scope of the trail rehabilitation.

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1 Rose Park, which I think is a very minor part  
2 of this wonderful project, I would suggest that one way  
3 to reduce the conflict between different kinds of users  
4 is to make it easier for cyclists to access the main  
5 Rock Creek trail to the south of Rose Park, not just  
6 connections to M Street, but all the way across  
7 Pennsylvania Avenue to the entrance to the trail. I  
8 believe that that can be done with dedicated bicycle  
9 signals that would not add any new cycle stopping  
10 traffic on M or Pennsylvania if the timing is  
11 coordinated with the existing traffic lights; some new  
12 curb cuts and painted lines and those dedicated traffic  
13 signals, would make it much easier for cyclists to  
14 enter the main trail and not have to use the Rose Park  
15 Spur as much. Thank you.

PM-  
04

16 MR. WISER: Thank you. Jeanie Osburn.

17 MS. OSBURN: My name is Jeanie Osburn. I  
18 live at 207 S Street, Northwest, which is in Ward 5. I  
19 am on the D.C. Bicycle Advisory Council, as a  
20 representative from Ward 5, and I'm also the Chair of  
21 the Facilities Committee for D.C. Bicycle Advisory  
22 Council. I would like to say that I really appreciate

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***Response to PM-04***

As described in Chapter 1 of the EA, the NEPA process involves public agency involvement early in the project development to identify the scope of issues to be addressed and project area. Based on the early coordination and public outreach, new connections to the Rock Creek trail south of Rose Park and dedicated bicycle signals were determined to be outside of the scope of the trail rehabilitation.



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1 DDOT and the Park Service working together to improve  
2 the conditions of the trail. We've long-needed a  
3 better access to the Rock Creek Park trail. We've  
4 needed the trails to be improved, widened and  
5 maintained appropriately so that people can enjoy and  
6 use it.

7 I would encourage the Park Service and DDOT  
8 to widen, wherever possible. I'm thoroughly delighted  
9 about it being 10-feet wide, wherever possible. I  
10 would encourage Alternative 3, obviously. I would  
11 encourage you to use Option B for the Peirce Mill  
12 trail, which is the eight-foot wide trail, and I would  
13 encourage Option C for Rose Park.

14 Again, it's a long time coming for widening  
15 the trail and the bicycle community is very, very  
16 delighted to be able to use the park safely and get rid  
17 of a lot of those kinks and 90-degree angles and blind  
18 curves and things like that. This way we can ride  
19 safely and enjoy nature with everyone else. Thank you.

20 MR. WISER: Doug Guarino. Is that right?

21 MR. GUARINO: It was pretty close. My name  
22 is Doug Guarino. I've lived in Mount Pleasant for

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1 about five and a half years. I frequently use the bike  
2 trail, both to commute to my office in Arlington and  
3 also for exercise.

4 I am particularly appreciative of how  
5 important some of these safety improvements are, as I  
6 unfortunately spent some time in the hospital as a  
7 result of a bike accident that occurred on the trail.  
8 I just wanted to quickly point out a few things that I  
9 think are particularly important.

10 First, the general widening and resurfacing  
11 of the trail is just really important, particularly  
12 during the evening rush when you have a lot of two-way  
13 traffic with bikers and runners, you know, there have  
14 been a lot of really rough spots with the trail being  
15 narrow. It can be very difficult to avoid collisions  
16 and obstacles with other people.

PM-  
05

17 The issue with the zoo gate and the Beach  
18 Drive Tunnel, it is true that the current path for  
19 cyclists and pedestrians through the tunnel when the  
20 zoo is closed is really dangerously narrow and the plan  
21 to widen that and to create some sort of a barrier  
22 between the cars and bikes/pedestrians should be really

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***Response to PM-05***

Trail usage was a consideration during planning phases for rehabilitation of the trail. Proposed trail widths were established based on trail criteria established by AASHTO, DDOT and NPS, analysis of public comments, and physical and environmental constraints.

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20

1 good.

2 Related to that, just south of there, the

3 Beach Drive Bridge over Rock Creek that was mentioned

4 earlier, I find this to be probably one of the most

5 dangerous points on the path. If you're coming

6 southbound through the zoo property, you have to make

7 this really sharp right-hand turn onto this very narrow

8 sidewalk/ledge, if you want to call it. Basically, if

9 you make one false move, you're going to end up falling

10 into the road, which is very busy with traffic during

11 rush hour. So basically, you can get run over by a

12 car. This problem is further exacerbated by the fact

13 that in that area it's very difficult to both see other

14 people coming at you and --

15 MR. WISER: Ten seconds.

16 MR. GUARINO: -- to pass them. Some people

17 are courteous and just wait for people to pass, but

18 others will just force and push you out of the way.

19 In short, the proposed construction of the

20 separate bridge for bikes and pedestrians would really

21 be a great addition. Thanks.

22 MR. WISER: Thank you. David Abrahams.

PM-  
06

***Response to PM-06***

The preferred alternative includes a new bridge to accommodate trail users. As described on page 29 of the EA, the proposed structure would be 12 feet wide, allowing for a 10-foot trail clearance. In addition, the amount of paved areas at the southbound end of the Beach Drive tunnel would be expanded to tie into the new bridge.

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1 MR. ABRAHAMS: Hi. Good evening. My name is  
2 David Abrahams. I live at 1410 26th Street, Northwest.  
3 I'm here tonight representing Friends of Rose Park, a  
4 501(c)(3) tax-exempt organization, recognized by our  
5 ANC 2E as the official community representative for  
6 issues of concern to the park. I'm here to address  
7 only issues related to the Rose Park portion of this  
8 project.

9 We will be submitting extensive written  
10 comment in regard to Rose Park Options B and C  
11 presented in the EA. I wanted to point out tonight  
12 three glaring points where the areas of health and  
13 human safety and vegetation are involved. The authors  
14 of the EA do not address the issues of critical  
15 importance which results in the EA's failure to measure  
16 up to NEPA.

17 First, the EA neglects the fact that one-  
18 third of the path directly abuts three distinct  
19 playground areas. Hundreds of toddlers and small  
20 children a week travel between these three play areas.  
21 If the EA fails to address the real safety issue that  
22 widening the path to six or eight feet will

PM-  
07

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**Response to PM-07**

For further clarification on potential conflicts between pedestrians and bicyclists, a synopsis of *Multiple Use Trails: Synthesis of the Literature and State of the Practice* was added to the human health and safety analysis in Chapter 4 of the EA. Under the preferred alternative, trail widths in Rose Park would generally remain the same, with zero to two-foot increases. The new trail surface could further promote use of the trail. However, the added use would not have a noticeable increase in the risk of unsafe conflicts for trail users, and any added risk would be offset by the improved trail conditions.

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1 dramatically increase the speed and resulting negligent  
2 operation of bicycles raising their newly created  
3 super-highway, narrowly funneled through these three  
4 play areas. This omission is glaring because of the  
5 fact that the authors of the EA received numerous  
6 written comments regarding this safety issue.

PM-07

7 Second, there is a venerable old oak tree  
8 cited in the Dumbarton Street tot lot, directly  
9 abutting the path. Although the EA specifically states  
10 that no tree will be disturbed, there's no mention as  
11 to how the root system of this one tree will be safe  
12 from damage.

PM-08

13 Third, significant water pooling and flooding  
14 occurs in three areas of the path and it is not  
15 mentioned at all in the EA. We look forward to  
16 reviewing a revised version of the EA which  
17 incorporates these legitimate safety issues. We also  
18 look forward to NPS keeping the written promises made  
19 to the neighborhood by Director Stanton and for former  
20 Superintendent Coleman that the path will remain in its  
21 current location and at its current width. Thank you.

PM-09

22 MR. WISER: Harold Fuller-Bennett.

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**Response to PM-08**

As stated on page 38 and within Chapter 4 of the Final EA, protection measures and BMPs would be implemented to avoid impacts to all types of park vegetation to the extent possible. Vegetation protection measures for the oak tree near the Dumbarton Street playground area may include development of a tree save plan by an arborist or licensed tree expert, or installation of tree protection fencing. Impacts to the tree's root system would be avoided to the extent possible. If necessary, alternative trail materials and/or narrowing of the trail would be utilized to preserve the tree's roots.

**Response to PM-09**

Based on comments received from the Friends of Rose Park and others, the project team conducted several field visits to evaluate drainage concerns at Rose Park and other locations in the project area. During the detailed design phase of the project, flood prone areas would be addressed. Although flood prone areas were not specifically noted in the EA, it is a purpose of the project to install more effective drainage and erosion control. Drainage designs throughout the project would be prepared in coordination with DDOE and in accordance with DDOT Design Manual requirements.

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1 MR. FULLER-BENNETT: Hello. My name is  
2 Harold Fuller-Bennett. I live at 2456 28th Street,  
3 Northwest, right next to the Duke Ellington Bridge that  
4 goes over Rock Creek in the Rock Creek Trail.

5 I'm in full support of the preferred  
6 alternative. As a resident of D.C. and a frequent user  
7 of the trail, I have often been frustrated by the poor  
8 condition and narrow track of the trail. Due to its  
9 location, it has the potential to be a major corridor  
10 for both recreation and travel by bicycle or on foot,  
11 and it simply does not serve that purpose right now.

12 The widening and resurfacing of the Rock  
13 Creek Trail is an excellent idea. Thank you to all  
14 involved.

15 MR. WISER: Thank you. Was there anybody  
16 else who did not sign up that hasn't already come to  
17 the podium to make a comment that wanted to speak?

18 Okay. Well, that concludes the comment  
19 session. Tina, do you want to say a few closing  
20 remarks?

21 MS. CASEY: I guess we can stick around until  
22 8:00 since we have it advertised, in order to give

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1 people an opportunity to come in and make comments if  
2 they wish.

3           Again, if anyone who has not had a chance to  
4 speak and wants to do so or want to leave a written  
5 comment, you know, every comment or insight you have is  
6 welcomed and appreciated. As I shared before, this is  
7 a process we've been through and our next step is to  
8 hopefully get a FONSI, and then that would conclude the  
9 NEPA process.

10           Again, thank you for coming. We will keep  
11 you informed. We'll have the information on the  
12 website for you to review.

13                       (Whereupon, at 7:04 p.m., the  
14                       proceedings were concluded.)

15  
16  
17  
18  
19  
20  
21  
22

PEPC Correspondence  
Keep Private: No  
Name: Philip L. McClain  
Address: 1728 Poplar Lane, NW Washington DC, 20012  
Email: pmclain@starpower.net  
Date Received: 12/17/11

I was very glad to learn that the much needed repairs and upgrades to this section or trail is, hopefully, to become reality. Since I have used this area of trails from 1974, the maintenance has been steady looking. It would be good to have an ONGOING maintenance to our trails in RCP after initial construction projects have been completed.

15-01

Thank you,  
Philip McClain

PEPC Correspondence  
Keep Private: No  
Name: Roberta Carroll  
Address: 3514 Yuma St., NW Washington DC, 20008  
Email: carrollbb@verizon.net  
Date Received: 12/19/11

On Page 29 you refer to a "restoration of the Klingle Valley Trail" which is completely wrong. There is a road, called Klingle Road, that has been open for over 100 years and has never been a trail. It remains to be decided if DC will waste 7 million dollars on a proposed trail or rebuild the road. Either way trucks and emergency vehicles will be using it, so to call it a trail is not accurate. You need to change the language on this page and call it a road that bikes will use.

16-01

***Response to 15-01***

Long-term maintenance of the trail will be conducted by NPS. Rehabilitation of the trail would address current and future maintenance needs such as trail patching and sediment and debris removal.

***Response to 16-01***

A Finding of No Significant Impact (FONSI) for the construction of a multi-use trail facility within the barricaded portion of Klingle Road was published in 2011. The Klingle Valley Trail project would create connectivity in the District of Columbia trail network by connecting Rock Creek Trail to the Klingle Valley Trail.



RECEIVED DEC 23 2011

Barbara L. Bryant  
1530 26<sup>th</sup> Street, NW  
Washington, D.C. 20007  
202-316-5521  
BryantandAssociates@Juno.com

December 19, 2011

Mr. Terry Bellamy  
Director, DC Department of Transportation  
55 M Street, S.E., Suite 500  
Washington, D.C. 20003

Dear Director Bellamy:

I am a 37 year resident of the District of Columbia, residing in the neighborhood adjacent to Rose Park. Rose Park is one of our city's treasures. Its usage is primarily for quiet enjoyment and foot traffic; i.e., children, families, downtown workers, and the elderly, for relaxation and the opportunity to walk safely, away from traffic and hazards, in an arcadian, serene environment.

Today, I am writing to you to plead for this pleasant bucolic scene to continue and express my support for the position taken for more than a decade by Friends of Rose Park: Keep the pedestrian path; which runs the length of Rose Park, at its current width and in its current location.

For many years, our neighborhood has been promised by the National Park Service, that the path through Rose Park would be rehabilitated; remain in its current location; and, at its current width. My utmost concern is that a wider path will result in danger and a safety hazard to the many little children and toddlers who travel between the Park's several play areas; and to elderly citizens such as me; who walk along its path at any given time.

17-01

The initial draft of the Environmental Assessment; issued by DDOT and FHA, fails to address the major safety issues to pedestrians, should the path be widened to 6 or 8 feet. Please know how difficult it is for me, and others who walk slowly, to react quickly. We simply cannot get out of the way fast enough for the bike riders.

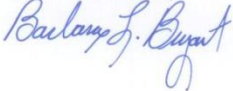
17-02

My strong interest and concern is also for the vegetation, beautiful plantings, tree root systems and ground cover throughout the Park which would be limited in receiving adequate rainwater and groundwater seepage (as it all does now), should a larger area of bare ground become covered by a non-permeable, asphaltic surface.

17-03

Respectfully, I request you to please not place any additional pavement and destroy what little green space we have in the city. Please consider the safety, well being and enjoyment we have been promised and maintain the pathway at its current location and width.

Respectfully submitted,



### **Response to 17-01 and 17-02**

Original correspondence with the NPS indicated the trail would not be widened. NPS also stated the use of the trail would not be restricted. Subsequently, NPS and DDOT determined that trail widening was necessary based on field observation and trail counts in order to accommodate all users. As a compromise, NPS and DDOT decided an approximate zero to two-foot widening of the trail would resolve concerns. The current, narrow width of the trail has caused ponding issues and has forced users from the trail, trampling the vegetation along the path. A wider trail will accommodate the multiple user types of the path in a safe manner. In a letter dated August 24, 2011, NPS selected Rose Park Option B (six-foot resurfaced trail).

The preferred alternative for the project has been determined to have a net benefit on human health and safety, based on the repair and rehabilitation of trails and other proposed improvements. Rose Park Trail Option B, described on page 34 of the EA, details the resurfacing of the Rose Park trail along its current alignment. Rehabilitation of the trail at its current width was dismissed in section 2.8.3 of the EA. Trail widening and a smoother surface could further promote use of the Rose Park trail. However, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added and raise safety awareness. To address potential conflict between trail users and park users in the Rose Park area, additional analysis was added to the EA under Human Health and Safety in Chapter 4.

### **Response to 17-03**

Measures to protect vegetation throughout the entire project area including Rose Park are described on page 38 of the EA and include

From: sflank@gmail.com [mailto:sflank@gmail.com] On Behalf Of S. Flank  
Sent: Monday, December 19, 2011 2:43 PM  
To: HATAMI, Caesar  
Subject: Rock Creek EA

Dear Mr. Hatami,

Thank you for your excellent work on the Rock Creek Trail EA, and for speaking with me at the public hearing last week. As you suggested, I'm passing along a few comments that may be helpful as you wrap up this phase of the project. I will be submitting most of these as public comments, but thought they may be useful for you to have directly. I also still intend to send you the pointers I mentioned, for alternative standards to rely on (other than AASHTO) for designing more bicycle-friendly intersections.

First, in the Shoreham drive area (Fig 14 in the EA): That crossing has already been substantially changed by the current construction project, and more changes are planned. So you may want to talk to the folks there, both to update your drawings or recommendations, and to take advantage of this opportunity to put some of the recommended changes into place essentially immediately. The EA also omitted any discussion of the trail spur onto Cathedral Ave. As with the Broad Branch crossings, a "T" intersection should definitely be avoided. My understanding is that DDOT has added that location to their 2012 list of bike-line additions, so it's all the more urgent to get these pieces coordinated. Finally, there is a nearby spot where significant and ongoing ponding occurs, which I didn't see mentioned in the EA -- as the trail descends Shoreham Hill and crosses the bridge over Rock Creek, maybe another 100 feet downstream (just before the trail becomes immediately adjacent to the Parkway).

18-01

We didn't discuss it at the hearing last week, but a curb cut from Klingle Rd. is clearly needed, right at the bridge where the trail crosses over Rock Creek (the bridge that's pictured on the front cover of the EA). I know you want to avoid getting roped into any debates about the Klingle Valley trail, but the connection from the road to the Rock Creek trail there is obvious, regardless of the eventual Klingle trail design. I was also wondering if the team had given any consideration at all to how cyclists are expected to travel East on Porter St from Cleveland Park and then get onto the Rock Creek trail -- it's currently just about impossible to do both safety and legally. Trying to make the left turn at the bottom of the valley is quite dangerous; whereas the safer route, making the almost-U turn to the right (onto the Klingle Rd. entrance ramp), is against the legal traffic flow.

18-02

18-03

18-04

18-05

Finally, I will try to find you the appropriate references / authorities that would support a better Beach Drive intersection on the north side of Broad Branch, one which doesn't require cyclists to come to do a dead stop in order to continue "straight".

Good luck with completing the EA process, and let me know if there's anything else that would be helpful.

Thanks,  
--Shalom Flank

evaluation of large trees and development of a tree save plan by an arborist or licensed tree expert. Along the Rose Park trail, the proposed zero to two-foot widening would not have appreciable effects on vegetation or ground water seepage. The existing narrow width of the Rose Park trail forces users off the trail, resulting in bare soils. The proposed rehabilitation would provide a more adequate width for users to remain on the trail thereby encouraging growth of ground cover beside the trail.

#### ***Response to 18-01***

Since the Draft EA, crossing improvements were constructed at Shoreham Drive as part of the Beach Drive Road Reconstruction Project. The crossing was realigned to include a single crosswalk, and safety elements were incorporated into the new design. Further improvement of the crossing is no longer proposed under the Rock Creek Multi-Use Trail Rehabilitation.

#### ***Response to 18-02***

This request has been forwarded to the DDOT Bicycle Advisory Council and will be further addressed during the detailed design phase of the project.

#### ***Response to 18-03***

The project team conducted several field visits to evaluate drainage concerns throughout the project area. During the detailed design phase of the project, flood prone areas would be addressed. Although flood prone areas were not specifically noted in the EA, it is a purpose of the project to install more effective drainage and erosion control. Drainage designs throughout the project would be prepared in coordination with DDOE and in accordance with DDOT Design Manual requirements.

December 20, 2011

Dear Folks Who Make Things Happen!

I support the position of the Friends of Rose Park in regard to keeping the pedestrian path in its' same location and width, in order to preserve its' pedestrian nature, for the safety of walkers, runners, and children.

I also agree that it would be much preferable to have a permeable surface. I do think that brick would be more in keeping with Georgetown and the appearance of parks throughout D.C. than asphalt, and much better for trees and plants.


19-01

We fall into the category of elderly frequent users of the path and we do feel that a wider path would create a situation attractive to bikers, in conflict with safe walking for us, and safe use of the play areas for toddlers.

We trust that all entitites will uphold their previous commitment to maintain the current width and location of the path.

Thank you for your attention.

Sincerely,

  
Lois and Dirk Jecklin  
1232 - 27<sup>th</sup> St NW  
Washington DC 20007

Copies: Terry Bellamy, Austina Casey, Joseph Lawson, Tara Morrison, Peter May, Jesus Aguirre, The Hon. Jack Evans, David Abrams

***Response to 18-04 and 18-05***

Page 87 of the EA states, "The Rock Creek Park multi-use trail passes under the Porter Street, NW and Klinge Road, NW ramps. A trail tie-in is proposed at this location as part of the Klinge Valley trail project... the tie-in would connect the Rock Creek Park multi-use trail with a new trail along Klinge Valley and points west." According to the 2011 Klinge Valley Trail FONSI, a six- to eight-foot multi-use trail would be constructed along the south side of Klinge Road and continue along the Porter Street ramp before connecting with the Rock Creek Trail below Porter Street, NW. The connection would be designed to provide safe passageway from Porter Street to the Rock Creek trail.

***Response to 19-01***

As described in Section 2.5.2 of the EA (page 35), trail material selection would be considered during the detailed design phase of the project. For the Rose Park trail, spot improvement areas, and new trail sections the design team will consider the use of pervious materials for the trail surface: but will also need to consider other factors such as safety, trail uses, and long-term maintenance.

Serious Urgent Attention – see attached letter.

KEEP THE ROSE PARK PATH AS IS!

Madam/Sir:

Your proposition is dangerous to everyone in the community and to all people who routinely use this path!

20-01

Marguerite Juengst |

1316 27<sup>th</sup> Street, NW

Washington DC 20007

email: [mjuengst@cbmove.com](mailto:mjuengst@cbmove.com)

***Response to 20-01***

The preferred alternative for the project has been determined to have a net benefit on human health and safety, based on the repair and rehabilitation of trails and other proposed improvements. Rose Park Trail Option B, described on page 34 of the EA, details the resurfacing of the Rose Park trail along its current alignment. Rehabilitation of the trail at its current width was dismissed in section 2.8.3 of the EA.

At Rose Park, the current, narrow width of the trail has caused ponding issues and has forced users from the trail, trampling the vegetation along the path. A wider trail would accommodate the multiple user types of the path in a safer manner. Trail widening and a smoother surface could further promote use of the trail. However, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added and raise safety awareness. In further consideration of pedestrian/bicyclist safety, a synopsis of *Conflicts on Multiple-Use Trails: Synthesis of the Literature and State of the Practice* was added to Chapter 4 of the Final EA under Human Health and Safety.

