4.0 ENVIRONMENTAL CONSEQUENCES

This page is intentionally left blank

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

This Environmental Consequences chapter analyzes both beneficial and adverse impacts that would result from implementing 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 analysis used for determining cumulative impacts. As required by CEQ regulations implementing NEPA, a summary of the environmental consequences for each alternative, which can be found in Chapter 2: Alternatives, is provided in Table 2.7.1. The resource topics presented in this chapter, and the organization of the topics, correspond to the resource discussions contained in Chapter 3: Affected Environment of this EA.

General Methodology for Establishing Impact Thresholds and Measuring Effects by Resources

The following elements were used in the general approach for establishing impact thresholds and measuring the effects of the alternatives on each resource category:

- General analysis methods as described in guiding regulations, including the context and duration of environmental effects;
- Basic assumptions used to formulate the specific methods used in this analysis;
- Thresholds used to define the level of impact resulting from each alternative;
- Methods used to evaluate the cumulative impacts of each alternative in combination with unrelated factors or actions affecting park resources; and
- Methods and thresholds used to determine if impairment of specific resources would occur under any alternative.

4.1.1 General Analysis Methods

The analysis of impacts follows CEQ guidelines and Director's Order 12 procedures (NPS, 2001) and is based on the underlying goal of providing long-term protections, conservation, and restoration of native species and cultural landscapes. This analysis incorporates the best available scientific literature applicable to the region and setting, the species being evaluated, and the actions being considered in the alternatives.

As described in Section 1, NPS created an interdisciplinary science team to provide important input to the impact analysis. For each resource topic addressed in this chapter, the applicable analysis methods are discussed, including assumptions and impact intensity thresholds. Impacts described in this section are direct unless otherwise indicated.

4.1.2 Basic Assumptions

As stated above, the analysis of impacts follows CEQ guidelines and Director's Order 12 procedures (NPS, 2001) and incorporates the best available scientific literature applicable. However, applicable literature is not always available. In such cases, analysis may require assumptions of specific conditions. Assumptions used for

analysis in this EA are identified and explained for each resource, as needed.

4.1.3 Impact Thresholds

Determining the impact thresholds is a key component in applying NPS *Management Policies* and Director's Order 12. These thresholds provide the reader with an idea of the intensity of a given impact on a specific resource. The impact threshold is determined primarily by comparing the effect to a relevant standard based on applicable or relevant/appropriate regulations or guidance, scientific literature and research, or best professional judgment. Because definitions of intensity vary by impact topic, intensity definitions are provided separately for each impact topic analyzed in this document. Intensity definitions are provided throughout the analysis for negligible, minor, moderate, and major impacts. In all cases, the impact thresholds are defined for adverse impacts. Beneficial impacts are addressed qualitatively.

Potential impacts of the action 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: The affected environment within which an impact would occur, such as local, park-wide, regional, global, affected interest, society as a 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.

4.1.4 Cumulative Impacts Analysis Method

The CEQ regulations to implement NEPA require the assessment of cumulative impacts in the decision making process for federal actions. 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" (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 NAMA and, if applicable, the surrounding area. Table 4-1 summarizes these actions that could affect the various resources at the site, along with the plans and policies of both the park and surrounding jurisdictions, which were discussed in Section 2. Additional explanation for most of these actions is provided in the narrative following the table.

The analysis for 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 Sections 3 and 4 of this document**.**

Step 2: Set Boundaries. Identify an appropriate spatial and temporal boundary for each resource. The temporal boundaries are noted at the top of Table 4-1. 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 4-1 and described below.

Step 4: Cumulative Impact Analysis. Summarize the impacts of other actions, plus impacts of the proposed action to arrive at the total cumulative impact. This analysis is included for each resource in Section 4.