12/20/11

Mr. Terry Bellamy  
Director, DC Department of Transportation  
55 M Street, S.E., Suite 500  
Washington, D.C. 20003  
[terry.bellamy@dc.gov](mailto:terry.bellamy@dc.gov)

Ms. Austina Casey, Project Manager  
DC Department of Transportation  
Attn: Rock Creek Trail EA  
55 M Street, S.E., Suite 500  
Washington, D.C. 20003  
[austina.casey@dc.gov](mailto:austina.casey@dc.gov)

Mr. Joseph Lawson, Division Administrator  
Federal Highway Administration  
1990 K Street, N.W., Suite 510  
Washington, D.C. 20006  
[christopher.lawson@fhwa.dot.gov](mailto:christopher.lawson@fhwa.dot.gov)

Ms. Tara Morrison, Superintendent  
Rock Creek Park  
3545 Williamsburg Lane, N.W.  
Washington, D.C. 20008  
[tara\\_morrison@nps.gov](mailto:tara_morrison@nps.gov)

Mr. Peter May, Associate Regional Director  
National Park Service  
1100 Ohio Drive, S.W.  
Washington, D.C. 20242  
[peter\\_may@nps.gov](mailto:peter_may@nps.gov)

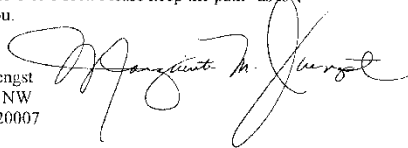
Mr. Jesus Aguirre, Director  
D.C. Dept. of Parks & Recreation  
3149 16<sup>th</sup> Street, N.W.  
Washington, D.C. 20010  
[jesus.aguirre@dc.gov](mailto:jesus.aguirre@dc.gov)

The Honorable Jack Evans  
D.C. City Council  
1350 Pennsylvania Ave., N.W., Suite 106  
Washington, D.C. 20005

Dear Agency Official:

I am writing to you to express my support for the position taken for more than a decade by Friends of Rose Park to keep the pedestrian path which runs through Rose Park at its current width and in its current location. NPS has previously promised our community that the path would be rehabilitated but remain in its current location and at its current width. Any widening of the path will result in danger to the hundreds of small children and toddlers who travel between all of the play areas in the park on a weekly basis, and to the elderly who walk along the path at any given time. In addition, if a larger area of bare ground is covered by a non-permeable, asphalt, surface, the less water is available for planting and natural ground cover. The initial draft of the Environmental Assessment put out by DDOT and FHA fails to address the major safety issues to pedestrians which exist if the path is widened to 6 or 8 feet. Please keep the path "as is", in its current location and at its current width. Thank you.

Sincerely yours,  
Marguerite M. Juengst  
1316 27<sup>th</sup> Street, NW  
Washington DC 20007



21-01

21-02

### **Response to 21-01**

Original correspondence with the NPS indicated the trail would not be widened. NPS also stated the use of the trail would not be restricted. Subsequently, NPS and DDOT determined that trail widening was necessary based on field observation and trail counts in order to accommodate all users. As a compromise, NPS and DDOT decided an approximate zero to two-foot widening of the trail would resolve concerns. The current, narrow width of the trail has caused ponding issues and has forced users from the trail, trampling the vegetation along the path. A wider trail will accommodate the multiple user types of the path in a safe manner. In a letter dated August 24, 2011, NPS selected Rose Park Option B (six-foot resurfaced trail).

The preferred alternative for the project has been determined to have a net benefit on human health and safety, based on the repair and rehabilitation of trails and other proposed improvements. Rose Park Trail Option B, described on page 34 of the EA, details the resurfacing of the Rose Park trail along its current alignment. Rehabilitation of the trail at its current width was dismissed in section 2.8.3 of the EA. Trail widening and a smoother surface could further promote use of the Rose Park trail. However, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added and raise safety awareness. To address potential conflict between trail users and park users in the Rose Park area, additional analysis was added to the EA under Human Health and Safety in Chapter 4.

### **Response to 21-02**

Measures to protect vegetation throughout the entire project area including Rose Park are described on page 38 of the EA. For the Rose Park trail, the proposed zero to two-foot widening would not have

Thank you for your prompt response. This is an important issue for all citizens, neighborhood residents and visitors to DC who use this path.

We have to be involved. Year after year DOT continues to bring it up! The use has not changed – nor should it be by virtue of making it wider for a continuous caravan of bikes to use it as a short cut! Pedestrians have rights too! Yet DOT continues to harp on the path use against the urgencies of the community! It is a bad idea to broaden the path. A dangerous idea. An unfair precedent that all paths should be wide enough for bikes! Use common sense. Senior citizens, small children, adults, and families – (with baby carriages), native citizens and visitors to the city all use this path for pleasure and for a connection to close neighborhoods by walking. Bikes can use the paths that have already been designated for them on Rock Creek Parkway.

**Marguerite Juengst |**

1316 27<sup>th</sup> Street, NW

Washington DC 20007

email: [mjuengst@cbmove.com](mailto:mjuengst@cbmove.com)

22-01

appreciable effects on vegetation or ground water seepage. The existing narrow width of the Rose Park trail forces users off the trail, resulting in bare soils. The proposed rehabilitation would provide a more adequate width for users to remain on the trail thereby encouraging growth of ground cover beside the trail.

#### ***Response to 22-01***

The preferred alternative for the project has been determined to have a net benefit on human health and safety, based on the repair and rehabilitation of trails and other proposed improvements. Rose Park Trail Option B, described on page 34 of the EA, details the resurfacing of the Rose Park trail along its current alignment. Rehabilitation of the trail at its current width was dismissed in section 2.8.3 of the EA.

At Rose Park, the current, narrow width of the trail has caused ponding issues and has forced users from the trail, trampling the vegetation along the path. A wider trail would accommodate the multiple user types of the path in a safer manner. Trail widening and a smoother surface could further promote use of the trail. However, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added and raise safety awareness. In further consideration of pedestrian/bicyclist safety, a synopsis of *Conflicts on Multiple-Use Trails: Synthesis of the Literature and State of the Practice* was added to Chapter 4 of the Final EA under Human Health and Safety.

**From:** nancyflinn@aol.com [mailto:nancyflinn@aol.com]  
**Sent:** Tuesday, December 20, 2011 4:29 PM  
**To:** Bellamy, Terry (DDOT)  
**Subject:** Rose Park Path

Dear Mr. Bellamy:

Several years ago, I was a part of a neighborhood group studying the use of the Rose Park land and pedestrian walkway. For three days, from approximately 8am to 6pm, we counted the number of pedestrians, bicyclers, skate boarders, parents with strollers and little children. The greatest use of the Rose Park pathway was pedestrians (WALKING, presumably to work) in the early and late hours. Also during these early hours, dogs were being walked. During the course of the daytime hours, significant numbers of nannies, mom pushing strollers and many walking youngsters traversing the path between two playgrounds were counted. As well as a small number of runners. Bicyclers and skate boarders comprised the smallest group using the path. This was presumed to be because of the parallel bike, runner path directly below along Rock Creek Parkway.

Based on these findings then, which I believe hold true today, I am writing to express my support to keep the pedestrian path which runs through Rose Park at its current width and in its current location. For those who use this path, including me and many friends and neighbors, it works well. I understand that NPS promised our community that the path would be rehabilitated and/or maintained, but continue to remain in its current location and at its current width. Any widening of the path will result in danger to the hundreds of small children and toddlers who travel between all of the play areas in the park on a weekly basis, and to the elderly who walk along the path at any given time. In addition, if a larger area of bare ground is covered by a non-permeable, asphalt, surface, the less water is available for planting and natural ground cover.

23-01

23-02

The initial draft of the Environmental Assessment put out by DDOT and FHA fails to address the major safety issues to pedestrians which exist if the path is widened to 6 or 8 feet. And it appears to fail to address the actual usage of the path. It works well for those who use it and are a majority. Please keep the path "as is", in its current location, and at its current width. This makes sense and will save taxpayer money.

Thank you.

Sincerely yours,

Nancy Flinn  
2714 1/2 Poplar Street NW  
Washington DC, 20007

### ***Response to 23-01***

The preferred alternative for the project has been determined to have a net benefit on human health and safety, based on the repair and rehabilitation of trails and other proposed improvements. Rose Park Trail Option B, described on page 34 of the EA, details the resurfacing of the Rose Park trail along its current alignment. Rehabilitation of the trail at its current width was dismissed in section 2.8.3 of the EA.

At Rose Park, the current, narrow width of the trail has caused ponding issues and has forced users from the trail, trampling the vegetation along the path. A wider trail would accommodate the multiple user types of the path in a safer manner. Trail widening and a smoother surface could further promote use of the trail. However, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added and raise safety awareness. In further consideration of pedestrian/bicyclist safety, a synopsis of *Conflicts on Multiple-Use Trails: Synthesis of the Literature and State of the Practice* was added to Chapter 4 of the Final EA under Human Health and Safety.

### ***Response to 23-02***

Measures to protect vegetation throughout the entire project area including Rose Park are described on page 38 of the EA. For the Rose Park trail, the proposed zero to two-foot widening would not have appreciable effects on vegetation or ground water seepage. The existing narrow width of the Rose Park trail forces users off the trail, resulting in bare soils. The proposed rehabilitation would provide a more adequate width for users to remain on the trail thereby encouraging growth of ground cover beside the trail.

Dear Ms. Morrison

We are writing to you to express our support for the position taken for more than a decade by Friends of Rose Park to keep the pedestrian path which runs through Rose Park at its current width and in its current location. NPS has previously promised our community that the path would be rehabilitated but remain in its current location and at its current width. Any widening of the path will result in danger to the hundreds of small children and toddlers who travel between all of the play areas in the park on a weekly basis, and to the elderly who walk along the path at any given time. In addition, if a larger area of bare ground is covered by a non-permeable, asphalt, surface, the less water is available for planting and natural ground cover. The initial draft of the Environmental Assessment put out by DDOT and FHA fails to address the major safety issues to pedestrians which exist if the path is widened to 6 or 8 feet. Please keep the path "as is", in its current location and at its current width. Thank you.

Sincerely yours,

Randy & Russell Katz  
2723 Q ST NW  
[rkatz@momidc.com](mailto:rkatz@momidc.com)

24-01

24-02

#### ***Response to 24-01***

The preferred alternative for the project has been determined to have a net benefit on human health and safety, based on the repair and rehabilitation of trails and other proposed improvements. Rose Park Trail Option B, described on page 34 of the EA, details the resurfacing of the Rose Park trail along its current alignment. Rehabilitation of the trail at its current width was dismissed in section 2.8.3 of the EA.

At Rose Park, the current, narrow width of the trail has caused ponding issues and has forced users from the trail, trampling the vegetation along the path. A wider trail would accommodate the multiple user types of the path in a safer manner. Trail widening and a smoother surface could further promote use of the trail. However, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added and raise safety awareness. In further consideration of pedestrian/bicyclist safety, a synopsis of *Conflicts on Multiple-Use Trails: Synthesis of the Literature and State of the Practice* was added to Chapter 4 of the Final EA under Human Health and Safety.

#### ***Response to 24-02***

Measures to protect vegetation throughout the entire project area including Rose Park are described on page 38 of the EA. For the Rose Park trail, the proposed zero to two-foot widening would not have appreciable effects on vegetation or ground water seepage. The existing narrow width of the Rose Park trail forces users off the trail, resulting in bare soils. The proposed rehabilitation would provide a more adequate width for users to remain on the trail thereby encouraging growth of ground cover beside the trail.



PEPC Correspondence  
Keep Private: Yes  
Date Received: 12/23/11

ROSE PARK

I support the Rose Park Trail Option C- 8'wide trail. The 8' width is needed to accommodate the existing volume of trail users. I recommend that supplemental lighting be added to the lower portion of the trail similar to the trail lights on the northern part.

25-01

BEACH DRIVE TUNNEL

I support the modifications to the Beach Drive tunnel for 2- 11' lanes and a 5' trail. However instead of bollards I recommend a low profile guardrail similar to the guardrail on the P St. NW bridge. This type of rail is less intrusive and not as likely to cause drivers or bikers to move away from the edge of the road or path toward the center line and thus threaten oncoming traffic. This may be especially the case with the narrower 11' lanes.

25-02

***Response to 25-01***

New lighting was considered by the project team but dismissed based on standard NPS policy. As described on page 41 of the EA, "Rock Creek Park is closed from dusk to dawn. Furthermore, according to NPS Management Policies (NPS 2006), the NPS seeks to preserve, to the greatest extent possible, the natural lightscapes of parks."

***Response to 25-02***

The preferred alternative would widen the path to a four foot width. Due to the constraints of the tunnel, construction of a pathway greater than four feet wide would not be feasible. Current designs include a low-profile guardrail for trail use/vehicle separation.

Dear All: I have lived for 20 years on Dumbarton Street, one block away from Rose Park. I have been involved, along with many neighbors, in rehabilitating the park from a place that people avoided to a green place that people flock to for sports, a farmers market, a tot lot and to sit on a bench to read a book with a cup of coffee.

One of the most exciting times for me was when I began to see real estate ads that mentioned a house "was near Rose Park." In fact, many of us believe that the park is part of a reason that young families choose to move into or stay on the east side of Georgetown.

Any one who spends real time in the park knows it is a community park.

My reason for writing to you is to express my strong opposition to an **asphalt** path in the park. Today while driving out MacArthur Boulevard I noticed the path along the canal is packed dirt/sand. While living in Europe for three years the paths through the parks are all pervious surfaces. In Colorado, where I spend time, the National Parks pride themselves on paths that are environmentally friendly both to the land and to the wildlife.

26-01

Asphalt in this day and age is not a smart surface. It is not good for the environment and because after a short time it cracks and sinks in places it is dangerous for walkers and bike riders. A look at what is there now will let you know asphalt is not a good choice.

I support the path remaining where it is now located, keeping it at 6 feet in width and encouraging its use as a walking path whether for baby carriages, tots running and playing or for people willing to walk their bikes for several hundred yards. I STRONGLY OPPOSE A SURFACE OF UNSIGHTLY ASPHALT IN A NATIONAL PARK SETTING.

Sincerely,  
Pamla H. Moore

***Response to 26-01***

As described in Section 2.5.2 of the EA (page 35), trail material selection would be considered during the detailed design phase of the project. For the Rose Park trail, spot improvement areas, and new trail sections the design team will consider the use of pervious materials for the trail surface; but will also need to consider other factors such as safety, trail uses, and long-term maintenance.

Ms. Austina Casey  
Project Manager  
DC Department of Transportation  
Attn: Rock Creek Trail EA  
55 M Street, S.E., Suite 500  
Washington, D.C. 20003

Dear Ms. Casey,

I live at 2500 Q St, which backs onto P St, so we take Rose Park path to M St to commute to work and other purposes. I think expanding and repaving the path is an excellent idea. The path is too narrow to currently accommodate pedestrians, dogs and other path users.

27-01

Widening the path would make it safer (not more dangerous, as others might believe). As a cyclist, I have common sense and know not to speed through a neighborhood or sidewalk when others are using it. There is no way that the Rock Creek Park trail could be considered an alternative to the Rose Park path, as they are at different elevations, and go to different places with different access points.

27-02

For folks who are concerned about small children wandering onto the path (where is their supervision?), a small fence of some type could easily solve this potential dilemma.

27-03

Fixing the path to increase safety is very much needed. Cyclists are not the enemy to safety, and easily co-exist with other trail users, as we do in the streets and other paths

through the city and region. A wider, safer path is not an incentive for cyclists who live in the neighborhood to speed through our own neighborhood to get from/to town from our homes. But it is a way to keep us safer, too.

27-04

There are simple ways to co-exist with multiple trail users while improving the path itself. Thank you for seeing the larger picture. The 21st century awaits.

Sincerely,

FWG

***Response to 27-01, 27-02, 27-03 and 27-04***

Thank you for your interest and response. Your comments will be included as part of the public record for the project.

I live near Rose Park and frequently walk there, with my wife, with my dog, and alone. I think widening the path would be a major mistake. It is at present quite wide enough to permit walkers going in opposite directions to pass with ease. Widening it would encourage bicyclists to use the path at speed, and this usage should be discouraged. Many bicyclists are a law unto themselves, uncaring of pedestrians, tearing along at pell-mell speeds, endangering all near them.

Please do not widen the path. It is wide enough.

The path could be improved, however, as it frequently floods near the southwestern corner of the park, where the farmers' market meets in the summer.

--  
Henry Townsend  
2918 P Street NW  
Washington, DC 20007  
[202.333.9343](tel:202.333.9343)

28-01

***Response to 28-01 and 29-01***

The preferred alternative for the project has been determined to have a net benefit on human health and safety, based on the repair and rehabilitation of trails and other proposed improvements. Rose Park Trail Option B, described on page 34 of the EA, details the resurfacing of the Rose Park trail along its current alignment. Rehabilitation of the trail at its current width was dismissed in section 2.8.3 of the EA.

At Rose Park, the current, narrow width of the trail has caused ponding issues and has forced users from the trail, trampling the vegetation along the path. A wider trail would accommodate the multiple user types of the path in a safer manner. Trail widening and a smoother surface could further promote use of the trail. However, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added and raise safety awareness. In further consideration of pedestrian/bicyclist safety, a synopsis of *Conflicts on Multiple-Use Trails: Synthesis of the Literature and State of the Practice* was added to Chapter 4 of the Final EA under Human Health and Safety.

I live at 2500 Q Street across the street from Rose Park. I understand that a substantial widening of the pedestrian path through the park is being considered. Although the current path is not in good repair, doubling or tripling its width would expose pedestrians to even more risk from cyclists than exists now. It would also increase the risks from swerving cyclists to those nearby, including children who use the playground beside the path.

29-01

The National Park Service should recognize the safety issues and the concerns of neighborhood users and supporters of the park and keep its previous promises not to widen the path.

Sincerely,

Marilyn Field  
2500 Q Street NW

SUSAN AND WOLF SAPIRSTEIN  
1308 27th Street, N.W.  
WASHINGTON, D.C. 20007  
(202) 338-4909

December 28, 2011

Ms. Austina Casey, Project Manager  
DC Department of Transportation  
Att: Rock Creek Trail EA  
55 M Street S.E. Suite 500  
Washington,  
20003

D.C.

Dear Ms. Casey:

We are writing to express our support to keep the pedestrian path which runs through Rose Park at its current width and in its current location. We live in the 1300 block of 27th Street, and are directly across from the Park and the path. We use the path regularly and are intimately aware of who uses it and how it is used. We believe that the path as presently configured should not be changed.

We understand that NPS promised our community that the path would be rehabilitated and/or maintained but continue to remain in its current location and at its current width. Any widening of the path will result in danger to the small children and toddlers who travel between all of the play areas in the park on a weekly basis, and to the many pedestrians and joggers who use the path. By far the greatest use of the path is in the form of foot traffic: people with children, people walking dogs, and individuals walking to and from work or the metro who are using the path as a shortcut. In our experience, most bicyclists use the path on Rock Creek, or ride on the neighboring streets. Enlarging it to accommodate bicyclists would be a mistake, and create a dangerous environment for the people who are not on bikes. In addition, if a larger area of bare ground is covered by a non-permeable, asphalt, surface, the less water is available for planting and natural ground cover.

The initial draft of the Environmental Assessment put out by DDOT and FHA fails to address the major safety issues to pedestrians which exist if the path is widened to 6 or 8 feet. And it appears to fail to address the actual usage of the path. It works well for those who use it and are a majority. Please keep the path "as is", in its current location, and at its current width. This makes sense and will save taxpayer money.

Sincerely yours,

Wolf and Susan Sapirstein

### **Response to 30-01 and 30-03**

The preferred alternative for the project has been determined to have a net benefit on human health and safety, based on the repair and rehabilitation of trails and other proposed improvements. Rose Park Trail Option B, described on page 34 of the EA, details the resurfacing of the Rose Park trail along its current alignment. Rehabilitation of the trail at its current width was dismissed in section 2.8.3 of the EA.

At Rose Park, the current, narrow width of the trail has caused ponding issues and has forced users from the trail, trampling the vegetation along the path. A wider trail would accommodate the multiple user types of the path in a safer manner. Trail widening and a smoother surface could further promote use of the trail. However, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added and raise safety awareness. In further consideration of pedestrian/bicyclist safety, a synopsis of *Conflicts on Multiple-Use Trails: Synthesis of the Literature and State of the Practice* was added to Chapter 4 of the Final EA under Human Health and Safety.

### **Response to 30-02**

Measures to protect vegetation throughout the entire project area including Rose Park are described on page 38 of the EA. Along the Rose Park trail, the proposed zero to two-foot widening would not have appreciable effects on vegetation or ground water seepage. The existing narrow width of the Rose Park trail forces users off the trail, resulting in bare soils. The proposed rehabilitation would provide a more adequate width for users to remain on the trail thereby encouraging growth of ground cover beside the trail.

30-01

30-02

30-03

*Citizens Association of Georgetown*

1365 Wisconsin Avenue Suite 200

Washington DC 20007

202-337-7313

[caqmail@cagtown.org](mailto:caqmail@cagtown.org)

[www.cagtown.org](http://www.cagtown.org)

December 28, 2011

Austina Casey

D.C. Department of Transportation

2000 14<sup>th</sup> Street, N.W., 6<sup>th</sup> Floor

Washington, D.C. 20009

Dear Ms. Casey,

On behalf of the over 1200 members of the Citizens Association of Georgetown, I would like to reiterate our association's long-held position on the potential impact from rehabilitating, widening, rerouting or otherwise modifying the Rose Park Path. We believe:

- 1) The path should remain in its current location and at its current width.
- 2) The path should be renovated as its current condition is hazardous.
- 3) No bike traffic should be allowed on the path because of the dangers of mixing uses on such a narrow path and because of the intense use of the path by children and pedestrians.

31-01

We stand firmly in sync with the Friends of Rose Park and Advisory Neighborhood Commission 2E in our position.

Please contact me should you have any questions regarding this matter.

Sincerely,

Jennifer M. Altemus  
President  
Citizens Association of Georgetown

***Response to 31-01***

The preferred alternative for the project has been determined to have a net benefit on human health and safety, based on the repair and rehabilitation of trails and other proposed improvements. Rose Park Trail Option B, described on page 34 of the EA, details the resurfacing of the Rose Park trail along its current alignment. Rehabilitation of the trail at its current width was dismissed in section 2.8.3 of the EA.

At Rose Park, the current, narrow width of the trail has caused ponding issues and has forced users from the trail, trampling the vegetation along the path. A wider trail would accommodate the multiple user types of the path in a safer manner. Trail widening and a smoother surface could further promote use of the trail. However, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added to raise safety awareness. In further consideration of pedestrian/bicyclist safety, a synopsis of *Conflicts on Multiple-Use Trails: Synthesis of the Literature and State of the Practice* was added to Chapter 4 of the Final EA under Human Health and Safety.



RECEIVED  
1-9-2012

January 6, 2012

Mr. Peter May  
Regional Director  
National Park Service  
1100 Ohio Drive, S.W.  
Washington, D.C. 20242

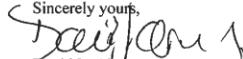
Board Members  
David Dunning, President  
Dr. Russell Bridges, Treasurer  
Katie Sexton, Secretary  
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Toni Brody  
John Donovan  
Anna Fuhrman  
Marjorie Heiss  
Rob Hetem  
Pamla Moore  
Victoria Rigby  
Dave Salwen  
Leslie Wheelock  
Jill White

RE: Friends of Rose Park, Inc.  
Written Comments  
To the Rock Creek Multi-Use Trail  
Rehabilitation Environmental  
Assessment

Dear Mr. May:

Enclosed please find a copy of the Written Comments submitted by Friends of Rose Park, Inc. to the Environmental Assessment completed regarding the Rock Creek Multi-Use Trail Rehabilitation Project.

We look forward to the National Park Service keeping the oral and written promises made to our group, and to the Georgetown community, over the past decade to keep the path at its current width and at its current location.

Sincerely yours,  
  
David L. Abrams  
For Friends of Rose Park

Friends of Rose Park, Inc.  
www.roseparkdc.org  
c/o David L. Abrams, 1410 26<sup>th</sup> Street, N.W., No. 1, Washington, D.C. 20007  
(202) 351-9921 (C)  
jake.chase@juno.com



**WRITTEN COMMENTS  
SUBMITTED BY FRIENDS OF ROSE PARK, INC.  
TO THE ROCK CREEK MULTI-USE TRAIL REHABILITATION  
ENVIRONMENTAL ASSESSMENT  
ISSUED NOVEMBER, 2011**

Dated: January 6, 2012

Board Members  
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John Donovan  
Anna Fuhrman  
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This document shall constitute written comments to the Rock Creek Park Multi-Use Trail Rehabilitation Environmental Assessment dated November, 2011, prepared pursuant to 42 U.S.C. § 4332(2)(c) by the U.S. Department of Transportation, the Federal Highway Administration, The National Park Service and the District of Columbia Department of Transportation in regard to the Rose Park section of the project and is being submitted by Friends of Rose Park, Inc., a non-profit, tax-exempt organization dedicated to maintaining and improving Rose Park, a small, narrow urban park located in Georgetown, Washington, D.C. These written comments are solely directed to the sections of the Environmental Assessment (hereafter referred to as "EA") which only relate to the portion of this rehabilitation project which runs directly through Rose Park.

## 1. INTRODUCTION

Friends of Rose Park, Inc. is a 501(c)(3) non-profit, tax exempt organization dedicated to maintaining and improving Rose Park, a small, narrow end-destination community park located in an east end residential neighborhood of Georgetown, Washington, D.C. The land which encompasses Rose Park is owned by both the District of Columbia government and also the Federal government. Federal lands are part of the National Park Services' Rock Creek Park.

Friends of Rose Park was organized 13 years ago to improve conditions in Rose Park, which had been neglected and overlooked by both the Federal government and the District of Columbia government for decades. Hundreds of thousands of dollars have been raised from neighbors and local community organizations to maintain, improve and

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○ install both softscape and hardscape amenities in the park. Friends of Rose Park built both the Dumbarton Street Tot Lot and the 26<sup>th</sup> and O Streets Playground which bring hundreds of children, infants to 3 years old and older, to the two play areas which are immediately adjacent to, and connected by, the path. We have planted more than 40 trees, thousands of daffodils and crocuses, and hundreds of rose bushes, holly bushes and other plantings. We have installed benches, a flagpole, park signage, and other items. We work with certified landscapers to maintain the park year-round and host numerous free annual events to bring the community together to celebrate the park. All of this has occurred at *no* cost to the District of Columbia government or the Federal government and has occurred with the approval of the D.C. Department of Parks & Recreation, the Old Georgetown Board and our local ANC2E.

Friends of Rose Park, Inc. has been recognized by our local ANC 2E as the “official community representative for Rose Park.” See, letter dated April 12, 2011 from ANC 2E Chair Ron Lewis, attached as Exhibit No. 1. Accordingly, Friends of Rose Park, Inc. is to be considered by the agencies involved in the Rock Creek Park Multi-Use Trail Rehabilitation project, and by EA’s project team, as *the* primary stakeholder for issues of concern to Rose Park.

## 2. THE ENVIRONMENTAL ASSESSMENT AS IT PERTAINS TO ROSE PARK

○ There is a 1,800 foot section of a pedestrian path which runs through Rose Park which is being considered for rehabilitation under the overall scope of the larger Rock Creek Multi-Use Trail rehabilitation project. The EA mistakenly describes the lineal footage as 2,600 feet - this is an incorrect number and despite a written request to DC-DDOT for clarification as to what encompasses the 2,600 feet, and which agency or consulting firm came up with this 2,600 foot figure, no *definitive* answer has yet been provided. Friends of Rose Park and other community groups have been trying for over 13 years to have the National Park Service address and resolve the deteriorated condition of the pedestrian path which runs through the park. Numerous attempts to resolve the conditions of this path have had false starts, beginning back in the 1990’s, and this most current effort has been going on for at least 3 years.

32-01

32-02

The position of Friends of Rose Park as to fixing the condition of the path has been consistent over the years: for safety reasons, the path *must* remain in its current site, at the top of the hill overlooking the Rock Creek Parkway, and at its current width, which runs from 4-5 feet in different sections of the path. We have had verbal and written promises from various Federal and city agencies over the years that the path would be kept in its current location and at its current width, including statements from National Park Service Director Robert Stanton and Rock Creek Park Superintendent Adrienne Coleman. See, letter from Ms. Coleman, attached as Exhibit No. 2, where she states with specificity that “...the path will not be widened...”. Emphasis added.

○ Indeed, the numbers of path users as counted by the EA’s authors themselves, discussed more fully in §8, below, evidences that more pedestrians, including walkers, runners and people

### ***Response to 32-01***

The linear footage that is listed as 2,600 feet referred to the Rose Park trail and connecting ramps, which were grouped together for the purpose of describing the Rose Park trail option. To be more exact, the Rose Park trail is 1,929 feet long, the north connection ramp to P Street is 363 feet long, and the south connection ramp to M Street is 388 feet long. The combination of these three segments is 2,680 linear feet. The EA has been revised to include these footages in reference to the Rose Park trail.

### ***Response to 32-02***

Under the preferred alternative, the Rose Park trail would be resurfaced to improve its condition.

pushing baby strollers, far outnumber people who ride bikes on the path. This clear fact dictates that widening the path would adversely affect the majority of users who actually use the path.

**3. THE NATIONAL ENVIRONMENTAL PROTECTION ACT OF 1969, AS AMENDED, AND THE INSTANT ENVIRONMENTAL ASSESSMENT**

The purpose of the National Environmental Policy Act of 1969, as amended, is “[T]o declare a national policy which will encourage productive *and enjoyable harmony between man and his environment*; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and nature resources important to the Nation; and to establish a Council on Environmental Quality.” 42 U.S.C. § 4321 §§ 2

The instant EA, undertaken by the involved Federal and city agencies, is guided, among other statutes, regulations and documents, by NPS Management Policies (NPS 2006), which states that the EA shall consider the effects of any proposed action taking into account Visitor Safety (§8.2.5.2) and Public Health (§8.2.5.5). The EA as it is presently written totally fails to discuss, mention or take into account Visitor Safety or Public Health in that the EA fails to discuss at all the safety and health of the children playing in the various play areas in the park despite the fact that the essential purpose of NEPA is to ensure that *all* environmental factors *are weighted equally* when compared to other factors in the decision making process undertaken by Federal agencies. Indeed, the EA’s recommendation to widen the path will not enhance “harmony between man and his environment: in our park; rather, widening the path will result in more chaos and confrontations between walkers and bicycle riders.

32-03

The purpose of an EA is to determine whether the impacts of a proposed action or reasonable alternatives to that action may be significant. In the instant case, the proposed options to widen the path to 6 or 8 feet are unreasonable given the fact that leaving the path at its current width has been historically preferred by a vast majority of neighbors and users of the park, as amply demonstrated by the public comments presented to the involved agencies over the past 12 years. *See, e.g.*, letter from Peter Pulsifer, ANC2E Chair, dated December 10, 2000, attached as Exhibit No. 3; letter from Ed Solomon, ANC2E Chair, dated December 7, 2006, attached as Exhibit No. 4; letter from Denise Cunningham, President of the Citizen’s Association of Georgetown, dated January 8, 2008, attached as Exhibit No. 5; letter from Ed Solomon, ANC2E Chair, dated January 10, 2008, attached as Exhibit No. 6; letter from Ron Lewis, ANC2E Chair, dated February 7, 2011, attached as Exhibit No. 7; letter from D. Cary Mitchell, Esq., dated February 7, 2011, attached as Exhibit No. 8; letter from Jennifer Altemus, President of the Citizen’s Association of Georgetown, dated December 28, 2011, attached as Exhibit No. 10; and letter from Edith Schafer, dated January 5, 2012, attached as Exhibit No. 11.

***Response to 32-03***

To address concerns regarding trail user safety in the Rose Park area, further consideration of pedestrian/bicyclist user conflicts was added to the EA under Human Health and Safety in Chapter 4. According to the FHWA document *Conflicts on Multi-use Trails: Synthesis of the Literature and State of the Practice*, user conflicts on multiple-use trails are a common concern. Research suggests that minimization of user contact in congested areas is an effective measure to reduce conflicts. Accordingly, the preferred alternative at Rose Park is intended to minimize contact between users by providing a wider, smoother trail that would accommodate different uses. Additional suggestions to reduce conflicts on multi-use trails include educational elements in the form of signage or brochures posted at trailheads to identify safety issues and promote trail sharing. During final design of the trail rehabilitation, DDOT and NPS would consider these elements to improve the safety of the trail.

4. **THE EA's PROJECT TEAM MIS-STATES THAT THE PATH IS TOO NARROW FOR SPECIOUS AND MIS-STATED REASONS; ACCORDINGLY THEIR UNILATERAL, BASELESS CONCLUSION TO WIDEN THE PATH FAILS**

In § 2.8.3 of the EA, at page 38, the authors state that

"...the project team considered rehabilitation options for the Rose Park trail which included paving the trail in its current width. Because the existing trail is too narrow, this option was dismissed. Trail users routinely leave the paved trail surface in order to walk side by side or pass other users. This migration of users from the trail has caused trampling of vegetation. In several locations, the tramped area beside the trail is one or two feet wider than the paved trail surface. While feasible, it would not be practical to rehabilitate the trail at its existing width because users would continue to migrate from the trail, and replanting would not be successful."

The project team is correct in stating that a dirt track of approximately one foot wide runs on the side on the paved path. However, the project team is incorrect in stating the reasons for the creation of this dirt track. It is incorrectly asserted that the dirt track was created because trail users routinely leave the paved trail to pass other users. In fact, the dirt track was created by runners who wish to follow the direction of the pedestrian path but who choose to run on dirt, a softer service than asphalt. The project team, not knowing how the path and our park are used, mistakenly jumps to a conclusion which is factually incorrect.

32-04

32-05

Based on the factually incorrect assumption and the false and negligently asserted reasons put forth by the project team, the team unilaterally dismisses paving the path at its current width *although they state with specificity that such an option is absolutely feasible*. EA § 2.8.3 at page 38.

After relying solely on one incorrect fact, the project team then considers three other options for the path: (1) taking no action at all, (2) widening the path to 6 feet and (3) widening the path to 8 feet.

The first option, of taking no action at all, will not be discussed herein because all concerned parties agree that the path needs to be rehabilitated.

As to widening the path, the park has six (6) separate and distinct play areas for children of various ages which immediately abut the pedestrian path: the north lawn, the softball field, the 26<sup>th</sup> and O Street Flagpole Playground, the asphalt play area at the basketball court, the Dumbarton Street playground, and the south lawn. The total linear footage of the pedestrian path, from M Street, NW to where P Street, NW connects with the access roadway down to the Rock Creek Parkway, is 1,806 feet. 565' of the total length, or roughly one-third, runs from the 26<sup>th</sup> and O Streets Flagpole Playground to the Dumbarton Street Playground. During any given

**Response to 32-04 and 32-05**

This statement was made based on visual observations during site visits where various users were observed leaving the paved surface to pass other users. Runners are included among the users who contributed to the deterioration of the areas adjacent to the paved trail.

week, hundreds of small children and toddlers use the path to walk and toddle between the various play areas, riding their tricycles, pedaling along in their pint-sized cars, or pushing their scooters. Parents walk their tethered small children and push their baby strollers between these play areas, and if the path were to be widened, especially with no calming effect<sup>1</sup>, bicyclists would zip by the small ones on the newly created, smooth super-highway, creating more of a public safety hazard than currently exists.

32-06

The health and safety of the children and other users of the path necessitates that the original promises made by NPS to keep the path at its current width *must* be kept, for the following reasons:

1. The path is *not* too narrow at its current width. The project team specifically states that it is “feasible” to pave the path at its current width. EA § 2.8.3 at page 38. The current width has served the neighborhood well over the past years and will continue to serve the neighborhood well at its current width.

2. The authors are mistaken when they write that some trampled parts of the grass next to the trail are 1-2 feet wide. This is not factually correct – at no part of the path is the “trampled” part next to the path 2 feet wide. This is an exaggeration on the part of the authors in a misguided attempt to not pave the path at its current width and, as such, is contrary to public policy. Importantly, Courts have invalidated NEPA documents that rely on flawed data. See, *Natural Resources Defense Council vs. U.S. Forest Service* (No. 04-35868, 35 ELR 20160, 9<sup>th</sup> Cir., Aug. 5, 2005), *Native Ecosystems Council vs. U.S. Forest Service* (No. 04-35375, 35 ELR 20166, 9<sup>th</sup> Cir. Aug. 11, 2005), *Ecology Center vs. Norton* (No. 03-35095, 35 ELR 20248, 9<sup>th</sup> Cir.

32-07

Dec. 8, 2005). The assertion that the dirt track which runs beside the path is 2 feet wide, in addition to the assertion that the path is 2,600 long and not 1,800 long, are both exaggerations and thus must be considered as flawed data.

32-08

3. As is obvious to anyone who has walked the path, there is a dirt track which runs beside for the path for the 1,800 foot section of the path which runs through the park, but this dirt track will always be present no matter how wide the path is asphalted – it is caused not by people who are trying to walk two abreast on the path, as there is

<sup>1</sup> During meetings with members of representatives of the various Federal and City agencies involved in writing this EA, including a meeting at the site of the pedestrian path, promises were made by the project team that the EA would affirmatively discuss the placement of “calming effects” on any re-surfaced area of the path, i.e., “calming effects” such as speed bumps or grooves in the surface of the path to slow down speeding bicycles. The concession on the part of the project team that calming effects on the path were necessary is a clear recognition on their part that bicycles speeding through the park are a danger to pedestrians. Despite this acknowledgment, no mention at all is made in the EA by the project team as to the need for “calming effects” thus the agencies have failed to meet their responsibilities to the community and have failed to meet NEPA and CEQ standards and regulations.

32-09

5

### **Response to 32-06**

The preferred alternative for the project has been determined to have a net benefit on human health and safety, based on the repair and rehabilitation of trails and other proposed improvements. Rose Park Trail Option B, described on page 34 of the EA, details the resurfacing of the Rose Park trail along its current alignment. Rehabilitation of the trail at its current width was dismissed in section 2.8.3 of the EA.

At Rose Park, the current, narrow width of the trail has caused ponding issues and has forced users from the trail, trampling the vegetation along the path. A wider trail would accommodate the multiple user types of the path in a safer manner. Trail widening and a smoother surface could further promote use of the trail. However, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added and raise safety awareness. In further consideration of pedestrian/bicyclist safety, a synopsis of *Conflicts on Multiple-Use Trails: Synthesis of the Literature and State of the Practice* was added to Chapter 4 of the Final EA under Human Health and Safety.

### **Response to 32-07 and 32-08**

The measurement provided in the EA is an estimate and does not affect the intensity of impacts to any of the resources within Rose Park.

### **Response to 32-09**

DDOT and NPS did not make any commitments to incorporate or eliminate the use of calming measures in the EA. During the design process, DDOT will evaluate where site specific safety measures can be incorporated along the 5.1 miles of trail rehabilitation including the trail options, roadway crossings and new connections.

plenty of room on the path for people to walk side-by-side – rather, it is caused by runners who prefer to run on a dirt surface because it is easier on their feet, ankles and knees. It is a commonly accepted sports medicine fact that running on dirt is preferable to running on a hard surface such as asphalt. See, Pat Connelly in *Runner's World*, www.secondwindrunning.com. The fact that the project team bases their entire renunciation of leaving the path at its current width on this incorrect and baseless premise is simply wrong. Accordingly, this rationale violates NEPA standards because the argument is specious, capricious and self-serving. Self-serving statements which are arbitrary, capricious and unreasonable serve only to make the EA fail because NEPA standards do not allow such self-serving, incorrect statements to form public policy. See, *National Wildlife Federation vs. Schafer*, 38 ELR 20186 (W.D. Wash. 2008).

The abject failure of the project team to more fully consider, discuss and weigh the option of keeping the path at its current width, instead of unilaterally dismissing it for specious and factually wrong reasons, again goes against public policy and the standards established by NEPA. NEPA specifically requires Federal agencies to study, develop and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources. See, NEPA, §102(2)(E).

**5. THE PROJECT TEAM HAS FAILED TO TAKE A “HARD LOOK” AT THE IMPACT ON THE ENVIRONMENTAL HEALTH AND SAFETY WHICH THE PROPOSED PROJECT WOULD HAVE ON THE ENJOYMENT OF RECREATIONAL ACTIVITIES IN THE PARK AND HAS FAILED TO TAKE A “HARD LOOK” AT ALTERNATIVE BUILDING MATERIALS FOR THE RESURFACING PROJECT**

The Federal agencies involved in this process are required by NEPA to demonstrate that potential environmental impacts are given a “hard look”. See, *Geertson Seed Farms vs. Johanns*, No. 06-01075, 37 ELR 20047 (N.D. Cal. Feb. 13, 2007); *Ohio Valley Environmental Coalition vs. United States Army Corp of Engineers*, No. 3:05-0784, 37 ELR 20070 (S.D.W.V. Mar 23, 2007); *Western Watersheds Project vs. Kraavenbrink*, 620 F.3d 1187 (9<sup>th</sup> Cir. 2010). *Native Ecosystems Council vs. Tidwell*, 599 F3d 926 (9<sup>th</sup> Cir. 2010). The fact that the project team does not address or consider the health and safety issues as presented herein results in this EA being faulty and not in compliance with NEPA or CEQ regulations.

32-10

Further, as the project team is well aware, if any agency decides to *not* prepare an EIS it is required to supply a convincing statement of reasons to explain why a project’s impacts are insignificant. The statement of reasons is crucial in determining whether the agency took a hard look at the potential environmental impact of a project. See, *Center for Biological Diversity vs. National Highway Traffic Safety Administration*, 2007 U.S. App. LEXIS 26555 (9<sup>th</sup> Cir. Nov. 15, 2007). The EA as presently written abjectly fails to provide any statement of reasons which

32-11

**Response to 32-10**

The Rock Creek Multi-Use Trail Rehabilitation EA is in full compliance with the requirements of NEPA; the Council on Environmental Quality (CEQ) Regulations (40 CFR 1500-1508); FHWA Technical Advisory T6640; the NPS NEPA compliance guideline (DO-12), and the National Historic Preservation Act of 1966, as amended. The work is also compliant with NPS Management Policies.

The project team analyzed impacts of the project objectively and determined that the proposed trail rehabilitation would result in human health and safety benefits, based on the repair of the trail surface, vehicle separations, and crossing improvements. The analysis did involve a “hard look” which was carried out through on-site investigation, review of available resources, coordination with local and regional agencies, and analysis of public comments.

**Response to 32-11**

To address concerns regarding trail user safety in the Rose Park area, further consideration of pedestrian/bicyclist user conflicts was added to the EA under Human Health and Safety in Chapter 4.

address how the health and safety of children and other users of the park will be negatively affected if the path is widened to 6 or 8 feet. Accordingly, this EA again fails to meet the standards established by Courts in their correct oversight of agencies' implementation of NEPA standards.