Table 4-1: Summary of Cumulative Projects

Impact Topic	Study Area	Present Actions	Future Actions
Cultural Resources: Archeology	Area of Potential Effect (APE)	National Mall Plan, Mall Turf Rehabilitation, Switzer Building Improvements, Potomac Park Levee, NMAAHC, perimeter security projects within the nation's capital	American Veterans Disabled for Life Memorial, disposition of GSA properties along Maryland Avenue, the National Museum of Women's History, Museum of the American Latino, Redesign of Union Square, Sylvan Theatre Area, and Constitution Gardens;
Cultural Resources: Historic Resources		Vietnam Veterans Memorial Visitors Center, National Mall Plan, and FOB 8	American Veterans Disabled for Life Memorial, Redesign of Union Square
Cultural Resources: Visual Resources	APE	FOB 8, Mary E. Switzer Building, perimeter security projects within the nation's capital	Disposition of GSA properties along Maryland Avenue
Park Operations and Management	NAMA	Potomac Park Levee, Jefferson Seawall Rehabilitation, Martin Luther King, Jr. Memorial, National Mall Plan; DC World War I Memorial, Mall Turf Rehabilitation, Lincoln Memorial Reflecting Pool and Grounds Rehabilitation	Vietnam Veterans Memorial Visitors Center, American Veterans Disabled for Life Memorial, Jefferson Memorial Vehicular Security Barriers, and Washington Monument Security Screening. Redesign of Union Square, the Sylvan Theater Area, and Constitution Gardens
Soils	Adjacent sites	None	None

Impact Topic	Study Area	Present Actions	Future Actions
Transportation: Traffic	Approximately 2 blocks in each direction. See resource analysis.	FOB 8, Mary E. Switzer Building, DDOT bike lane striping, Constitution Avenue Street Improvements	American Veterans Disabled for Life Memorial
Transportation: Parking	Approximately 2 blocks in each direction. See resource analysis.	FOB 8, Mary E. Switzer Building	
Vegetation	Adjacent sites	FOB 8, Mary E. Switzer Building	
Visitor Use and Experience	NAMA	Vietnam Veterans Memorial Visitors Center, National Mall Plan, National Aquarium, perimeter security projects within the nation's capital, NMAAHC, Potomac Park Levee, Jefferson Seawall Rehabilitation, Mall Turf Rehabilitation, Lincoln Memorial Reflecting Pool and Grounds Rehabilitation, Constitution Avenue Street Improvements, Martin Luther King, Jr. National Memorial, National Gallery East Building Renovations	American Veterans Disabled for Life Memorial, National Museum of Women's History, National Museum of the American Latino, Madison Drive Streetscape Improvements, Jefferson Memorial Vehicular Security Barriers, and Washington Monument Security Screening, Redesign of Union Square, Sylvan Theatre Area, and the Constitution Gardens
Water Quality	Watershed	FOB 8, Mary E. Switzer Building	

Descriptions of Cumulative Projects

Mary E. Switzer Building Renovation and Site Improvements: The Switzer Building is located south of C Street, between 3rd and 4th Streets, directly to the southeast of the LBJ Building. As part of a major modernization of the building, planned improvements include the transformation of a surface parking lot to a landscaped plaza, the installation of perimeter security features, public art, and a concession stand.

Federal Office Building (FOB) 8 Renovation and Site Improvements: FOB 8 is located one block east of the Switzer Building. A renovation of both the building and the site is underway. Similar to the Switzer Building, site improvements at FOB 8 will include perimeter security and the conversion of a surface parking lot to a landscaped plaza.

Perimeter Security Projects within the Nation's Capital: Numerous perimeter security projects are planned, have been approved, or have been recently completed within vehicular rights-of-way. These security improvements are widespread, including those immediately around the Switzer Building, on Capitol Hill northeast of the Switzer Building, on the Mall, and in the downtown. Near the project site, permanent perimeter security measures have been approved at FOB 8 and the Switzer Building, and are planned over the long-term at the Cohen Building. In addition, permanent security measures have been installed at the Humphrey Building and the Ford House Office Building. On Capitol Hill, permanent perimeter security is widespread including around the Capitol complex, the Library of Congress buildings, and the Rayburn House Office Building, among others. North of the project site, along the Mall, permanent perimeter security has been installed or approved for installation at the majority of the Smithsonian museums including NMAI, NASM, the Hirshhorn Museum and Sculpture Garden, the Smithsonian Institution Building, the National Museum of Natural History, and the National Museum of American History. Permanent perimeter security improvements have been proposed or temporary measures have been installed at a number of buildings between the 3rd and C Streets area, and the Tidal Basin further west. Across the Mall, temporary perimeter security measures have been installed around buildings within the Federal Triangle, and permanent security measures are being considered for several of these buildings, including the headquarters of the U.S. Department of Commerce and the National Archives. Perimeter security measures have also been proposed, approved, or constructed at a number of buildings east and west of Federal Triangle.

American Veterans Disabled for Life Memorial: The American Veterans Disabled for Life Memorial is planned for a two-acre landscaped parcel one block east and north of the Switzer Building. Bordered by 2nd Street, Washington Avenue, and ramps to I-395, the memorial will include a reflecting pool, treed walkways, and a landscaped area, all with commanding views of the U.S. Capitol Building.