32-11

In addition, although no mention is made of a specific building surface material for the re-paving project, the project team is clearly favoring an impervious surface material, such as asphalt, for the resurfacing of the path. No discussion or consideration is given, however, of using an alternative resurfacing material, such as brick, which is permeable and which would allow water to penetrate to the trees, plantings and ground cover which surround the affected area, despite the project team being asked to consider such an alternative material. The project team has failed to take a "hard look" at alternative resurfacing materials which again leads this EA to fail under existing NEPA standards and CEQ regulations. Increasing the impervious surface in the park is at odds with the fact that this is a park where impervious surfaces should be minimized as much as possible, or reduced – not increased.

32-12

32-13

32-14

**6. THE PROJECT TEAM FAILS TO PROVIDE ANY INFORMATION IN THE EA AS TO WHAT WILL HAPPEN TO A VERY OLD OAK TREE SITED AT THE DUMBARTON STREET TOT LOT LOCATED IMMEDIATELY ADJACENT TO THE PEDESTRIAN PATH, THUS AGAIN FAILING TO TAKE A "HARD LOOK" AT ALL OF THE ENVIRONMENTAL FACTORS REQUIRED PURSUANT TO NEPA**

There is a venerable old oak tree located at the Rose Park Dumbarton Street Tot Lot, on land owned by the District of Columbia government, not the Federal government. The circumference of the tree is more than 12 feet and it is at least several hundred years old. Friends of Rose Park have consistently been told over the years by certified arborists, including privately retained arborists and arborists from Casey Trees, the D.C. Department of Parks & Recreation, and the D.C. Urban Forestry Administration, that the tree is in excellent health.

The pedestrian path runs *immediately* next to this tree and *it is impossible to increase the width of the path where it runs next to the tree to 6 or 8 feet without causing a major impact to the root system of the tree.* The EA specifically provides that if the path were to be increased to either 6 or 8 feet that "No large, mature trees in the Rose Park area would be removed..." EA, §§ 4.5.2.4 and 4.5.2.5, pp 109-110. Despite this "promise", *no discussion or consideration is given to the fact that on the east side of the old oak tree there is no room for the path to be widened to 6 feet or 8 feet.* On the east side of the oak tree there is the current path which is presently 5 feet and 2 inches in width. See, photo of this section of the path, where the tree abuts the path, attached as Exhibit No. 9. On the immediate east side of the path there is an *immediate* sheer drop off to the hillside which runs several hundred feet down to the Rock Creek Parkway. Erosion has caused this drop off to occur over the past 13 years. Friends of Rose Park has been actively advocating for rehabilitation of the path for the past 13 years but the National Park Service has closed its eyes to the problems located at this specific site on the path by taking no

32-15

32-16

***Response to 32-12 and 32-14***

As described in Section 2.5.2 of the EA (page 35), trail material selection would be considered during the detailed design phase of the project. For the Rose Park trail, spot improvement areas, and new trail sections the design team will consider the use of pervious materials for the trail surface; but will also need to consider other factors such as safety, trail uses, and long-term maintenance.

***Response to 32-13***

As described in the response to comment 32-10, The Rock Creek Multi-Use Trail Rehabilitation EA is in full compliance with the requirements of NEPA and other pertinent regulations. Analysis of resurfacing materials is outside of the scope of the EA. As described in Section 2.5.2 of the EA (page 35), trail material selection for Rose Park would be considered during the detailed design phase of the project.

***Response to 32-15 and 32-16***

As stated on page 38 and within Chapter 4 of the Final EA, protection measures and BMPs would be implemented to avoid impacts to all types of park vegetation to the extent possible. Vegetation protection measures for the oak tree near the Dumbarton Street playground area may include development of a tree save plan by an arborist or licensed tree expert, or installation of tree protection fencing. Impacts to the tree's root system would be avoided to the extent possible. If necessary, alternative trail materials and/or narrowing of the trail would be utilized to preserve the tree's roots.

action 13 years ago when the problem was first identified by Friends of Rose Park and when the problem would have been easier to resolve.

The project team is acutely aware of the location of this one oak tree, and the unique problems it brings to the design of the path rehabilitation project, as several project team members have personally visited the site on at least one, if not several, occasions with the undersigned. Promises were made over the past three years to Friends of Rose Park by project team members that the EA would address the concerns presented by this tree and its location right next to the path, yet *no* mention of the tree and its very unique status is made in the EA. The EA thus again fails to meet the standards established by NEPA and CEQ regulations and case law.

32-17

**7. THE EA IS REPLETE WITH INCORRECT DATA, FALSE DATA, FLAWED DATA AND SLOPPY MISTAKES AND THUS FAILS THE STANDARDS SET FORTH BY NEPA AND THE CEQ**

It is well established that Courts have invalidated NEPA documents that rely on flawed data. See, *Natural Resources Defense Council vs. U.S. Forest Service* (No. 04-35868, 35 ELR 20160, 9<sup>th</sup> Cir., Aug. 5, 2005), *Native Ecosystems Council vs. U.S. Forest Service* (No. 04-35375, 35 ELR 20166, 9<sup>th</sup> Cir. Aug. 11, 2005), *Ecology Center vs. Norton* (No. 03-35995, 35 ELR 20248, 9<sup>th</sup> Cir., Dec. 8, 2005). The EA sections which pertain to the Rose Park portion of the project are filled with mistakes authored by the project team. Examples of these mistakes include, but are not necessarily limited to, the following:

1. The project team states that the Rose Park segment of the overall project is 2,600 feet. § S.1, Introduction, p. 1. The project team is wrong. The Rose Park path is 1,806 feet from where the path begins on the northern side of the park at P Street, N.W., where P Street intersects with the access roadway going down to the Rock Creek Parkway, to where it ends on the southern side of the park at the M Street sidewalk. DDOT was contacted for clarification as to the genesis of the 2,600 foot number, but DDOT could not, with any specificity, provide the name of the person, agency or subcontracting firm which came up with the figure of 2,600 feet, could not, with any specificity, provide a specific designation as to where the 2,600 foot path began and ended and could not, with any clear specificity state what specific lineal footage was included in the alleged 2,600 foot figure.

32-18

2. The project team relies on flawed data when it proposes to widen the path to 6 feet and 8 feet. § 4.5.2.4 of the EA, at page 109, states that a 6 foot resurfaced trail will result in "...an increase of *0.20 acres* of impervious surface...". Emphasis added. However, on that very same page, page 109, §4.5.2.5 states that if the path were to be increased to 8 feet wide, it would (also) result in "... *0.20 acres* of impervious surface...". Emphasis added. The project team members use the same 0.20 acres of impervious surface being added to the park if the path is increased to *either 6 or 8 feet*. This number clearly has to be wrong in one instance or the other because

32-19

**Response to 32-17**

As described in the response to comment 32-10, The Rock Creek Multi-Use Trail Rehabilitation EA is in full compliance with the requirements of NEPA and other pertinent regulations. Measures to protect the oak tree near the Dumbarton Street playground area are described in Section 2.5.2 to include the use of alternative trail materials and/or narrowing of the trail.

**Response to 32-18**

The linear footage that is listed as 2,600 feet referred to the Rose Park trail and connecting ramps, which were grouped together for the purpose of describing the Rose Park trail option. To be more exact, the Rose Park trail is 1,929 feet long, the north connection ramp to P Street is 363 feet long, and the south connection ramp to M Street is 388 feet long. The combination of these three segments is 2,680 linear feet. The EA has been revised to include these footages in reference to the Rose Park trail.

**Response to 32-19**

The calculated area of 0.20 acres referenced was an error. Table 9 on page 104 of the EA provides the correct acreage of impervious area that would be added under each alternative and option. Additional impervious surface proposed under the preferred Rose Park trail option would be 0.07 acres. Additional impervious area associated with the Rose Park trail options was revised throughout the EA using calculations from Table 9.



shear logic dictates that an 8 foot wide path which the project team alleges is 2,600 feet long would result in an impervious surface which contains more surfaced area than a path which is widened to only 6 feet. This mistake represents not just flawed data but a sloppy mistake on the part of the authors.

3. As part of the rationale for widening the path to 6 or 8 feet the authors of the EA state, in an inartful attempt to strengthen their position that the path should be widened, that "...some areas (of the path) are overgrown with vegetation." §1.4, Project Area, at p. 6. In direct opposition to this false assertion, **no areas of the path are now, or have ever been, overgrown with any sort of vegetation.** The National Park Service and the D.C. Department of Parks & Recreation regularly mow the grass which grows on either side of the pedestrian path during grass growing season, and volunteers working with Friends of Rose Park regularly clip and trim vegetation which grows from the fence line which abuts a portion of the path. The statement by the project team that portions of the path are overgrown with vegetation is therefore patently false and another example of the sloppy observations by members of the project team. It is clear evidence that the project team does not know our park.

32-20

4. A discussion was held above about how the project team mistakenly says that the dirt track which runs next to the path is 2 feet wide. § 2.8.3 at p. 38. As previously stated, this figure is incorrect and needs to be also be "counted" as flawed data.

32-21

5. In discussing possible effects of the project on local Rose Park archeology, the EA's authors state that "Avoidance, minimization, and mitigation **within as yet unidentified archeological resources**, would result in no adverse effects." EA, § 2.10, Table 2, p 46. Emphasis added. How can the authors know if there is any impact, or any adverse effects on any archeological resources when these resources have not yet been identified. Again, flawed data.

32-22

All of these examples, although seemingly innocuous, perhaps, by themselves, add up to grossly flawed data upon which the project authors are relying in their self-serving determination that the path should be increased to either 6 or 8 feet. **Again, it is well settled law that Courts have voided NEPA documents which rely on flawed, self-serving data.**

**8. WHEN CONSIDERING THE CULTURAL LANDSCAPE OF ROSE PARK, HISTORY DICTATES KEEPING THE WIDTH OF THE ROSE PARK PATH AT ITS CURRENT WIDTH AND NOT WIDENING IT AT ALL**

The project team mistakenly asserts that the two options of widening the path to either 6 or 8 feet "...would not have an effect on the cultural landscape because it is not a component of Rock Creek Park's cultural landscape." EA, p. 45.

The project team spends absolutely no time discussing the history of Rose Park and the fact that the path as it currently exists has historically been used as a pedestrian "short-cut"

***Response to 32-20***

The sentence was removed from the EA.

***Response to 32-21***

The measurement provided in the EA is an estimate and does not affect the intensity of impacts to any of the resources within Rose Park.

***Response to 32-22***

According to page 138 of the EA, "As the presence of NRHP-eligible archeological sites is at present unknown, and as final design plans are not available, only general strategies for the mitigation of adverse impacts can be outlined. It is the preferred mitigation strategy to avoid any disturbance to archeological sites by siting of the project component, including trail and connector construction and grading. The lead agencies would continue to coordinate with DC HPO in accordance with project commitments on further archeological investigations or mitigation measures if necessary." This is the agreed upon strategy to refine the scope of the study until a more detailed design is available.

between the port of Georgetown and the residential neighborhoods and commercial areas of the West End and Dupont Circle areas of Northwest Washington.

The park is not a “commuter” park but, rather, is a “destination” park, in that neighbors of the park for generations and generations have used it as a recreation source. See, *Black Georgetown Remembered*, Georgetown University Press, 1991, which documents that Rose Park was the first integrated, end-destination community park in the city of Washington, D.C.

The short sighted individuals who wish to increase the width of the path are mainly bicycle users who wish to create a super-highway through the park which can be utilized for bicycle trail “connectivity” reasons, i.e., as a lazy-persons shortcut between M Street and P Street. Contrary to misstatements which have been made by others, Friends of Rose Park has never advocated the absolute ban of bicycles from Rose Park. We have, however, consistently maintained the fact that if the width of the path is increased to a smooth surfaced 6 feet or 8 feet, it will increase the flow of bicycles speeding through the park which will have an absolute negative impact on the health and safety of children and others using the park and using the path.

32-23

The numbers and types, or categories, of path users which the project team itself has identified as using the path clearly evidences that the path is used mainly by pedestrians and not bicycle riders. On Thursday, May 5, 2011, project team members allegedly conducted a 2-hour survey of who used the Rose Park path between the hours of 4:45 pm and 6:45 pm. The results show that 259 walkers, runners, and people using baby strollers or walking dogs used the path as opposed to a mere 30 people using bicycles. See, Table 7, Trail User Counts on May 5, 2011, a graphic chart compiled by the project team, EA at page 84. Despite the sheer numbers weighing in favor of the position taken for more than a decade by Friends of Rose Park that the path is a *pedestrian* path, the project team wishes to increase the width of the path to accommodate an overwhelming minority of the paths’ users, i.e., bicyclists, while subjecting the majority of path users, i.e. walkers, to significantly increased dangers posed by bicyclers speeding down a new, smooth highway-like surface.

Despite the best intentions of some bicycle riders and some bicycle organizations, the vast majority of Rose Park path bike riders totally disregard the children and pedestrians who use the path to travel from one play area to another play area. The law in the District of Columbia clearly states that it is the responsibility of bicyclers who ride on sidewalks to move out of the way of pedestrians. This rarely, if ever, happens on the pedestrian path. The law in the District of Columbia as it pertains to bicycles riding on sidewalks prohibits bicycles from riding on sidewalks in the Central Business District. See, D.C.M.R. Title 18, Chapter 12, § 1201.9. As anyone who has ever walked on a downtown D.C. sidewalk knows, bicyclers are forever riding on the sidewalks, disrupting pedestrians and disregarding the law. Further, D.C.M.R. Title 18, Chapter 12, § 1201.10 specifically states that “Any person riding a bicycle upon a sidewalk *shall yield the right-of-way to pedestrians*, and shall travel at a speed no greater than the posted speed limits of the adjacent roadway; Provided, that such speed is safe for the conditions then existing on the sidewalk.” Emphasis added. **There is a culture, however, among a majority of bicycle riders where they exert their physical presence against pedestrians in a manner which is**

### **Response to 32-23**

As described in response to comment 32-06, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added to raise safety awareness.

aloof and dismissive. Any number of parents and park users can testify that almost *no* bicyclist adheres to the rules about yielding to pedestrians when traveling on the Rose Park path. They speed by as if they had the right of way, not the pedestrians, ringing their bicycle bells, glaring at pedestrians for being in the way, and yelling at pedestrians to get out of the way.

**9. WHILE THE PROJECT TEAM HAS INVITED PUBLIC COMMENT ON THE ENVIRONMENTAL ASSESSMENT PURSUANT TO NEPA, THE TEAM HAS FAILED TO INCORPORATE THE PUBLIC COMMENTS IT RECEIVED IN ANY DISCERNIBLE MEASURE**

Friends of Rose Park has been consistent in its position over the years that the pedestrian path which runs through the park should be kept at its current width and in its current location, and the agencies involved in this project, which have previously supported this position, are more than amply aware of this position due to written and verbal, public, comments made by Friends of Rose Park over the years.

Other individuals, organizations and our own local ANC2E have also historically advised the involved agencies that the path should be kept at its current width and in its current location. See, Exhibits 3 through 7, attached. In addition, over the past decade, DC-DDOT, NPS, FHA and DPR have received hundreds of letters imploring the agencies to keep the path in its current width. See, letter from D. Cary Mitchell, Esq., a neighbor and park user, dated February 7, 2011, attached as Exhibit 8, as an example of the letters which have been sent in by members of the community. See also, letter from Edith Schafer, dated January 5, 2012, attached as Exhibit No. 11. See, especially, letter from Jennifer Altemus, President of the Citizens Association of Georgetown, dated December 28, 2011, attached as Exhibit No. 10. *Ms. Altemus, writing on behalf of the over 1,200 members of CAG, reiterates her organizations' long held position that the path must not be widened.*

The EA, however, fails to address the position put forth by Friends of Rose Park and also fails to take into account that hundreds and hundreds of Georgetown residents, organizations, and elected and appointed officials have contacted the various agencies involved in this project over the years, expressing their individual and organizational support of the position taken by Friends of Rose Park to keep the path at its current width.

It is well established that Federal agencies must involve the public in the preparation of an Environmental Assessment and take into account the public's comments on any given project. *California Trout vs. Federal Energy Regulatory Commission*, 572 F.3d 1003 (9<sup>th</sup> Cir. 2009) and *Theodore Roosevelt Conservation Partnership vs. Salazar*, 605 F.Supp.2d 263 (D.D.C. 2009). The EA as it is currently written fails to meet this standard.

***Response to 32-24***

The current width of the Rose Park Trail varies from four to five feet, which is below DDOT's and AASHTO's minimum width for a multi-use trail (8 feet). Taking into account the Friends of Rose Park concerns, the preferred alternative would resurface the Rose Park trail to a six-foot width, which is the standard width of a DDOT residential sidewalk.

32-24

10. THE PROJECT TEAM FAILS TO PROVIDE ANY INFORMATION IN THE EA AS TO THE AREAS OF THE PEDESTRIAN PATH WHICH FLOOD EVEN AFTER THE LIGHTEST OF RAINFALLS, THUS AGAIN FAILING TO TAKE A "HARD LOOK" AT ALL OF THE ENVIRONMENTAL FACTORS REQUIRED PURSUANT TO NEPA

Friends of Rose Park has made the project team aware on numerous occasions that the pedestrian path floods during even the slightest rain in three distinct places: (1) for a 20-30 foot length on the path where the path immediately abuts the 26<sup>th</sup> and O Streets Flagpole Playground; (2) for a 20-40 foot length on the path where the path immediately abuts the Rose Park basketball court at the center fence cut-through and the southern cut-through between the fence and the Rose Park Recreation Center stone retaining wall; and (3) where the path meanders through the copse of trees at its southern end near the M Street sidewalk.

32-25

Severe flooding occurs on a 20-40 foot section of the path which abuts the Rose Park basketball court at both the center cut-through of the fence and at the southern cut-through between the end of the fence line and the stone retaining wall surrounding the Rose Park Recreation Center. There are two drains in these two areas, but several years ago, when the sub-contractor for the D.C. Department of Parks and Recreation repaired and re-painted the surface of the basketball court, the sub-contractor negligently paved over the two drains, thus blocking water from draining away. The DPR Capital Projects Office was made aware of this negligent action on the part of the subcontractor *the day it happened* but no remedial action was ever taken by the Capitol Projects Office or the subcontractor. The result is that when it rains even the slightest amount, pooling of water occurs on the path in this section of the path. When a significant rainfall occurs a pool of standing water results which can be as deep as 2 inches or more. The location of these two drains were pointed out by the undersigned to project team members during a walk-through of the site in February, 2011, yet no mention of the pooling is made in the EA and no corrective action has yet been taken.

32-26

11. CONCLUSION

The EA totally ignores the danger which would face the hundreds of infants, toddlers, small children and other users of the park if the path were to be widened to 6 or 8 feet. The EA further fails to provide any discussion or explanation as to how the Dumbarton Street Tot Lot oak tree would be saved if the path were to be widened. Importantly, the project team admits freely, clearly and unequivocally in the EA that it is feasible to re-pave the path at its current width. However, the project team then goes on to rely on false, mis-written and incorrect data to present two other options for widening the path to 6 feet and 8 feet. The project team specifically relies on the single assertion that by widening the asphalt path from its current width to 6 feet or 8 feet that the dirt track which runs beside the current path will somehow magically

**Response to 32-25 and 32-26**

Based on comments received from the Friends of Rose Park and others, the project team conducted several field visits to evaluate drainage concerns at Rose Park and other locations in the project area. During the detailed design phase of the project, flood prone areas would be addressed. Although flood prone areas were not specifically noted in the EA, it is a purpose of the project to install more effective drainage and erosion control. Drainage designs throughout the project would be prepared in coordination with DDOE and in accordance with DDOT Design Manual requirements.

disappear. As stated above, the dirt track will always be present because runners will create this dirt track simply because runners prefer to run on grass or dirt as opposed to asphalt.

The Federal and District of Columbia agencies involved in this project must, therefore, revise the EA to reflect the overwhelming desire of the neighbors, community organizations and a vast majority of park users to keep the path at its current width and in its current location.

Sincerely yours,

Friends of Rose Park, Inc.  
by David L. Abrams  
Member, Board of Directors  
1410 26<sup>th</sup> Street, N.W., No. 1  
Washington, D.C. 20007  
(202) 333-6366 (H)  
e-mail: jake.chase@juno.com

Enclosures:

- Exhibit No. 1, ANC2E letter designating Friends of Rose Park as the "official" community representative for Rose Park, dated April, 12, 2011
- Exhibit No. 2, letter from NPS Superintendent Adrienne Coleman, dated February 13, 2008
- Exhibit No. 3, support letter from ANC2E, dated December 10, 2000
- Exhibit No. 4, support letter from ANC2E, dated December 7, 2006
- Exhibit No. 5, support letter from CAG, dated January 8, 2008
- Exhibit No. 6, support letter from ANC2E, dated January 10, 2008
- Exhibit No. 7, support letter from ANC2E, dated February 7, 2011
- Exhibit No. 8, support letter from D. Cary Mitchell, Esq, dated February 7, 2011
- Exhibit No. 9, photo of the oak tree where it meets the path at the Dumbarton Street Tot Lot
- Exhibit No. 10, support letter from Jennifer Altemus, CAG, dated December 28, 2011
- Exhibit No. 11, support letter from Edith Schafer, dated January 5, 2012

Copy to:

Ms. Ruth Werner, Office of CM Jack Evans  
Mr. Jim Sebastian, DC DDOT  
Ms. Cindy Cox, NPS

GOVERNMENT OF THE DISTRICT OF COLUMBIA

## Advisory Neighborhood Commission 2E



Representing the communities of Burleith, Georgetown and Hillandale  
3265 S Street, NW • Washington, DC 20007  
(202) 724-7098 • [anc2e@dc.gov](mailto:anc2e@dc.gov)

**Exhibit No. 1**

By email

April 12, 2011

Sri Sekar  
c/o Department of Park and Recreation  
3149 16th Street, NW  
Washington, DC 20010

Dear Sri Sekar,

Advisory Neighborhood Commission 2E, during its regular monthly public meeting held on April 4, 2011, duly noticed and at which seven commissioners were present constituting a quorum, unanimously adopted the following resolution:

ANC 2E is proud to designate the Friends of Rose Park as the official community representative for Rose Park.

ANC2E Commissioners Lewis, Starrels, Solomon, Birch, Eason, Jones and Sticka, or any one or more of them, are authorized to act for ANC2E in this matter or any matters which may come before the Department relating thereto.

Sincerely,

Ron Lewis  
Chair, ANC 2E

COMMISSIONERS:

Ed Solomon, District 1 Ron Lewis, District 2 Jeff Jones, District 3 Jake Sticka, District 4  
Bill Starrels, District 5 Tom Birch, District 6 Charles F. Eason, Jr., District 7



IN REPLY REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE  
National Capital Region  
Rock Creek Park  
3545 Williamsburg Lane, N.W.  
Washington, D.C. 20008-1207



FEB 13 2008

Exhibit No. 2

Mr. David Salwen, President  
Friends of Rose Park, Inc.  
2816 Dumbarton Street, N.W.  
Washington, D.C. 20007

Dear Mr. Salwen:

We appreciate your contacting us to express your concerns about the path in Rose Park.

Our position on the management of the Rose Park path has not changed. We intend to continue to manage it in the manner that is has been for the past 10 years. We agreed several years ago that the path should remain in its current location and at its current width. We also agree that the path should be renovated. Through an agreement between the National Park Service and the D.C. Department of Transportation (DDOT), both agencies have contributed funding to rehabilitate not only the Rose Park path, but other segments of Rock Creek Park's trail system.

While there are guidelines (ASHTO) that recommend a width of 10 feet for multi-use trails, it is not a requirement. In fact, because of space limitations, many portions of Rock Creek Park's trails do not exceed 8 feet or less.

The Rose Park path has always been a multi-use facility, and it not the intention of the National Park Service to begin to exclude bikers, not to mention the unenforceability of such a policy. Since the path will not be widened, it is important for all users to understand that they must share the pathway, as they do with all other areas of Rock Creek Park's trail system.

We, too, look forward to a refurbished path that all users can enjoy. If you have questions, please contact me at 202-895-6004.

Sincerely,



Adrienne A. Coleman  
Superintendent, Rock Creek Park

Cc: The Honorable Jack Evans  
D.C. City Council  
1350 Pennsylvania Avenue, N.W., Rm. 106  
Washington, D.C. 20004

The Honorable Tom Birch  
ANC Commissioner  
1240 29<sup>th</sup> Street, N.W.  
Washington, D.C. 20007

Ms. Denise R. Cunningham  
Citizens Association of Georgetown  
1365 Wisconsin Avenue, N.W., Suite 200  
Washington, D.C. 20007

Mr. Jim Sebastian  
D.C. Department of Transportation

Mr. Clark Ray, Acting Director  
D.C. Department of Parks and Recreation  
3149 16<sup>th</sup> Street, N.W.  
Washington, D.C. 20010



GOVERNMENT OF THE DISTRICT OF COLUMBIA  
**Advisory Neighborhood Commission 2E**

Representing the communities of Burleith, Foxhall-MacArthur,  
Georgetown and Hillandale  
3265 S Street, NW • Washington, DC 20007  
(202) 338-7427 • FAX (202) 338-0279 • anc2e@erols.com

**Exhibit No. 3**

December 10, 2000

Pamla H. Prochnow  
Friends of Rose Park  
2525 P Street, NW  
Washington, DC 20007

Dear Pam:

Thank you very much for attending our ANC 2E public meeting on December 5, 2000. It was good to hear from you that the National Park Service had decided to withdraw the proposal to widen the path at Rose Park. In the spirit of the evening the ANC with a quorum present passed the following resolution:

**ANC 2E puts itself on record as being opposed to widening  
the existing path at Rose Park.**

Please keep us informed of the future restoration plans at Rose Park and let us know if we can help in any way.

Happy Holidays.

Sincerely,

Peter Pulsifer  
Chair, ANC 2E

COMMISSIONERS:

Scott Polk, District 1 Fran Goldstein, District 2 Peter Pulsifer, District 3 Barbara Zartman, District 4  
Matt Payne, District 5 Bill Starrels, District 6 Mark Ryan, District 8

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
**Advisory Neighborhood Commission 2E**  
Representing the communities of Burleith, Georgetown and Hillandale  
3265 S Street, NW • Washington, DC 20007  
(202) 338-7427 • FAX (202) 338-0279 • anc2e@erols.com

December 7, 2006

**Exhibit No. 4**

Kimberly Flowers, Director  
Department of Parks and Recreation  
3149 16<sup>th</sup> Street, NW  
Room 207  
Washington, DC 20010

**RE: Foot Paths in Rose Park, Georgetown**

Dear Superintendent Coleman:

At the December 5, 2006 public meeting of ANC 2E, which was duly noticed and attended by all seven commissioners, Commissioner Haley made the following motion passed by a unanimous vote:

Whereas, ANC 2E commends the community for its dedication to improving facilities at Rose Park for the enjoyment and use of all. We are looking forward to review plans prepared for a much needed renovation of the Rose Park footpath.

Be it Resolved that:  
ANC 2E supports the Friends of Rose Park's efforts and desire for maintenance of the footpaths in their existing location and at their existing width;  
ANC 2E supports the rehabilitation of the Rose Park footpaths; and  
ANC 2E strongly objects to the widening of the footpaths or any change in their location.

We hope you will give our position thoughtful consideration. Thank you.

Sincerely,

Ed Solomon  
Chair, ANC 2E

COMMISSIONERS:

Ed Solomon, District 1   John Lever, District 2   Bill Skelsey, District 3   Brett Clements, District 4  
Bill Starrels, District 5   Gunnar Halley, District 6   Charles Eason, District 7

Exhibit No. 5

January 8, 2008

Susan Gygi,  
Senior Transportation Planning Engineer  
HNTB Corporation  
2900 South Quincy Street, Suite 200,  
Arlington, Va. 22206

Re Georgetown Transportation Study

Dear Ms. Gygi:

As you may know the Citizens Association of Georgetown is made up of over 1100 Georgetown residents who support the CAG mission "to preserve the historic character, to develop the aesthetic values of Georgetown . . . to help protect the interests of the residents and homeowners, and to assist in making it a pleasant place in which to live." Our active Board of (fourteen) Directors spearheads community education and advocacy regarding historic preservation and zoning, Alcoholic Beverage Control issues, and many other issues concerning streetscape, parks, traffic, parking, and utilities.

We have reviewed with interest the "Draft Report of Existing Conditions" dated November 21, 2007. Please note that a correction is needed with respect to the path through Rose Park. On page 9 and in Figure 7 this is referred to as an "existing bike trail". This is inaccurate. It is a path approximately 4' in width, and should be referred to as a 'footpath'.

Please also note that CAG supports the Resolution passed by unanimous vote by the ANC2E on December 7, 2006 that the footpath through Rose Park should be rehabilitated but not widened. A copy of the Resolution is attached for your reference.

Sincerely,

Denise Cunningham  
President

32-27

*Response to 32-27*

The current width of the Rose Park Trail varies from four to five feet, which is below DDOT's and AASHTO's minimum width for a multi-use trail (8 feet). Taking into account the Friends of Rose Park concerns, the preferred alternative would resurface the Rose Park trail to a six-foot width, which is the standard width of a DDOT residential sidewalk.

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
**Advisory Neighborhood Commission 2E**

Representing the communities of Burleith, Georgetown and Hillandale  
3265 S Street, NW • Washington, DC 20007  
(202) 338-7427 • FAX (202) 338-0279 • anc2e@erols.com

January 10, 2008

**Exhibit No. 6**

Mr. Clark Ray  
Acting Director  
D.C. Department of Parks and Recreation  
3149 16<sup>th</sup> Street, N.W.  
Washington, D.C. 20010

Mr. Emeka Moneme  
Director  
D.C. Department of Transportation  
2000 14<sup>th</sup> Street, N.W., 6<sup>th</sup> Floor  
Washington, D.C. 20009

Ms. Adrienne A. Coleman  
Superintendent, Rock Creek Park  
National Park Service  
3545 Williamsburg Lane, N.W.  
Washington, D.C. 20008-1207

**RE: Rose Park Pedestrian Pathways**

Dear Mr. Ray, Mr. Moneme, and Ms. Coleman:

At the January 2, 2008 regularly scheduled public meeting of ANC 2E, at which a quorum was present, the following resolution passed by a unanimous vote:

Whereas ANC 2E commends the community for its dedication to improving facilities at Rose Park, including a much needed renovation of the Rose Park footpaths:

Be it resolved that ANC 2E supports the Friends of Rose Park's efforts and desire for maintenance of the footpaths in their existing location and at their existing width; ANC 2E supports the rehabilitation of the Rose Park footpaths; and ANC 2E strongly objects to the widening of the footpaths or any change in their location.

We trust that you will give this resolution its full weight. Thank you for your attention to this matter.

Ed Solomon

Chair, ANC 2E

GOVERNMENT OF THE DISTRICT OF COLUMBIA

**Advisory Neighborhood Commission 2E**

Representing the communities of Burleith, Georgetown and Hillandale  
3265 S Street, NW • Washington, DC 20007  
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February 7, 2011

**Exhibit No. 7**

Mr. Jesus Aguirre  
Director, D.C. Department of Parks and Recreation  
3149 16<sup>th</sup> Street, NW  
Washington, DC 20010

Mr. Terry Bellamy  
Interim Director, D.C. Department of Transportation  
2000 14th Street, N.W., 6th Floor  
Washington, D.C. 20009

Mr. Stephen Syphax  
Acting Superintendent, Rock Creek Park  
National Park Service  
3545 Williamsburg Lane, N.W.  
Washington, D.C. 20008-1207

**Re: Rose Park Foot Path**

Dear Director Aguirre, Director Bellamy and Superintendent Syphax:

Advisory Neighborhood Commission 2E, at a public meeting held on January 31, 2011, duly noticed and at which six commissioners were present constituting a quorum, adopted the following resolution:

ANC 2E supports the Friends of Rose Park's efforts and desire for maintenance of the pedestrian foot path in its existing location and at its existing width; ANC 2E supports the rehabilitation of the Rose Park pedestrian foot path but ANC 2E strongly objects to the widening of the pedestrian foot path or any change in its location.

ANC 2E Commissioners Birch, Solomon, Lewis, Sticka, Starrels, and Jones, or any one or more of them, are authorized to act for ANC 2E in this matter and any matters which may come before the D.C. government or the National Park Service relating thereto.

Sincerely,

Ron Lewis  
Chair, ANC 2E

cc by email: Austina Casey, Project Manager, D.C. Department of Transportation

Exhibit No. 8

LAW OFFICES  
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RICHARD D. RUBINO  
MARY J. SISAK  
D. CARY MITCHELL  
SALVATORE TAILLEFER, JR.

ARTHUR BLOOSTON  
1914 - 1999

February 7, 2011

WRITER'S CONTACT INFORMATION  
202-828-5538  
cary@bloostonlaw.com

Via First Class Mail and Electronic Filing

Mr. Terry Bellamy  
Interim Director  
DC Department of Transportation  
2000 14th Street, N.W., 6th Floor  
Washington, D.C. 20009

Mr. Jesus Aguirre  
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Washington, D.C. 20010

Mr. Stephen Syphax  
Acting Superintendent  
Rock Creek Park  
3545 Williamsburg Lane, N.W.  
Washington, D.C. 20008-1207

Ms. Austina Casey  
Project Manager  
DC Department of Transportation  
2000 14th Street, N.W., 7th Floor  
Washington, D.C. 20009

Re: Rose Park Pedestrian Path - Georgetown

Dear Mr. Bellamy, Mr. Syphax, Mr. Aguirre, and Ms. Casey:

I have been a Georgetown resident since 1996 and I am writing to you in support of the position taken by Friends of Rose Park, the ANC 2E and the Citizens Association of Georgetown in regard to the Pedestrian Path which runs through Rose Park in Georgetown.

In the second Environmental Assessment which you are conducting in regard to the Rock Creek Park Multi-Purpose Trail you must consider that the 3,000 foot segment of the Rose Park Pedestrian Path is a separate pedestrian path which runs through Rose Park and must not be considered as a multi-use trail.

32-28

I am an avid bicycle rider and applaud the District for its work in developing bicycle lanes and participation in the Capital Bikeshare program. However, widening the path and/or encouraging bicycle traffic through Rose Park is a recipe for disaster. The path is used intensively by children and senior citizens who live in my neighborhood, as well as joggers, families with pets, and commuters walking to and from the Dupont Circle metro station. I would never consider riding my bike on that short stretch of footpath because of the dangers this would pose to my neighbors and their children/pets. Others who are less familiar with Rose Park are not likely to be as respectful when they're "looking for a shortcut between Georgetown and Dupont Circle" which is all the proposed widening of the pathway would do

32-29

Response to 32-28

Rose Park trail options are addressed separately from the Rock Creek Park multi-use trail in the EA. In consideration of comments received regarding Rose Park, the preferred alternative would resurface the Rose Park Trail to a maximum six-foot width, whereas the Rock Creek Park multi-use trail would be resurfaced at six to ten foot widths.

Response to 32-29

The preferred alternative for the project has been determined to have a net benefit on human health and safety, based on the repair and rehabilitation of trails and other proposed improvements. Rose Park Trail Option B, described on page 34 of the EA, details the resurfacing of the Rose Park trail along its current alignment. Rehabilitation of the trail at its current width was dismissed in section 2.8.3 of the EA.

At Rose Park, the current, narrow width of the trail has caused ponding issues and has forced users from the trail, trampling the vegetation along the path. A wider trail would accommodate the multiple user types of the path in a safer manner. Trail widening and a smoother surface could further promote use of the trail. However, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added and raise safety awareness. In further consideration of pedestrian/bicyclist safety, a synopsis of *Conflicts on Multiple-Use Trails: Synthesis of the Literature and State of the Practice* was added to Chapter 4 of the Final EA under Human Health and Safety.

February 7, 2011

Comments of D. Cary Mitchell and Samantha A. Tysz  
Page 2

I have personally witnessed numerous "close calls" and a handful of accidents/conflicts between bicycles and pedestrians in the narrow stretch of path between the toddler play area and steep hillside. Due to the location of the fenced play area and large trees, there is no room for widening the pathway and this will become a chokepoint. I don't like to "rat out" my fellow cyclists, but the individuals who choose to ride on the Pedestrian Path now seldom dismount out of respect for others. Making the path wider in other parts of Rose Park will only make matters worse. Bicycles are simply not compatible with all the strollers and tricycles in the area.

32-30

32-31

Signs and maps – and construction resources – should instead encourage cyclists to use the existing Multi-Use Trail along Rock Creek Parkway. This would channel visitors and local cyclists to access the excellent Georgetown Waterfront Park (which is nearing completion) as well as the C & O Canal National Historic Park and to take advantage of these resources. It would also promote use of the newly-built Capital Bikeshare station at 30<sup>th</sup> and K Streets and it would discourage bicyclists from zooming up the sidewalk or riding against one-way traffic to cut back across the bridge at M and 26<sup>th</sup> Street. It would be dangerous to channel increased bicycle traffic directly onto M Street (where there is fast-moving traffic and a 6" granite curb) or the already busy pedestrian sidewalk where the proposed Rose Park Multi-Use Trail would come to a full stop.

32-32

I believe there are plenty of existing roadways and that provide safe riding in and around Georgetown for responsible bicyclists like me. Widening the path will not only encourage more bicycle use through an area that is not well suited for two-wheeled traffic, but (and take from one who knows) it will actually encourage these riders to go faster. In addition to the increased risk of accidents, turning the Pedestrian Path into a bicycle thoroughfare is also likely lead to additional litter (and increased maintenance costs for DDOT and NPS), and the added water runoff is likely to cause increased erosion on the hillside. Areas adjacent to the path are almost certain to become a rutted, muddy mess and grass in the park will be crisscrossed with makeshift pathways from cyclists taking shortcuts. In sum, turning the Pedestrian Path into a multi-use trail is likely to upset the current peaceful character of Rose Park for the whole community.

32-33

32-34

32-35

In closing, my wife and I respectfully submit that the Rose Park Pedestrian Path must be repaired in its current location and it must be maintained at its current width. We urge you not to move or widen the path for any purpose.

Respectfully submitted,

Cary Mitchell

D. Cary Mitchell  
Samantha A. Tysz, MD  
1228 28<sup>th</sup> Street, NW  
Washington, DC 20007  
Tel. (202) 338-2734

**Response to 32-30, 32-31 and 32-33**

To address concerns regarding trail user safety in the Rose Park area, further consideration of pedestrian/bicyclist user conflicts was added to the EA under Human Health and Safety in Chapter 4. According to the FHWA document *Conflicts on Multi-use Trails: Synthesis of the Literature and State of the Practice*, user conflicts on multiple-use trails are a common concern. Research suggests that minimization of user contact in congested areas is an effective measure to reduce conflicts. Accordingly, the preferred alternative at Rose Park is intended to minimize contact between users by providing a wider, smoother trail that would accommodate different uses. Additional suggestions to reduce conflicts on multi-use trails include educational elements in the form of signage or brochures posted at trailheads to identify safety issues and promote trail sharing. During final design of the trail rehabilitation, DDOT and NPS would consider these elements to improve the safety of the trail.

**Response to 32-32**

The suggested trail resources and construction are outside the scope of the proposed trail rehabilitation. For the Rose Park trail, signage would be considered during design of the trail rehabilitation to promote safety. NPS and DDOT determined that widening of the Rose Park trail was necessary based on field observation and trail counts in order to accommodate all users. Minimum requirements for multi-use trail facilities involve a trail width of eight feet, for short distances under physical constraints. In consideration of comments received from the Friends of Rose Park, NPS and DDOT propose a six-foot width to resolve concerns.

**Response to 32-34**

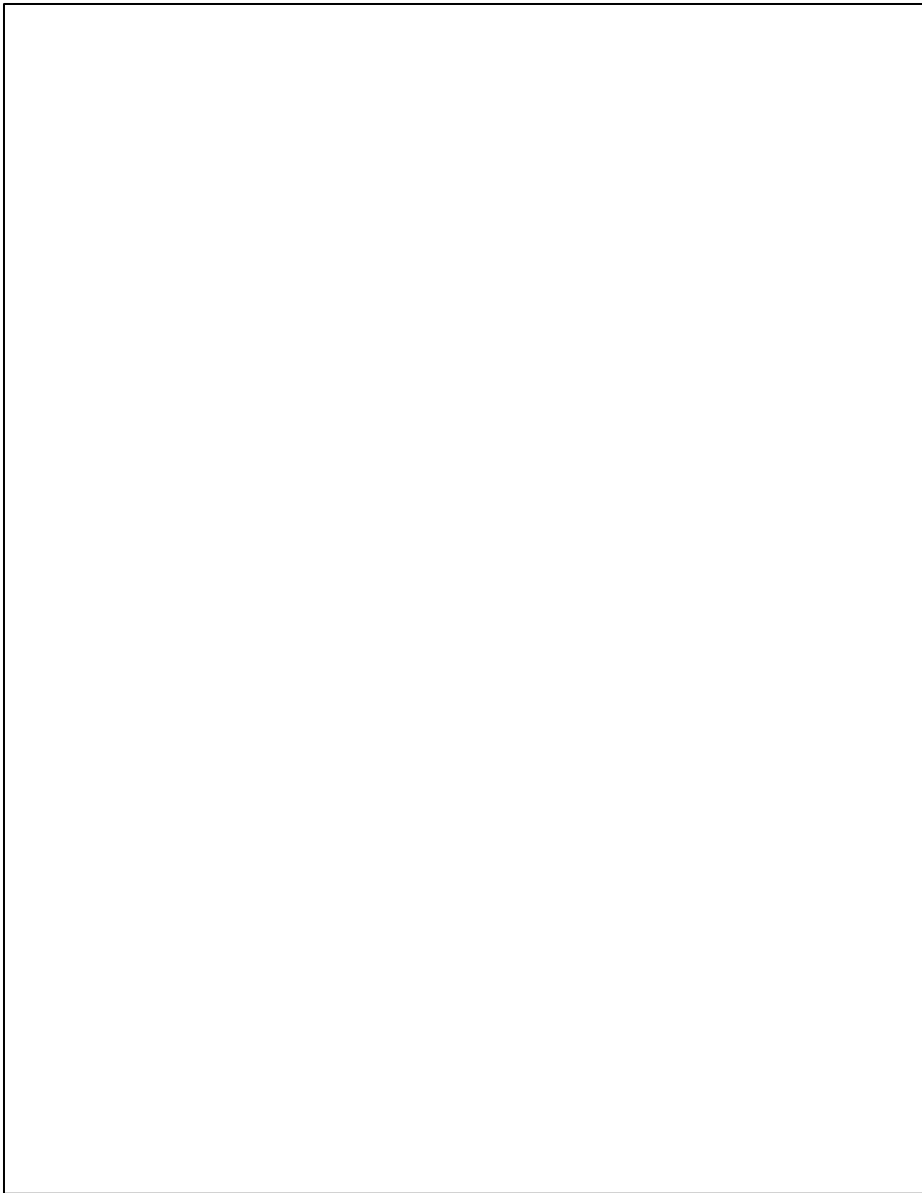
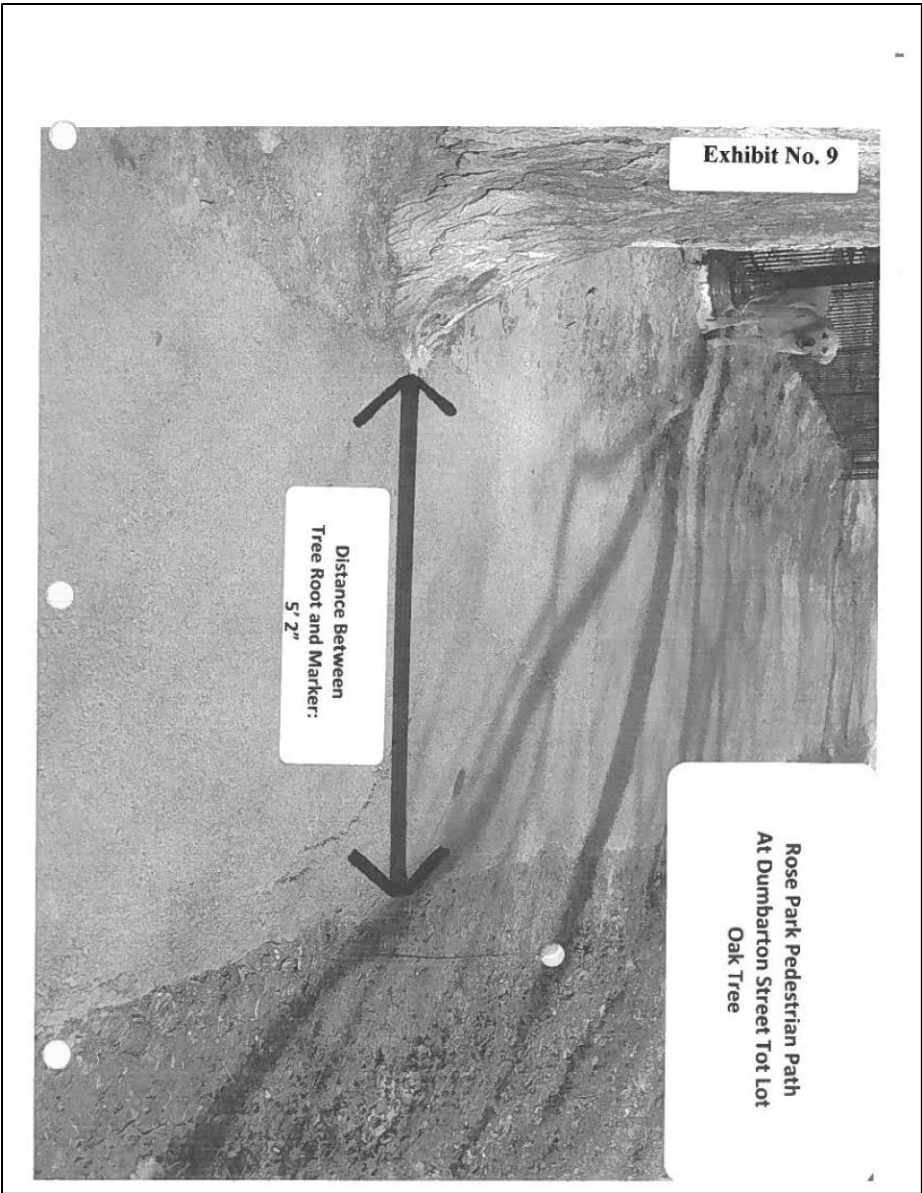
Under the preferred Rose Park trail option, the trail would be resurfaced to a width of six feet - the standard width of a DDOT residential sidewalk. The

effects of the proposed zero- to two-foot widening are not expected to result in additional litter.