Vietnam Veterans Memorial Visitor Center: This center will educate students and visitors about the Vietnam War and the Memorial itself. The Visitor Center will be located in the northwestern corner of the National Mall, west of the Vietnam Veterans Memorial, on the east side of 23rd Street between the Lincoln Memorial Circle and Constitution Avenue.

Martin Luther King, Jr. Memorial: The Martin Luther King, Jr. .Memorial was recently completed at a four-acre parcel located on

the northwestern side of the Tidal Basin within West Potomac Park. The site includes the memorial, the re-alignment of West Basin Drive, a 3,000 square foot visitor services facility, and perimeter security elements.

National Museum of African American History and Culture: The Smithsonian Institution is planning to establish and construct a museum dedicated to African American History and Culture on a five-acre site at the southwest intersection of Constitution Avenue and 14th Street NW. Depending upon the final design, the museum would be approximately five levels above ground with two levels below ground. Access points would be from Constitution Avenue to the north and from the National Mall to the south.

National Mall Plan: The NPS's National Mall Plan lays out management policies and strategies to restore the National Mall. It focuses on cultural resources, visitor circulation, natural resource protection, visitor amenities, health and public safety, and park operations.

Bike Lane Striping: DDOT is scheduled to install a bike lane on 4th Street near the Eisenhower Memorial.

National Women's History Museum: This private institution is planning to establish and construct a museum dedicated to reclaiming women's history and creating an accurate historical record inclusive of women at the intersection of Independence Avenue and 12th Street SW.

Potomac Park Levee: This project would introduce an improved levee system in the area between 23rd Street and 17th Street and along the north side of the Reflecting Pool. At 17th Street, just south of Constitution Avenue, a closure structure would be built with abutments that support posts and panels that would be erected during a flood emergency. At 23rd Street and along the Reflecting Pool, existing low spots in the levee would be filled and brought to an elevation that complies with USACE standards.

Lincoln Memorial Reflecting Pool and Grounds Rehabilitation: This project would rehabilitate and enhance the infrastructure, circulation, and accessibility around the Lincoln Memorial east plaza. At the Reflecting Pool, upgrades to the structural and water systems would improve its functionality and sustainability and formalize walkways along the north and south edges of the pool. Site furnishings throughout the project area would be refurbished and reconfigured.

Constitution Avenue Street Improvements: Constitution Avenue NW between 23rd Street NW and 15th Street NW would be rehabilitated; streetscape improvements would introduce new street lighting and storm sewer upgrades.

Madison Drive Streetscape Improvements: Madison Drive would be rehabilitated with enhancements to streetscape elements.

Jefferson Seawall Rehabilitation: This project would rehabilitate the Thomas Jefferson Memorial plaza, seawall, and staircases in a manner that improves pedestrian circulation and visitor safety.

National Aquarium Renovation: The National Aquarium is located in the Herbert C. Hoover Building, which is currently under renovation. The improvements would relocate the Aquarium's entrance to Constitution Avenue. It would also improve the quality of exhibits and facilities.

Disposition of Government Property in SW by GSA: GSA plans to dispose of properties in Southwest DC along Maryland Avenue, west of the Memorial site. This would make underutilized parcels, some of which currently function as open space, available for development.

National Museum of the American Latino: This organization has preliminarily identified four sites as potential locations for this future museum: the Yates Building and South Monument, near the intersection of 14th Street and Independence; the Witten Building on Independence Avenue, currently home to the USDA; the Smithsonian Arts and Industries Building along Independence Avenue; and a site at the U.S. Capitol Grounds. The museum would be approximately 300,000 to 350, 000 square feet of building space.

DC War Memorial Restoration: This project would clean and restore the stone of the Memorial, install new bluestone paving, and replace the vault hatch cover in the memorial chamber. All renovations would be based on historical documentation and support the original design of the 1930s.

Mall Turf Rehabilitation: NPS seeks to improve the vegetation and soil on the Mall by removing and replacing the existing soil and irrigation system in portions of the Mall and installing new curb and gutter profiles around turf panels.

Jefferson Memorial Vehicular Security Barrier: NPS proposes the installation of permanent vehicle barriers and security monitoring at the Jefferson Memorial. This would replace the temporary concrete jersey barriers around the Memorial and the parking area that was closed to vehicular traffic in 2001 to provide security to the Memorial and to protect its visitors and staff.