***Response to 32-35***

Based on comments received from the Friends of Rose Park and others, the project team conducted several field visits to evaluate drainage concerns at Rose Park and other locations in the project area. During the detailed design phase of the project, flood prone areas would be addressed. Although flood prone areas were not specifically noted in the EA, it is a purpose of the project to install more effective drainage and erosion control. Drainage designs throughout the project would be prepared in coordination with DDOE and in accordance with DDOT Design Manual requirements.





## Citizens Association of Georgetown

1365 Wisconsin Avenue Suite 200  
Washington DC 20007  
202-337-7313  
cagmail@cagtown.org  
www.cagtown.org

Exhibit No. 10

December 28, 2011  
Austina Casey  
D.C. Department of Transportation  
2000 14<sup>th</sup> Street, N.W., 6<sup>th</sup> Floor  
Washington, D.C. 20009

Dear Ms. Casey,

On behalf of the over 1200 members of the Citizens Association of Georgetown, I would like to reiterate our association's long-held position on the potential impact from rehabilitating, widening, rerouting or otherwise modifying the Rose Park Path. We believe:

- 1) The path should remain in its current location and at its current width.
- 2) The path should be renovated as its current condition is hazardous.
- 3) No bike traffic should be allowed on the path because of the dangers of mixing uses on such a narrow path and because of the intense use of the path by children and pedestrians.

32-36

We stand firmly in sync with the Friends of Rose Park and Advisory Neighborhood Commission 2E in our position.

Please contact me should you have any questions regarding this matter.

Sincerely,

Jennifer M. Altemus  
President  
Citizens Association of Georgetown

Cc: Mr. Jesus Aguirre, Director  
D.C. Department of Parks and Recreation  
3149 16<sup>th</sup> Street, N.W.  
Washington, D.C. 20010

Mr. Emeka Moneme, Director  
D.C. Department of Transportation  
2000 14<sup>th</sup> Street, N.W., 6<sup>th</sup> Floor  
Washington, D.C. 20009

Mr. Stephen Syphax, Acting Superintendent  
Rock Creek Park  
National Park Service

3545 Williamsburg Lane, N.W.  
Washington, D.C. 20008  
Citizens Association of Georgetown  
1365 Wisconsin Avenue Suite 200  
Washington DC 20007  
cagmail@cagtown.org  
www.cagtown.org

### *Response to 32-36*

The preferred alternative for the project has been determined to have a net benefit on human health and safety, based on the repair and rehabilitation of trails and other proposed improvements. Rose Park Trail Option B, described on page 34 of the EA, details the resurfacing of the Rose Park trail along its current alignment. Rehabilitation of the trail at its current width was dismissed in section 2.8.3 of the EA.

At Rose Park, the current, narrow width of the trail has caused ponding issues and has forced users from the trail, trampling the vegetation along the path. A wider trail would accommodate the multiple user types of the path in a safer manner. Trail widening and a smoother surface could further promote use of the trail. However, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added and raise safety awareness. In further consideration of pedestrian/bicyclist safety, a synopsis of *Conflicts on Multiple-Use Trails: Synthesis of the Literature and State of the Practice* was added to Chapter 4 of the Final EA under Human Health and Safety.

**Exhibit No. 11**

Dear All,

5 January 2012

I am writing to protest strongly the widening of the path at Rose Park. I write as a long time devotee of that park.

Rose Park is like one of those happy pictures in children's books where everything is happening. In those books trains are going across trestles, airplanes are flying over head, boats are sailing by, smoke is rising from smokestacks and so on. And so in our much loved neighborhood park we have little kids riding scooters, big guys shooting hoops, plenty of jungle gym, slide and sandbox activity, dogs moseying around, first rate tennis players playing tennis, mothers and nannies hanging out. Add pleasant informal socializing, and a farmers' market in season, and you have a compelling example of what a local park should be.

Here is my point: It has a cheerful and excellent messy vitality that should not be destroyed by having a bicycle commuter thruway run through it. I am speaking about ~~against~~ the widening of the path from P Street to M Street that runs along the side of the park in order to facilitate biking commuters. Of course bicycles are a good idea in our energy-haunted society, but we haven't figured out how to manage them yet. They continue to be dangerous to kids and fearsome to pedestrians. One way not to handle the problem is to turn Rose Park into a speedway.

32-37

There are other routes, particularly the one along Rock Creek Parkway. That one is clearly dangerous for pedestrians at certain times of day. Please don't do that to Rose Park.

32-38

Sincerely yours,

Edith Schafer

1530 30<sup>th</sup> Street, NW

***Response to 32-37***

The preferred alternative for the project has been determined to have a net benefit on human health and safety, based on the repair and rehabilitation of trails and other proposed improvements. Rose Park Trail Option B, described on page 34 of the EA, details the resurfacing of the Rose Park trail along its current alignment. Rehabilitation of the trail at its current width was dismissed in section 2.8.3 of the EA.

At Rose Park, the current, narrow width of the trail has caused ponding issues and has forced users from the trail, trampling the vegetation along the path. A wider trail would accommodate the multiple user types of the path in a safer manner. Trail widening and a smoother surface could further promote use of the trail. However, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added and raise safety awareness. In further consideration of pedestrian/bicyclist safety, a synopsis of *Conflicts on Multiple-Use Trails: Synthesis of the Literature and State of the Practice* was added to Chapter 4 of the Final EA under Human Health and Safety.

***Response to 32-38***

NPS and DDOT determined that widening of the Rose Park trail was necessary based on field observation and trail counts in order to accommodate all users. Minimum requirements for multi-use trail facilities involve a trail width of eight feet. In consideration of comments received from the Friends of Rose Park, NPS and DDOT propose a six-foot width to resolve concerns.

Ms. Austina Casey, Project Manager  
DC Department of Transportation  
Attn: Rock Creek Trail EA  
55 M Street S.E., Suite 500  
Washington, D.C. 20003

January 6, 2012

Dear Ms. Casey,

I am writing today in opposition to the National Park Service proposal to widen the pedestrian path which runs through Rose Park. I concur with the need to rehabilitate the path but at its current width and in its current location.

Several years ago I participated in an informal study of the number and kinds of users of the path, monitoring its use throughout the day. We found that by far the greatest use of the path was by pedestrians, walkers on their way to and from work in the mornings and late afternoons, neighborhood residents walking their dogs, a small number of joggers and even smaller number of bicyclers. In the course of the daytime hours the path was principally used by significant numbers of parents and nannies with small children walking or pushing strollers to and between the two small playgrounds adjacent to the path. Table 7 of the environmental assessment measured similar use during a two-hour period between 4:45 PM and 6:45 PM on a normal week day in May of last year. According to that table, out of 289 users of the path during that short time frame, 259 were on foot including a small number of joggers, only 30 were bicyclers. In other words, approximately 90 % of the usage is by pedestrian traffic.

My concern as a neighbor and frequent user of the park is that the assessment has failed to take into account the safety issues with regard to pedestrians if the path is widened. In addition there is a very beautiful large tree shading one of the playgrounds which would surely be adversely affected by widening the path.

33-01

Furthermore, I do not understand the need to designate the Rose Park trail as a bicycle path. Among the stated purposes of the rehabilitation include preserving natural resources, improving the safety of the users of the path and enhancing the connectivity of the Rock Creek Multi-use Trail. Changing the width and/or location of the Rose Park path would not preserve natural resources, not would it improve the safety of the users of the path, since in my personal experience, the major danger I encounter on my walks along the path is from bicyclers riding at a fast pace. As for the connectivity issue, this path is principally used to connect M St. in Georgetown to the Dupont Circle area, neither of which is part of the Rock Creek Trail. The surface streets running alongside Rose Park have very little traffic and should not pose undue danger to bicyclers moving between those two points.

33-02

33-03

In addition there is already an excellent and recently re-paved bike path in Rock Creek Park just below and parallel to the Rose Park path. This path already connects to the Georgetown Historic District from K Street and from the paved

### ***Response to 33-01***

The preferred alternative for the project has been determined to have a net benefit on human health and safety, based on the repair and rehabilitation of trails and other proposed improvements. Rose Park Trail Option B, described on page 34 of the EA, details the resurfacing of the Rose Park trail along its current alignment. Rehabilitation of the trail at its current width was dismissed in section 2.8.3 of the EA.

At Rose Park, the current, narrow width of the trail has caused ponding issues and has forced users from the trail, trampling the vegetation along the path. A wider trail would accommodate the multiple user types of the path in a safer manner. Trail widening and a smoother surface could further promote use of the trail. However, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added and raise safety awareness. In further consideration of pedestrian/bicyclist safety, a synopsis of *Conflicts on Multiple-Use Trails: Synthesis of the Literature and State of the Practice* was added to Chapter 4 of the Final EA under Human Health and Safety.

### ***Response to 33-02***

As stated on page 38 and within Chapter 4 of the Final EA, protection measures and BMPs would be implemented to avoid impacts to all types of park vegetation to the extent possible. Vegetation protection measures for the oak tree near the Dumbarton Street playground area may include development of a tree save plan by an arborist or licensed tree expert, or installation of tree protection fencing. Impacts to the tree's root system would be avoided to the extent possible. If necessary, alternative trail materials and/or narrowing of the trail would be utilized to preserve the tree's roots.

path alongside the ramp next to the Four Seasons Hotel. I can see that a paved walkway alongside the P Street exit ramp would make the Rock Creek Trail more accessible for bicyclers, pedestrians and visitors from the Dupont Circle area, but that does not require traversing Rose Park.

I hope all of these points will be taken into consideration and fully examined before any decision is made with regard to the Rose Park path. Please keep the path at its current width and in its current location.

Sincerely yours,

Teel Oliver  
1313 28<sup>th</sup> St. N.W.  
Washington, D.C. 20007

Cc: Mr. Terry Bellamy  
Director, DC Department of Transportation  
55 M Street, S.E. Suite 500  
Washington, D.C. 2000  
terrybellamy@dc.gov

Mr. Joseph Lawson, Division Administrator  
Federal Highway Administration  
1990 K Street, N.W., Suite 510  
Washington, D.C. 20006  
christopher.lawson@fhwa.dot.gov

Ms. Tara Morrison, Superintendent  
Rock Creek Park  
3545 Williamsburg Lane, N.W.  
Washington, D.C. 20008  
Tara.morrison@nps.gov

Mr. Peter May, Associate Regional Director  
National Park Service  
1100 Ohio Drive, S.W.  
Washington, D.C. 20242  
peter\_may@nps.gov

Mr. Jesus Aguirre, Director  
D.C. Dept. of Parks & Recreation  
3149 16<sup>th</sup> St. N.W.  
Washington, D.C. 20010  
Jesus.aguirre@dc.gov

### ***Response to 33-03***

Under the preferred alternative, the Rose Park trail would be resurfaced along its current alignment. DDOT would not designate the Rose Park trail as a bicycle path. Under the preferred Rose Park trail option, the trail would be resurfaced to a width of 6 feet, which is the required minimum width of DDOT residential sidewalks. According to DDOT policy, bicycle facilities require a minimum width of 10 feet.

To address concerns regarding trail user safety in the Rose Park area, further consideration of pedestrian/bicyclist user conflicts was added to the EA under Human Health and Safety in Chapter 4. According to the FHWA document *Conflicts on Multi-use Trails: Synthesis of the Literature and State of the Practice*, user conflicts on multiple-use trails are a common concern. Research suggests that minimization of user contact in congested areas is an effective measure to reduce conflicts. Accordingly, the preferred alternative at Rose Park is intended to minimize contact between users by providing a wider, smoother trail that would accommodate different uses. Additional suggestions to reduce conflicts on multi-use trails include educational elements in the form of signage or brochures posted at trailheads to identify safety issues and promote trail sharing. During final design of the trail rehabilitation, DDOT and NPS would consider these elements to improve the safety of the trail.

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January 5, 2012


Mr. Terry Bellamy  
Director, DC Department of Transportation  
55 M Street, S.E., Suite 500  
Washington, D.C. 20003

Dear Mr. Bellamy:

I am writing to you to express my support for the position taken for more than a decade by Friends of Rose Park to keep the pedestrian path, which runs through Rose Park from M Street to P Street, at its current width and in its current location. NPS has previously promised our community that the path would be rehabilitated but remain in its current location and at its current width. Any widening of the path that would lead to increased use of bicycles, scooters, rollerblades or skateboards along the path will result in danger to the hundreds of small children and toddlers who travel between all of the play areas in the park on a weekly basis, and to the elderly and other pedestrians who walk along the path at any given time. The initial draft of the Environmental Assessment put out by DDOT and FHA fails to address the major safety issues to pedestrians on the path and to children using the play areas adjacent to the path, which exist if the path is widened to 6 or 8 feet. Thank you.

34-01

Sincerely yours,



Mary Carroll Platt  
2829 O Street, NW  
Washington, DC 20007

### *Response to 34-01*

To address concerns regarding trail user safety in the Rose Park area, further consideration of pedestrian/bicyclist user conflicts was added to the EA under Human Health and Safety in Chapter 4. According to the FHWA document *Conflicts on Multi-use Trails: Synthesis of the Literature and State of the Practice*, user conflicts on multiple-use trails are a common concern. Research suggests that minimization of user contact in congested areas is an effective measure to reduce conflicts. Accordingly, the preferred alternative at Rose Park is intended to minimize contact between users by providing a wider, smoother trail that would accommodate different uses. Additional suggestions to reduce conflicts on multi-use trails include educational elements in the form of signage or brochures posted at trailheads to identify safety issues and promote trail sharing. During final design of the trail rehabilitation, DDOT and NPS would consider these elements to improve the safety of the trail.

PEIPC Correspondence  
Keep Private: Yes  
Date Received: 1/11/12

I have commuted from Silver Spring to DC on this trail for many years and I welcome the plans to rehabilitate it.

A trail is only as safe as its most dangerous links and the two most dangerous links on the Rock Creek Trail are the zoo tunnel and the Shoreham Drive crossing. I applaud the plan to widen the path within the tunnel. Long overdue. The proposal for Shoreham Drive, on the other hand, leaves much to be desired. This is a treacherous crossing where high speed traffic often does not slow down for bikers. The danger is multiplied at night. The signage does not tell motorists to stop for cyclists and indeed very few do. Cyclists must wait for an opening and then take their chances against high-speed vehicles.

Things that can be done:

1. Signs requiring drivers to stop.

2. Lights to illuminate the crossing. Solar powered lights have been successfully installed on the Metropolitan Branch Trail.

3. A traffic light activated by cyclists or pedestrians to stop traffic.

35-01

35-02

35-03

There is an additional hazard for bike commuters around 6:30 pm when the one-way traffic becomes two-way again.

This crossing at night is likely a deterrent to many would-be bike commuters. The least that should be done is the installation of lights so that bikers and pedestrians are visible to drivers.

35-04

### ***Response to 35-01 and 35-03***

Since the Draft EA, crossing improvements were constructed at Shoreham Drive as part of the Beach Drive Road Reconstruction Project, in accordance with the FHWA *Manual for Uniform Traffic Control Devices (MUTCD)* standards. The crossing was realigned to include a single crosswalk. Safety was considered in the design of the new crossing, which includes stop signs for trail users and signs to warn motorists in advance of the crossing. Further improvement of the crossing is no longer proposed under the Rock Creek Multi-Use Trail Rehabilitation.

### ***Response to 35-02 and 35-04***

Since the Draft EA, crossing improvements were constructed at Shoreham Drive as part of the Beach Drive Road Reconstruction Project. In general, additional lighting would be excluded from Rock Creek Park project plans because the park is closed from dusk to dawn.

PEPC Correspondence  
Keep Private: No  
Name: Donald Francis  
Address: 2801 Allendale Pl, NW Washington DC, 20008  
Email: donaldfrancis@gmail.com  
Date Received: 1/11/12

I live near the intersection of Brandywine St. and Broad Branch Road. I strongly urge that any trail improvements to the Rock Creek Park trails include the addition of a trail or lane for bicycles and pedestrians from Beach Drive going north along Broad Branch Road. If the Park Service itself cannot construct such a trail, I urge the Park Service to work with the DC Government to allow a widening of Broad Branch Road to permit a shoulder lane for bicycles and pedestrians. Such an improvement would vastly increase safety, and would provide access to the trail along Rock Creek by the many residents in the Forest Hills and Chevy Chase neighborhoods, both primary objectives of the Rock Creek Park Multi-Use Trail Rehabilitation project.

36-01

I've recently seen increased levels of bicycle traffic on Broad Branch Road. I presume in response to the city's increased promotion of bicycle use. However, Broad Branch Road is extremely dangerous to bicyclists and pedestrians because of its narrow and winding nature. I have seen pedestrians seek safety by moving off the road to stand in the woods whenever a car passes. It is only a matter of time before someone is severely injured.

Presently no safe and ready access to the trail along Rock Creek exists for Forest Hills and Chevy Chase neighborhood residents. Such access now requires taking Connecticut Avenue to Tilden Street, which is not a practical option for most. My solution to the situation is to convey my bicycle by car to a parking area along the Rock Creek Bike Path from where I can safely ride - not an eco-friendly or convenient way to go for a bike ride. Neighborhood residents could readily and safely bike or walk to Rock Creek if Broad Branch Road had a trail or bike/pedestrian lane. I for one, and I believe many others, would visit the park much more frequently if this access were available. Plus, since the Rock Creek Trail connects to many other bicycle paths and lanes, a trail or lane along Broad Branch Road would grant access to much of the city for bicyclists in the aforementioned neighborhoods.

36-02

A portion of Broad Branch Road north of Brandywine Street has previously had a blacktopped sidewalk that now exists in very poor condition. Several years ago it was closed from use by the placement of large rocks along the walk. It is an eyesore and closed for no benefit apparent to the average citizen. This portion along Broad Branch Road could be readily rehabilitated. However, despite the greater challenge, I believe the most critical trail addition should be from Beach Drive north to Brandywine Street, since this would permit access from the Rock Creek Trail to sidewalks and to wider, safer residential streets connecting to the adjacent neighborhoods.

Thank you for your consideration.

Donald Francis

### ***Response to 36-01 and 36-02***

As described in Chapter 1 of the EA, the NEPA process involves public agency involvement early in the project development to identify the scope of issues to be addressed and the project area. Based on the early coordination and public outreach, dedicated lanes for bicyclists and pedestrians on the trail were determined to be outside of the scope of the trail rehabilitation. Similarly, widening to accommodate a new lane along Broad Branch road was determined to be outside of the scope of this project. Improvements to all modes of transportation on Broad Branch Road are being considered by DDOT under the Rehabilitation of Broad Branch Road, NW project.



Friends,

Below are comments I've just submitted on my own behalf to NPS re: the Final Environmental Assessment on the Rock Creek Trail (Due Friday 1/13 at <http://parkplanning.nps.gov/projectHome.cfm?projectId=34546>). As you can see I am generally supportive of the EA's preferred alternative, but I recommend additional low-cost safety measures for the hazardous Shoreham Hill crossing.

Regards,  
Rick Morgan

I am submitting these comments as a bicyclist and user of the Rock Creek Trail over four decades. NPS & DC Government's EA is a welcome and long-overdue prescription for addressing a number of vexing problems with the Rock Creek Trail, and I applaud the thoughtful and comprehensive approach embodied in the EA. That said, I wish to recommend a few critical refinements that I believe could further improve this excellent plan for the Trail.

In general, I believe the EA's preferred alternative represents a thoughtful balance of competing objectives in managing the Rock Creek Trail. I particularly support:

- Reconfiguring the Shoreham Hill trail crossing with a single raised crosswalk at the entrance to Rock Creek Parkway;
- Other trail crossing improvements;
- Widening the sidewalk within the Zoo Tunnel;
- Widening of the trail where feasible without damage to vegetation;
- Improvements to the P Street ramp;
- Improvements to Peirce Mill and Rose Park Trails;
- New pedestrian bridge near Zoo Tunnel; and
- Minimization of erosion and damage to vegetation.

Among the most persistent problems with the Rock Creek Trail is the crossing on Shoreham Hill. This intersection has been a particular source of conflict between trail users and motorists over the years. It has been the location of numerous accidents and near misses and yet has been left in an unchanged, hazardous state

for decades. Installing a raised crosswalk as proposed is a critical first step, but it is not enough to ensure the safety of trail users who are subjected to high speed traffic coming from two directions during the morning rush hour. I therefore urge NPS to implement the following additional low-cost safety measures at the Shoreham Hill crossing:

- Realign the trail with a single raised crosswalk as proposed, but move the crosswalk not uphill (as planned) but *downhill*, where the sightlines are much better for both motorists and trail users (see EA Figure 14). The crosswalk should be as far as possible from the point where Cathedral Ave merges with Shoreham Drive so that trail users won't have to cross at the very point where the two roadways merge;
- Reconfigure the Parkway lanes to include a median strip, so that trail users can cross one lane at a time, thus enhancing safety;
- Install a DOT-approved "rectangular rapid flash beacon" to draw motorists' attention to the crosswalk. These devices are user actuated and therefore flash only when the crossing is in use, thereby minimizing inconvenience for motorists. See <http://safety.fhwa.dot.gov/intersection/resources/techsum/fhwsa09009/fhwsa09009.pdf>.
- Provide appropriate signage on the roadway and trail as well as well-maintained rumble strips for motorists approaching the trail crossing.

37-01

37-02

37-03

37-04

37-05

### ***Response to 37-01, 37-02 and 37-05***

Since the Draft EA, crossing improvements were constructed at Shoreham Drive as part of the Beach Drive Road Reconstruction Project, in accordance with *Manual for Uniform Traffic Control Devices (MUTCD)* standards. The crossing was realigned to include a single crosswalk. Safety was considered in the design of the new crossing, which includes stop signs for trail users and signs to warn motorists in advance of the crossing. Further improvement of the crossing is no longer proposed under the Rock Creek Multi-Use Trail Rehabilitation.

### ***Response to 37-03***

As described in Chapter 1 of the EA, the NEPA process involves public agency involvement early in the project development to identify the scope of issues to be addressed and the significant issues related to the proposed action. Based on the early coordination and public outreach, reconfiguration of the Parkway to include a median strip was determined to be outside the scope of the trail rehabilitation.

### ***Response to 37-04***

New lighting was considered by the project team but dismissed based on standard NPS policy. As described on page 41 of the EA, "Rock Creek Park is closed from dusk to dawn. Furthermore, according to NPS Management Policies (NPS 2006), the NPS seeks to preserve, to the greatest extent possible, the natural lightscapes of parks."

I believe these recommended modifications are consistent with the overall thrust of the EA's preferred alternative and would further enhance the outcomes of planned trail improvements, particularly with respect to safety of trail users.

Thank you for considering my recommendations. I look forward to the important improvements to the Rock Creek Trail consistent with the EA.

Rick Morgan  
5902 32<sup>nd</sup> St, NW  
Washington, DC 20015

PEPC Correspondence  
Keep Private: Yes  
Date Received: 1/12/12

I have logged over 15,000 miles commuting to work year-round by bicycle for the past more than 8 years. I pick up Beach Drive at about Tilden Street and ride to Rock Creek and stay on that past Virginia Ave. Though I mostly bike, I also run the trail 2-8 times per month. I have reviewed the Rock Creek Park Multi-Use Trail Rehabilitation project (which is the trail I ride) and the written plan ("Plan") and have a number of comments.

Of course, the trail is in dire need of attention, and I welcome any improvement. After all, any

improvement is better than none at all. In summary, however, my feeling is that the Project has not been adequately considered and as a result proposes insufficient measures to properly meet its stated goals of, inter alia, safety and visitor experience as a result of "narrow trail widths" that impede trail users and due to the "large number of visitors." (Nov. Plan, pp. 1-2.) I liken the proposed measures to the old adage of

the boy sticking his finger in the dyke? The Project does not do enough to get to where it needs to be since it is not commensurate with the amount of traffic on the path. In addition, while the Plan is well written, it seems to have several major flaws. There is no discussion of whether the proposed widening will meet the current trail traffic needs, and the Plan misinterprets the one document it relies on to set the trail width. It would be a shame to spend time, money and energy on a plan that cannot satisfy usage for years to come.

38-01

38-02

#### FIRST ISSUE ? NO FACTUAL BASIS

An overriding concern is that the Project does not appear to be tied to any factual information about the path or its users. My uncertainty here is because the Project does not clearly identify how data was gathered. During the scoping process, a few meetings were held, and they received 600 comments. (Nov. Plan, pp. 12-13, 167-69.) They also conducted a one-time 2-hour study to count the number of trail users at three locations on the trail. (Nov. Plan, p. 83.) It is not clear how the Project identified the various impact areas, but it seems it was from public comment. (Nov. Plan, pp. 13-15.)

Thus, the Plan is mostly based on the passive identification of impact areas through public comment. Except for the single 2-hour study, the Plan administrators have not taken any active steps to identify impact or hazardous areas or otherwise design the trail. Notably, the Plan does not mention any of the following: (a) survey of trail users (i.e., bike riding, running and walking) other than at 3 discrete points; (b) use of the path by the Plan administrators; (c) study of trail usage on the weekend, morning, in the rain, at night, etc. (i.e., outside of the 2 hours noted in the Plan); (d) any study of trail users at blind spots, areas that gather water, sediment or loose dirt, or other hazardous areas; (e) a study of any actual impediment to trail use (such as other trail users); or (f) information about accidents, incidents and/or safety (whether filed with the police or not).

38-03

But most of all, I expected that the Project would have solicited the input of those who know the most about the path? the trail users themselves. The Project has had two meetings in the last year. And it is quite astonishing to me that there have been NO notices posted on the path, despite my email to Jim Sebastian 6 months ago. I expect that failing alone would be sufficient for a taxpayer to challenge these entire proceedings. When DC was redoing the playground at one of the local public schools, they held literally dozens of meetings for a much less complicated project. The absence of repeated meetings is unacceptable. I expect that future developments of this plan will be posted on the trail.

In retrospect, it must be obvious that a plan cannot be properly constructed without first having an understanding of how the trail is being used. How can someone design a trail if they lack the experience of a trail user? How would you know how wide to make the path to meet the current demand, not to mention projected use of the path?

38-04

#### SECOND ISSUE ? THE PROPOSED PLAN DOES NOT MEET CURRENT TRAIL TRAFFIC

The Plan makes absolutely no mention of how it arrives at a trail width of 8-10 feet. Rather, it refers to a single AASHTO policy issued over a decade ago, to justify the 8 and 10 foot trail widths. (A Policy on

38-05

#### Response to 38-01

Early in development of the project, the cooperating agencies identified the need to improve accessibility, safety, and visitor experience of the Rock Creek Park Multi-Use trail. Through preliminary studies, environmental assessment, agency coordination, and public outreach, a preferred alternative is proposed to address the project needs while maintaining the park's natural and cultural resources. The Rock Creek Multi-Use Trail Rehabilitation EA is in full compliance with the requirements of NEPA; the Council on Environmental Quality (CEQ) Regulations (40 CFR 1500-1508); FHWA Technical Advisory T6640; the NPS NEPA compliance guideline (DO-12), and the National Historic Preservation Act of 1966, as amended. The work is also compliant with NPS Management Policies.

#### Response to 38-02

Trail widths under the preferred alternative were developed as a result of multiple field walks, agency coordination and public outreach. The proposed width of the Rock Creek Multi-Use trail would be six to 10 feet, based on physical and environmental constraints. The proposed width is in accordance with multi-use trail criteria established by AASHTO, DDOT and NPS and is expected to enhance safety and the visitor experience on the trail.

#### Response to 38-03

The public scoping process was used to help determine the scope of issues to be addressed and for identifying the significant issues related to the project. While public scoping helped in determining project issues and concerns, it was not the only resource utilized in planning for rehabilitation of the trail. Planning also included coordination between members of a multidisciplinary team and investigation conducted by design professionals. Planning for the project involved individuals with detailed knowledge of the project area. The 2-hour study was used to evaluate points along the trail. However, existing trail counts and data collected by DDOT over time was also used to evaluate points along the trail. Further, additional areas of concern were called to attention during the public comment period.

Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials, cited at Nov. Plan, p. 177.) The AASHTO Policy wasn't made readily available to the public, but its guidelines appear in an FHA report. (Designing Sidewalks and Trails for Access, The U.S. Dept. of Transportation, Federal Highway Administration, www.fhwa.dot.gov/environment/sidewalk2/sidewalks214.htm, June 21, 2011 (copy attached); See Nov. Plan, pp. 33, 186.)

But, the Plan does not rely on the AASHTO Policy consistently. In some instances, the Plan states that the Policy provides for an 8-foot trail width as the minimum recommended width. (Nov. Plan, p. 33.) But in other instances, the Plan says that a 10-foot trail width is the minimum acceptable practice. (Sept. Plan, p. 15; Nov. Plan, pp. 27, 37, 153.)

38-06

In addition, the AASHTO Policy doesn't support either of those widths. Instead, the Policy says that a shared-use trail should have a minimum width of 10 feet, and that a minimum of 8 feet "may be used on shared-use paths that will have limited use." Moreover, for trails with "heavy" volumes of users, the trail width should be 12-14 feet. (FITWA, section 14.6, page 8 of 11.) And, it suggests that "if volume and space permits, bicyclists and pedestrians should have different lanes or pathways." (FHWA, section 14.3, page 3 of 11.)

Based on my experience, I would expect the path to have heavy volume and justify different pathways for bicyclists and pedestrians. For instance, there are typically groups of 2 or more runners who tend to take up most or all of the trail. Even single runners run along the middle of the path while listening to music, talking or generally not paying attention (such as in a workout zone ? I will note that in my experience bikers have to be more aware of their surroundings because of the added speed and dangers). There can be very little room for a bike to pass safely, and it can be difficult to judge if there is sufficient passing distance to oncoming trail users. Just the other morning, a person was on one side of the path with her dog

on the other side of the path and the leash extending across the entire path. I feel strongly that dual paths are needed to separate bikers and runners at the busier portions of the trail. The Plan appears to agree that there is "heavy" volume on the trail, citing to "a large number of visitors." (Nov. Plan, p. 2.) A dual path would clearly delineate a border between oncoming trail users and encourage users to stay on the proper side of the path.

38-07

However, the Plan makes absolutely no mention of a 12-14 foot trail width, or having different pathways for bicyclists and pedestrians. It also does not provide any considered analysis as to why a larger trail width is not necessary, and makes no mention of why the environmental impact study did not consider a width greater than 10-feet. A study should reveal whether a wide dual path is necessary to meet trail volume, at least along portions of the trail.

#### THIRD ISSUE ? THE PLAN IN A VACUUM

The Plan makes mention of a number of local and federal laws, rules, regulations, and goals, and evaluates the impact of the Project pursuant to those Laws. (Nov. Plan, pp. 8-11.) But the Plan fails to consider the Project as part of a greater urban city environment, and the overall impact that a wider trail will have on that urban city environment. For instance, it does not consider the positive environmental impact that a 12-14 foot trail would have, such as increasing the number of environmental-friendly commuters and reducing the number of vehicles. It would seem that such an analysis would be warranted by the National Environmental Policy Act referenced in the Plan. It is evident that alternative modes of transportation have gained wide public support in recent years. The tremendous success of DC's Capital Bikeshare program has increased trail users and evidences the relationship between trail access and trail usage. By considering the impact on the trail in a vacuum, the Plan has not properly evaluated the cited laws.

38-08

#### FOURTH ISSUE ? TRAIL BELOW ROSE PARK

The Plan stops at P-street and does not include the trail section that extends between Dupont Circle and Virginia Avenue. That is very surprising since that section is probably the busiest, narrowest and most dangerous section of the trail. It is in dire need of improvement and far below the AASHTO

38-09

#### Response to 38-04

Three public meetings were held for the project. Public notices were posted on the Planning, Environment and Public Comment website, the DDOT website and Facebook pages, and advertised in The Washington Post and The Current newspapers. Notice was sent by email or posted to list-servs of Advisory Neighborhood Commissioners, community groups, and potential stakeholders, including individuals and groups who previously expressed an interest in the project.

#### Response to 38-05, and 38-06

As per AASHTO guidelines, the appropriate paved width for a shared-use path is dependent on the context, volume and mix of users. The minimum paved width for a two directional shared-use path is 10 feet. A path width of eight feet may be used for a short distance due to a physical constraint such as an environmental feature, bridge abutment, utility structure, fence and such. The EA was reviewed for consistency among references to the minimum lane widths recommended by AASHTO:

- On page (page 33 of the Draft EA) the text was revised to read "an eight-foot width, the minimum multi-use trail width recommended by AASHTO for short distances under physical constraints."
- On page 29 (page 25 of the Draft EA) the 10-foot width refers to Beach Drive.
- On page (page 37 of the Draft EA), the EA refers to "a standard 10-foot width, which is recommended by AASHTO." This statement is correct and no change was made.
- On page 155 (page 153 of the Draft EA) the text was revised to read "an eight-foot width (the minimum multi-use trail width recommended by AASHTO for short distances under physical constraints)

#### Response to 38-07

As described in Chapter 1 of the EA, the NEPA process involves public agency involvement early in the project development to identify the scope of issues to be addressed and the significant issues related to the proposed action. Based on the early coordination and public outreach, separate lanes

recommended width. Recent maintenance work pushed large vehicle guiderail posts into the already narrow trail, causing safety issues and an awkward seam and angle where the new pavement meets the old. In addition, overgrowth of brush further narrows the trail at this section (as well as just north of Porter Street) and needs to be cut back more frequently than current maintenance provides. There is little room to the sides of the trail since it is bordered by the road on one side and a steep gradient on the other side. The trail needs to be substantially widened.

It is also surprising that the Plan pays so much attention to Rose Park while completely ignores the true path below. The 2-hour study confirms that Rose Park is simply a casual walking path. (Nov. Plan, p. 84.) It is mostly used by local residents in the busy Georgetown district, and is not truly part of the multi-use path. Rather, it is a connection for bikers and runners to get to the Rock Creek path. Some trail users may enter/exit at that location, but most do not.

#### FIFTH ISSUE - LIGHTING

A number of trail users have suggested that lights be placed along the path to improve safety and access. In response, the Plan notes that lights would have a negative impact on the natural landscape, and that the park is closed from dusk to dawn. (Nov. Plan, p. 39.) Consequently, the Plan summarily rejects the use of lighting.

But, the Plan does not consider that the NPS Management Policy (cited by the Plan) must account for environmental concerns that are not even remotely at issue here, such as caves and deep water bodies having blind fish. (See NPS policy, p. 57.) And contrary to the Plan's statement that "the NPS ? does not install lights along trails on its property," the NPS Management Policy leaves the decision of artificial lighting "to the discretion of the superintendent and is made through the planning process." (NPS policy, p. 57.)

The Plan's improper interpretation of NPS policy and complete lack of consideration is not acceptable to me and should not be acceptable to our elected officials. Certainly, any impact of artificial lighting would be minimal, especially since much of the trail is directly adjacent to (or within sight of) a busy roadway and the entirety of the trail is in the middle of an urban environment. And the Plan fails to weigh the negative impact of the lighting, if any, against the certain positive impact of having environmental-friendly transportation, removing bicycles from the streets, and the huge increase in trail safety (as the days get shorter, I have seen mothers with baby carriages or toddlers racing to get off the trail as night falls).

To minimize the impact of artificial lighting, the lights can only be used at reasonable times. For instance, the lights can be slowly turned off at 9pm when trail use would be reduced or negligible.

The use of artificial lighting needs to be evaluated. We should not blindly adopt the dusk-to-dawn hours, which perhaps were established in a different era with drastically different circumstances and considerations.

#### SIXTH ISSUE ? HAZARDOUS ZONES

There are a number of hazardous areas along the path which are not specifically identified in the Plan. I. Blind Spots. Trail users cannot see oncoming users at a number of locations along the trail, as set forth below. Some of these blind spots are not discussed in the Plan as being subject to widening or otherwise being fixed. Widening the trail would only slightly improve visibility, and the path needs to be redesigned in these areas to improve visibility and safety.

(a) One blind spot is at the foot bridge just south of the tunnel. There is brush along the trail that blocks visibility, such that persons on the bridge and those approaching the bridge from the zoo cannot see each other. And even without the brush, trail users tend to only focus on what is directly ahead of them and do not look to the side. Most trail users tend to cut the 90-degree angle by crossing into the path of oncoming users.

The Plan's response to this is to widen the bridge to 8 feet. It is not clear how that width was chosen, as it is well below the 10-foot minimum acceptable width set forth in the AASSTO Policy discussed above.

38-10

38-11

38-12

for bicyclists and pedestrians on the trail were determined to be outside of the scope of the trail rehabilitation.

#### *Response to 38-08*

The preferred alternative for the Rock Creek Trail (six- to 10-foot widening) was selected because it provides the widest range of beneficial uses while achieving negligible other undesirable and unintended consequences. A 12- to 14-foot trail would result in additional impacts which could result in impairment of the park's resources. In addition, physical features of the park are restrictive of 12- to 14 foot widening throughout most of the trail alignment. To address the impacts of the project as part of the greater urban city environment, the EA provides cumulative impacts analysis (page 91).

#### *Response to 38-09*

Based on early public agency involvement and public outreach, an extension of the trail between Dupont Circle and Virginia Avenue was determined to be outside of the project area of the trail rehabilitation.

#### *Response to 38-10 and 38-11*

New lighting was considered by the project team but dismissed based on the standard NPS policy. To enhance safety on the trail, the preferred alternative would include widening, trail user and vehicle safety improvements, roadway crossing improvements, and signage to promote safety.

#### *Response to 38-12*

Design for the rehabilitation of the trail would incorporate elements to address blind spots/hard turns to the extent feasible. Project designers have visited the trail to identify potential problem areas and make suitable modifications. Since the Draft EA, proposed actions for the trail over Rock Creek have been modified. Five feet from the existing bridge, a new bridge is proposed which would have a 10-foot clearance to accommodate trail

And widening the bridge would likely not cure the visibility issue. A separate bridge is needed that is curved to form a more natural line of travel with the path.

It is further noted that every foot bridge on the trail has a hard turn at one end, including the two bridges just south of Peirce Mill (one of which requires users to make a 90-degree turn or risk entering the busy parkway); the one just north of the zoo; the one at the bottom of the large hill by Woodley Park, and both ends of the bridge just north of the Dupont Circle exit. Each of those hard turns should be eliminated by having the bridge form a better line of travel with the path. They pose safety issues and have high incidence of trail user conflicts. There is no mention of widening those bridges, but even that would still require a hard turn which causes user conflicts and reduces safety.

(b) A second blind spot is at the hard turn just north of the Dupont Circle exit passing under the roadway overpass. I frequently encounter trail users passing at that section or on the wrong side of the path.

(c) Additional blind spots are at the three intersections with the roadway at the Dupont Circle and K-street exits. Each of those spots has the path encountering the roadway at a hard or unusual angle, such that visibility is very low. Stopping for car traffic can be dangerous, especially at the Dupont exit where cars are coming fast around a blind turn and a bicycle starts slowly from a complete stop (thereby requiring a longer crossing time).

(d) Another blind spot is at the underpass to the Whitehurst freeway. Both sides of the underpass have low visibility and high traffic.

(d) Another blind spot is at the underpass to Porter Street.

38-12

2. Dirt and Water Pooling. Certain areas along the trail seem to gather sediment from the creek, loose dirt, water and/or ice. These include at the foot of the hill at Woodley Park, at the woods section just north of Porter street and at the underpass at Porter street, across from the cemetery just south of Woodley Park, at the hard turn just south of the maintenance road at the zoo, and a few other spots. It is not clear if these areas will be tended to as part of the Project.

38-13

**SEVENTH ISSUE ? CONNECTIVITY**

There are a few other social paths that were not addressed in the Plan:

1- Peirce Mill South: There is a social path created South of the restrooms (which are located just south of the Peirce Mill). That path is nearly always muddy or iced over, but is not identified in the Plan. A paved path is desperately needed, even if it does not follow the social path.

2- Dupont Circle: Many trail users enter the path from Dupont Circle, though that is not addressed in the Plan. There is a very narrow and rocky social path extending alongside the exit ramp, but that is not suitable for bicycles and many runners and bicycles travel along both sides of the roadway ramp. To improve safety, the roadway should be widened and bike lanes should be marked on both sides of the roadway. The bike lanes should be separated from the roadway by a barrier to avoid vehicles cutting into the bike lanes to make those hard turns.

3- Cathedral Ave: There is no path alongside Cathedral Avenue, and the sidewalks are narrow and do not extend the entire length of Cathedral Avenue to Connecticut Avenue. Cathedral Avenue itself has parked cars during rush-hour and does not have a bike lane.