Washington Monument Security Screening: NPS proposes to replace and improve the existing visitor screening facility at the base of the Washington Monument, replacing the existing temporary facility and improve the overall security of the Monument in a manner that maintains and preserves the visitor experience and cultural landscape of the Washington Monument Grounds.

Redesign of Union Square, Sylvan Theater Area, and Constitution Gardens: These projects building on the foundation of the National Mall Plan, which called for improvements to these spaces. NPS seeks to redesign Union Square as a symmetrical and formally laid out civic square that is flexible and suitable for multiple uses, including large First Amendment demonstrations and national celebrations, as well as general tourism. The redesign of the Sylvan Theater area would include a multi-purpose entertainment facility. For Constitution Gardens, the improvements would include upgrading the pedestrian circulation system, improving soils, reconstructing the lake to be self-sustaining, constructing a flexible performance space, and adding a multipurpose visitor facility that would coordinated with the Potomac Park levee and plans for the canal Lockkeeper's House, which may be relocated from 17th Street and Constitution Avenue.

National Gallery East Building Exterior Renovations: This project would remove and reinstall the marble veneer on the exterior of the building. Once the repairs are complete, the East Building and landscaping would be restored to their original appearance.

4.2 CULTURAL RESOURCES

4.2.1 Archeological Resources

Methodology and Assumptions

As archeological resources exist essentially in subsurface contexts, potential impacts on archeological resources are assessed according to the extent to which the proposed alternatives would involve ground disturbing activities such as excavation or grading. In support of this EA and in order to comply with Section 106 of the NHPA, a Phase 1A archeological study was undertaken for the Eisenhower Memorial site. This study considered past archeological investigations within the project area as provided by the DC SHPO, historic maps, census records, historic photos, and studies relating to the history of Southwest Washington. In addition, site reconnaissance was completed in October, 2010. Although these records and investigations provide some information on the potential for archeological materials to be present in the project area, they do not constitute a complete inventory of archeological resources and can only be used as predictive tools.

Potential effects to historical archeological resources are assumed to be local to the Washington, DC area, unless identified as regional within the analysis. Potential effects to prehistoric archeological resources are assumed to have regional impacts, unless otherwise identified in the analysis in this document.

Study Area

The APE for archeological resources is the four-acre Project Site, as defined in Figure 3-1. It encompasses the GSA parcel, the Maryland Avenue roadway, and the NPS parcel.

Impact Thresholds

A proposed alternative is considered to have an impact on archeological resources when it results in the whole or partial destruction of the resource. The impact thresholds for archeological resources outlined here take into account both the degree to which the alternative has the potential to destroy an archeological resource and the degree to which the losses could be compensated by mitigation strategies, such as archeological data recovery or preservation in place.

Under Section 106 of the National Historic Preservation Act (NHPA), an undertaking must be evaluated for its effects on resources eligible for listing on the National Register of Historic Places (NRHP). Resources can meet four eligibility criteria, and must also be found to have sufficient integrity. The Phase IA archeological study presents a discussion of archeological potential within the project area, but no archeological resources have been identified. The impacts discussion is therefore based on archeological potential and not on known archeological resources.

- *Negligible.* The impact is barely measurable, with no perceptible adverse or positive consequences. Under Section 106, this would be considered *no adverse effect*.

- *Minor.* A minor adverse impact on archeological sites with the potential to yield important information in prehistory or history is detectable and measurable, but does not diminish the overall integrity of the resource. For purposes of Section 106, a determination of minor impact would be considered *no adverse effect*.

- *Moderate.* A moderate adverse impact is sufficient to cause a noticeable change, substantially affecting archeological sites with the potential to yield information, even if most of the resource can be avoided, and resulting in loss of overall integrity. For purposes of Section 106, a determination of moderate impact would be considered an *adverse effect*.

- *Major. A* major adverse impact consists of highly noticeable disturbance, degradation, or destruction of an archeological resource that results in the loss of most or all of the site and its potential to yield important information. For the purposes of Section 106, a determination of major impact would be considered an *adverse effect*.

- *Beneficial Impacts.* The site would be actively stabilized or preserved in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* to accurately depict its form, features, and character as it appeared during its period of significance. For purposes of Section 106, the determination of effect would be no adverse effect.

- *Duration.* All impacts to archeological resources are considered to be long-term since they result in the loss of non-renewable cultural resources.

Archeological Impacts of No Action Alternative

Under the No Action Alternative, there would be no ground-disturbing activities on the site as the Eisenhower Memorial would not be constructed. Thus, there would be no direct or indirect impacts to archeological resources and there would be no adverse effect under Section 106.