38-14

**EIGHTH ISSUE ? THE NATIONAL ZOO**

Trail users have complained that the zoo gates should not be locked at dusk. In response, the Plan notes that the zoo accreditation requires that the gates be locked, and instead proposes that the tunnel be redesigned to create a 5-foot path within the tunnel at a substantial cost and inconvenience. (Plan, pp. 27, 38.) Of course, while any increase in size is appreciated, the 5-foot path is well below the minimum standard recommended by the AAHSTO Policy. And the Plan does not evaluate the safety of car travel on a reduced lane size or closer to the tunnel wall at one side.

The Plan also does not evaluate the borders of the zoo, whether the trail extends onto zoo property, and whether the trail can be guided around the zoo borders. The path certainly does not come close to any animal exhibits. So consideration should be given to moving the gates closer to critical areas of the zoo, such as where the trail crosses the service road. To the extent there are less-critical zoo maintenance

38-15

users. Between the Beach Drive tunnel and the new bridge, there would be a newly paved area which would help to alleviate user conflicts in this location.

Additional realignments are proposed south of Peirce Mill and at the approach to the Devil's Chair Bridge to promote trail user safety. Also, proposed grading would improve sight lines on the trail. Further details of realignment and trail grades are to be determined during design phases of the project. Where modification of the trail alignment and/or bridge crossings is not an option, signage could be included in the project design to promote safety.

**Response to 38-13**

The preferred alternative would include raising the vertical profile of the trail as necessary to eliminate ponding and slope stabilization to improve soil erosion conditions. Improvement of the trail in this manner is proposed along a 1,100 foot segment of the trail south of Peirce Mill. Further details of drainage improvements are to be determined during design phases of the project.

**Response to 38-14**

Based on early public agency involvement and public outreach, amendments to the social trails at Peirce Mill South and Cathedral Ave. were determined to be outside of the scope of the trail rehabilitation. The requests have been forwarded to the DDOT Bicycle Advisory Council. Proposed improvements to both sides of the P Street ramp (Dupont Circle) are described in the EA under Section 2.3.3. Elements Common to Action Alternatives.

**Response to 38-15**

Redesign of the trail through the Beach Drive tunnel is proposed in order to promote safety. As described on page 29 of the EA, the sidewalk along the west wall of the Beach Drive tunnel is proposed to be widened from 2 feet to approximately 4 feet. To promote safety in this area, a low profile guardrail would be constructed to provide trail user/vehicle separation and signage would be posted at the tunnel approaches. The National Zoo and the park are

facilities by the trail, those can be separately gated. If the gates can be moved, the trail can continue at its existing location and there would be no need to revise the tunnel.

#### NINTH ISSUE ? TRAIL USER SAFETY

I suggest several measures for increasing user safety. A traffic crossing light should be installed where Rock Creek joins Beach Drive (at Woodley Park). It can be very difficult to safely cross the roadway at that point, and trail users often gather there and compete with one another to safely cross. Traffic crossing lights should also be considered for the Dupont Circle exit, as well as at the road crossing at M-street and 2 crossings at Whitehurst Freeway (K-Street), especially if the angle at which the path meets the road cannot be improved.

38-16

In addition, emergency call stations should be installed along the path. And, consideration should be given to prohibiting trail users from listening to music. The music makes them less aware of their surroundings, including bike bells, and they tend to drift to the wrong side of the trail.

38-17

#### TENTH ISSUE - CONSTRUCTION PHASE

The Plan does not have much discussion of the company that will perform the work. In the past 1-2 years, there has been some patchwork done on the trail that was simply poor. Specifically, about 100 yards of the trail was re-paved just north of the P-street (Dupont Circle) exit. The re-paved path is extremely bumpy and has sections with large side lips (once a bicycle goes off the trail, a large lip can make it dangerous to get back on the path, as I've learned firsthand). In addition, a small section under the bridge was paved (and the cobblestone removed), but creates a line of travel which is not appropriate. Also, the sidewalk ramps placed at Virginia Avenue are not properly aligned with each other, requiring bikers to move left/right rather than taking a straight line (they should really be redone). Thus, it is respectfully suggested that the company which is contracted to repave the path have experience with designing and paving bicycle paths.

38-18

In addition, all of the construction in the past few years has not been efficient. They started work on a first area of the trail, then started working on a second area while the first area sat unworked for weeks or months. And, the "walk your bike" signs were blocking the path. And, the trail was closed or "walk your bike" was started too early and ended too late. Just a few weeks ago, they posted "walk your bike" signs for the 150 or so yards just north of the Dupont Circle exit. Yet, there was no obstruction on the trail that would justify those signs for at least a week.

The construction phase does not seem to account for the trail users. Currently, there is a large 8-foot wooden fence built around construction equipment being housed at the intersection of Beach Drive, Cathedral Avenue and Rock Creek Parkway. Trail users cannot see around the wooden enclosure, and it is particularly hard to see if any cars are coming down Cathedral Avenue traveling south during the morning commute.

#### ELEVENTH ISSUE - MAINTENANCE

Brush along the sides of the trail is currently cut back 1-2 times per year. That needs to be doubled. Snow and tree removal has been good with a few exceptions. Maintenance guidelines should be put in place that requires the use of professional pavers (per the eleventh issue above).

38-19

#### CONCLUSION

I look forward to hearing from you on these issues.

closed from dusk to dawn. Therefore, modification of the zoo gates to accommodate users past dusk would be inconsistent with National Zoo and NPS policy.

#### *Response to 38-16*

New lighting was considered by the project team but dismissed based on the standard NPS policy. To enhance safety on the trail, the preferred alternative would include widening, trail user and vehicle safety improvements, roadway crossing improvements, and signage to promote safety.

#### *Response to 38-17*

Based on early public agency involvement and public outreach, elements such as emergency call stations were determined to be outside the scope of the trail rehabilitation. Signage posted throughout the trail to promote safety could recommend that trail users remain alert to avoid conflicts.

#### *Response to 38-18*

The most qualified contractor that is within the project budget and that can feasibly construct the project will be selected. During construction DDOT would monitor the contractors to ensure that project plans are carried out properly.

#### *Response to 38-19*

Maintenance of Rock Creek Park is overseen by the NPS. The request has been forwarded to Rock Creek Park Management.

PEPC Correspondence  
Keep Private: Yes  
Date Received: 1/12/12

I am a bike commuter who works at the National Zoo and am an avid runner. I support the most comprehensive plans for renovating the Rock Creek and Beach Drive trails, promoting safe and environmentally-friendly multiple-uses of the facilities.

As a bike commuter:

1. Along Piney Branch, I have frequently had cars drive within a foot of me and there is no shoulder nor trail on which I can more safely ride. I have had drivers even yell at me to get on the path, not knowing that there is no path on which I should go. I would also urge that if this road is furnished with a full pathway, that that pathway have ramps at either end so that bicyclists, strollers, wheelchairs, etc can easily access it.
2. From Pierce Mill to Rock Creek Parkway on Beach Drive and on the Parkway from P Street to K Street, the pathway is far too narrow for multi-users. Nowadays, many runners use headphones and are not aware of the location of other users. Safely passing these users is precarious. At the same time, many runners and pedestrians (and worse yet, pedestrians with strollers) use the path side by side one another, again, making passing difficult. When someone is approaching from the other direction, the situation becomes even worse. Anything that can be done to widen the pathway, especially from P Street to K Street where there is no grass or other space to utilize, would be very helpful.

39-01

39-02

Between running and biking, I am on the trails and pathways anywhere from 6-25 hours a week, and typically use them at least five days a week. This park is one of the DC area's greatest assets. It has been decisive in terms of where I live in the city, and in terms of my exercise and recreation regimen. Anything that can be done to improve them for an increasingly active and bike-using community will be monies well-spent.

### ***Response to 39-01***

The preferred alternative would involve restriping of Piney Branch Parkway and widening of the Piney Branch Parkway trail to a width of six to eight feet. The proposed trail would include ADA-compliant ramps to connect the trail with Arkansas Avenue and the Rock Creek Park Multi-Use Trail.

### ***Response to 39-02***

Under the preferred alternative, the Rock Creek Trail would be resurfaced and widened to a minimum 6-foot width and a maximum 10-foot width, depending on environmental and physical constraints. Resurfacing and widening is proposed from the Broad Branch/Grove 2 North parking area to P Street. From P Street to M Street, the preferred alternative would include resurfacing and widening the Rose Park trail to a maximum six-foot width.

As described in Chapter 1 of the EA, the NEPA process involves public agency involvement early in the project development to identify the scope of issues to be addressed and the project area. Based on the early coordination and public outreach, trail construction or rehabilitation south of M Street was determined to be outside the scope of the trail rehabilitation.



PEPC Correspondence  
Keep Private: Yes  
Date Received: 1/12/12

I attended the public meeting on this topic in December. I have attempted to read the full assessment and I have walked Rock Creek multi-use and foot trails contemplating the choices provided, my fellow human users of the park, the natural environment and wildlife, the challenges NPS and DDOT face, and the decisions that must be made.

Rock Creek is a neighbor to me, but I must admit that only since my retirement I have begun to appreciate more its loveliness and specialness. Before that time, I was like many occasional users, unthinking and oblivious to meaning of this treasure in the center of our city. My walks and contact with the good and knowledgeable NPS rangers and folks who devote their spare time to clean Rock Creek of trash, to rebuild the foot trails, and to advocate for its care (Rock Creek Park Conservancy and PATC) have helped me to understand more and thus to speak out.

1. With regards to Alternatives (No action, #2, and #3), I align myself with those for Alternative #2. It proposes positive changes that appear to address the major concerns within the historical mission of the park.

2. With regards to the Pierce Mill "social trail", I agree with the partial paving of the "social trail" to create a multi-use trail that will connect users from Broad Branch or Pierce Mill without having to go through the parking lot, but keeps to most of the original multi-use trail. Please note that the "social trail" was blazed for the Western Ridge trail. That was the beginning of foot travel, I imagine. Then the park (or someone) added picnic tables. And so more human traffic was encouraged. So, I further propose that NPS, consider reclaiming for nature the area around the multi-use paved trail, do not allow an unpaved foot trail in that area, plant more trees, bushes etc. (I will gladly help!) Reblaze the trees for the Western Ridge trail in that section so that users walk the short distance on paved surface.

3. With regards to Rose Park, I agree that the path needs to be repaved and 6 to 8 feet should be the maximum width. Bikers should be encouraged to use the lower trail along the parkway and walkers should be encouraged to use Rose Park trail. Signs would help.

Along with the construction changes, I hope the NPS and DDOT will also consider the following:

1. Emphasize through better and bolder signage (at least) the laws (on litter, pets on leash, alcohol etc) and the rules for park and path use (right of way, single file when necessary, walking bikes in tight spots, speed, etc). State parks do, why not in our Federal City? 2. Review the need for so many small car parks and picnic groves (such as those between Broad Branch and Military Road on Beach Drive). We residents and "visitors" of all ages need more meadows and forest areas. Would benches serve as nice stopping points?

40-01

40-02

I had photos of signs that I have seen in other state and regional parks, but I'm sure you all have seen some as well. If you want my collection and more comments, contact me.

Finally, please do not make Rock Creek a typical city Park. Please keep it rustic and natural and environmentally healthy as possible.

### ***Response to 40-01***

Under the preferred alternative, signage is proposed to promote safety on the trail. In accordance with *NPS Management Policy 2006*, "only those signs necessary for visitor safety or to protect wilderness resources, such as those identifying routes and distances, will be permitted. When signs are used, they should be compatible with their surroundings and the minimum size possible."

### ***Response to 40-02***

As described in Chapter 1 of the EA, the NEPA process involves public agency involvement early in the project development to identify the scope of issues to be addressed and the significant issues related to the proposed action. Based on the early coordination and public outreach, additional small car parks and picnic groves were determined to be outside of the scope of the trail rehabilitation.



RECEIVED JAN 25 2012

Board Members  
David Dunning, President  
Dr. Russell Bridges, Treasurer  
Katie Sexton, Secretary  
David Abrams  
Toni Brody  
John Donvan  
Anna Fuhrman  
Cerhyl Gray  
Marjorie Heiss  
Rob Hetem  
Pamla Moore  
Jenny Mottershead  
Victoria Rigby  
Dave Salwen  
Leslie Wheelock  
Jill White

January 20, 2012

Director Terry Bellamy  
D.C. Department of Transportation  
55 M Street, S.E., Suite 500  
Washington, D.C. 20003

RE: Rose Park Pedestrian Path  
and the Rock Creek Multi-Use  
Trail Rehabilitation project

Dear Director Bellamy:

I am writing to you on behalf of the Board of Directors of Friends of Rose Park, Inc. to follow-up on our request to keep the pedestrian path which runs through Rose Park at its current width of 4-5 feet and in its current location, running along the top of the Rock Creek Parkway hillside.

Friends of Rose Park, Inc. submitted the attached **Written Comments Submitted by Friends of Rose Park, Inc. to the Rock Creek Multi-Use Trail Rehabilitation Environmental Assessment Issued November, 2011** to NPS and DDOT in regard to the ill-conceived recommendation of the Rock Creek Multi-Use Rehabilitation project Project Team to widen the path to 6 feet.

Friends of Rose Park, Inc.  
www.roseparkdc.org  
c/o David L. Abrams, 1410 26<sup>th</sup> Street, N.W., No. 1, Washington, D.C. 20007  
(202) 351-9921 (C)  
jake.chase@juno.com

For the past 14 years, Friends of Rose Park has advocated for safety reasons to keep the pedestrian path at its current width. Widening the path to even 6 feet will create a smooth-surfaced "superhighway" through the park, allowing bicyclists to increase their speed, posing a greater danger to the health and safety of children, senior citizens and other pedestrians who use the path in far, far greater numbers than bicyclists.

41-01

The Environment Assessment regarding the rehabilitation of the Rose Park pedestrian path takes the position that the Rose Park section of the pedestrian path should be widened to 6 feet. As our *Written Comments* clearly evidence, the project team's recommendation to widen the path to 6 feet is based on false and erroneous data and false and outright wrong information. The project team which wrote the Environmental

41-02

Assessment created a document which fails to meet the standards required by Federal law, at least the portions of the document regarding the Rose Park recommendations. The health and safety of the small children and other pedestrians using the path, especially in the areas of the path which runs between six separate and distinct play areas, was totally disregarded and omitted by the people who wrote the Environmental Assessment, in clear contravention of existing law and regulations.

41-03

As our *Written Comments* importantly evidence, neighbors, park users, organizations and elected officials, representing *thousands* of Georgetowners, support keeping the path at its safe, current width. I use the word "thousands" with purposeful intent. When you look at the fact that the groups which have historically supported our position, groups such as the Citizen's Association of Georgetown, an organization of over 1,200 members, as well as our local ANC2E, and hundreds of individual neighbors and park users, the numbers add up and must not be discounted by your agency.

In the past, NPS Director Robert Stanton and Rock Creek Park Superintendent Adrienne Coleman fully and completely supported keeping the path at its current width. The Rose Park pedestrian path recommendations in the current Environmental

Assessment are a disservice to the park, the neighborhood, and the community and, if implemented, will create a tremendous public safety hazard. If the path is widened, notice is hereby given that a public safety hazard will be created by your agency.

41-04

#### ***Response to 41-01 and 41-04***

The preferred alternative for the project has been determined to have a net benefit on human health and safety, based on the repair and rehabilitation of trails and other proposed improvements. Rose Park Trail Option B, described on page 34 of the EA, details the resurfacing of the Rose Park trail along its current alignment. Rehabilitation of the trail at its current width was dismissed in section 2.8.3 of the EA.

At Rose Park, the current, narrow width of the trail has caused ponding issues and has forced users from the trail, trampling the vegetation along the path. A wider trail would accommodate the multiple user types of the path in a safer manner. Trail widening and a smoother surface could further promote use of the trail. However, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added and raise safety awareness. In further consideration of pedestrian/bicyclist safety, a synopsis of Conflicts on Multiple-Use Trails: Synthesis of the Literature and State of the Practice was added to Chapter 4 of the Final EA under Human Health and Safety.

#### ***Response to 41-02***

NPS and DDOT determined that trail widening was necessary based on field observation and trail counts in order to accommodate all users. The preferred alternative includes widening of the Rose Park Trail to six feet, in consideration of public comments regarding Rose Park.

#### ***Response to 41-03***

To address concerns regarding trail user safety in the Rose Park area, further consideration of pedestrian/bicyclist user conflicts was added to the EA under Human Health and Safety in Chapter 4. According to the

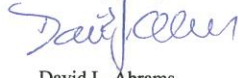
January 20, 2012  
Page Three of Three

We are asking that you act in your official capacity to change the recommendation contained in the current Environmental Assessment to widen the path to 6 feet and advise us in writing that while the path will be rehabilitated that it will remain in its current 4-5 foot width.

I am respectfully requesting that you respond to this letter as quickly as possible, because if the decision is made to widen the path please be advised that Friends of Rose Park will continue our exploration of taking alternative measures to keep our neighborhood infants, toddlers, older children, senior citizens and park users safe when using the path.

I look forward to receiving your written reply to this letter and your affirmative written pledge that while the path will be rehabilitated that it will be kept at its current width.

Sincerely yours,



David L. Abrams  
For Friends of Rose Park, Inc.  
1410 26<sup>th</sup> Street, N.W., No. 1  
Washington, D.C. 20007

copy to:

The Honorable Eleanor Holmes Norton  
The Honorable Jack Evans  
The Honorable Tom Birch  
DPR Director Jesus Aguirre

FHWA document *Conflicts on Multi-use Trails: Synthesis of the Literature and State of the Practice*, user conflicts on multiple-use trails are a common concern. Research suggests that minimization of user contact in congested areas is an effective measure to reduce conflicts. Accordingly, the preferred alternative at Rose Park is intended to minimize contact between users by providing a wider, smoother trail that would accommodate different uses. Additional suggestions to reduce conflicts on multi-use trails include educational elements in the form of signage or brochures posted at trailheads to identify safety issues and promote trail sharing. During final design of the trail rehabilitation, DDOT and NPS would consider these elements to improve the safety of the trail.

RECEIVED FEB 15 2011  
CMB

February 10, 2011

Mr. Terry Bellamy  
Interim Director  
D.C. Department of Transportation  
2000 14<sup>th</sup> Street, N.W., 6<sup>th</sup> Floor  
Washington, D.C. 20009

Dear Mr. Bellamy:

I am writing to you in support of the position taken by Friends of Rose Park, the ANC 2E and the Citizens Association of Georgetown in regard to the Pedestrian Path, which runs through Rose Park in Georgetown.

In the second Environmental Assessment, which is being conducted in regard to the Rock Creek Park Multi-Purpose Trail, you must consider that the 3,000-foot segment of the Rose Park Pedestrian Path is a separate Pedestrian Path, which runs through Rose Park and must not be considered as a multi-use trail. The Pedestrian Path must be repaired but it must be repaired "as is", i.e., in its current location and at its current width. It must not be moved or widened for any purpose.

42-01

Thank you.

  
Mary Carroll Platt  
2829 O Street, NW  
Washington, DC 20007

***Response to 42-01***

Rose Park trail options are addressed separately from the Rock Creek Park multi-use trail in the EA. In consideration of comments received regarding Rose Park, the preferred alternative would resurface the Rose Park Trail to a maximum six-foot width, whereas the Rock Creek Park multi-use trail would be resurfaced at six to ten foot widths.

DEAR Ms.Tara Morrison  
Superintendent

I am writing to you to express my support for the position taken for more than a decade by Friends of Rose Park to keep the pedestrian path which runs through Rose Park at its current width and in its current location. NPS has previously promised our community that the path would be rehabilitated but remain in its current location and at its current width.

Any widening of the path will result in danger to the hundreds of small children and toddlers who travel between all of the play areas in the park on a weekly basis, and to the elderly who walk along the path at any given time. In addition, if a larger area of bare ground is covered by a non-permeable, asphalt, surface, the less water is available for planting and natural ground cover. The initial draft of the Environmental Assessment put out by DDOT and FHA fails to address the major safety issues to pedestrians which exist if the path is widened to 6 or 8 feet. In advance, please attend to this very important request.

I lived for 20 years one block (2709 O Street,NW) from the Park and am one of the founding members of Friends for Rose Park so this is very dear to my heart and to me the best solution to a thriving neighborhood Park.

Sincerely Yours,  
Courtney Hagner  
2853 Ontario Road, NW  
Apt. #105  
Washington, DC 20009-2237

43-01

43-02

***Response to 43-01***

The preferred alternative for the project has been determined to have a net benefit on human health and safety, based on the repair and rehabilitation of trails and other proposed improvements. Rose Park Trail Option B, described on page 34 of the EA, details the resurfacing of the Rose Park trail along its current alignment. Rehabilitation of the trail at its current width was dismissed in section 2.8.3 of the EA.

At Rose Park, the current, narrow width of the trail has caused ponding issues and has forced users from the trail, trampling the vegetation along the path. A wider trail would accommodate the multiple user types of the path in a safer manner. Trail widening and a smoother surface could further promote use of the trail. However, the increase in usage resulting from a zero- to two-foot widening is not expected to result in increased pedestrian/bicyclist conflicts. To calm traffic, yield signs or speed limit signs could be added and raise safety awareness. In further consideration of pedestrian/bicyclist safety, a synopsis of *Conflicts on Multiple-Use Trails: Synthesis of the Literature and State of the Practice* was added to Chapter 4 of the Final EA under Human Health and Safety.

***Response to 43-02***

Measures to protect vegetation throughout the entire project area including Rose Park are described on page 38 of the EA. For the Rose Park trail, the proposed zero to two-foot widening would not have appreciable effects on vegetation or ground water seepage. The existing narrow width of the Rose Park trail forces users off the trail, resulting in bare soils. The proposed rehabilitation would provide a more adequate width for users to remain on the trail thereby encouraging growth of ground cover beside the trail.