Cumulative Impacts

With no ground-disturbing activities on the site under the No Action Alternative, there would be no cumulative impacts to archeological resources.

Conclusion

Under the No Action Alternative, there would be no ground disturbing activities on the site as the Memorial would not be constructed. Thus, there would be no direct, indirect, or cumulative impacts to archeological resources and no adverse effect under Section 106.

Archeological Impacts of Alternative 1

As part of Alternative 1, Maryland Avenue would be restored to its historic alignment and remain open to traffic. The columns and grove of trees within the Memorial would occupy both sides of Maryland Avenue in a circular arrangement, with the visitor services facilities located to the south. The installation of the blocks, reliefs, ranger station, book sales area, utilities, restrooms, and large trees would involve excavation of up to ten feet in depth, and the columns would involve disturbance of up to 60 feet in depth. These depths could impact sub-surface archeological deposits in Reservation D (the NPS parcel), Square 492 (the GSA parcel), and the Maryland Avenue right-of-way.

At the current time, impacts to archeological resources cannot be fully evaluated because subsurface testing has not yet been conducted and no archeological sites have yet been identified. Possible impacts to archeological resources could result from ground disturbance related to installing columns, relief elements, or landscaping components. Possible impacts of this alternative could range from negligible to moderate. However, these impacts would be mitigated through a phased approach to archeological investigation, ongoing consultation through the Section 106 process as agreed to in an MOA, and dissemination of information. If archeological impacts are negligible or minor, there would be no adverse effect under Section 106; if impacts are moderate, there would be an adverse effect under Section 106.

NPS is pursuing a phased approach to the identification and evaluation of archeological resources beginning with a Phase 1A study and geoarcheological consultation. These would focus on the areas of higher sensitivity for archeological resources, and applying the criteria of adverse effect. All such work would follow the "Guidelines for Archaeological Investigations in the District of Columbia" (1998, as amended), the "Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation" (1983), and NPS "Director's Order 28: Cultural Resource Management" (1998).

Cumulative Impacts

To the extent that they involve ground disturbing activities in areas of archeological sensitivity, several planned and current projects have the potential to contribute to cumulative impacts on archeological resources in the Nation's Capital. In particular, the Potomac Park Levee project and the Switzer Building Site Improvements are both being conducted in areas with identified archeological sites. Assessments of archaeological potential have not yet been conducted for the American Veterans Disabled for Life Memorial, implementation of the National Mall Plan, the disposition of GSA properties along Maryland Avenue, and ongoing or planned perimeter security projects within the Nation's Capital. Other projects such as the Museum of Women's History and the Museum of the American Latino do not yet have project sites identified, and the assessment of archeological potential has not yet been conducted. If located in an area of archeological sensitivity, these projects (for which no archeological assessment has yet been conducted) would also have potential to impact archeological resources due to ground-disturbing activities. If important archeological resources are encountered as part of these other projects, the cumulative projects could result in long-term negligible to moderate adverse impacts on archeological resources.

As stated above, Alternative 1 could result in long-term negligible to moderate adverse impacts on archeological resources. If important archeological resources are encountered as part of construction of the Memorial, the incremental impact of this action, when considered with other cumulative projects, could contribute to long-term moderate cumulative impacts on archeological resources.

Mitigation

The NPS is continuing Section 106 consultation to evaluate and mitigate adverse effects on historic properties, including archeological resources, through a Memorandum of Agreement (MOA) developed by NPS, the DC SHPO, NCPC, and the EMC. The MOA would include stipulations to insure an appropriate level of archeological documentation. Archeological documentation would occur prior to project construction. Mitigation of adverse effects would be accomplished by archeological documentation and in-place preservation, followed by publication of the results to the scientific community and the public. Among the vehicles to disseminate findings to the public is the e-Memorial, which would provide an online source of information about Eisenhower and the Memorial site.

If during construction, archeological resources are discovered, all work in the immediate vicinity of the discovery would be halted until the resources can be identified and documented and an appropriate mitigation strategy developed. If necessary, consultation with the DC Historic Preservation Officer, NPS, and/or the NPS Regional Archeologist will be coordinated to ensure that the protection of resources is addressed. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3001) of 1990 would be followed.

Conclusion

Due to the fact that there is the potential for sub-surface archeological deposits on the Memorial site, and that the installation of the blocks, reliefs, and large trees would involve up to 10 feet of excavation, as well as up to 60 feet of disturbance for the columns, there could be an adverse impact, ranging from negligible to moderate, on archeological resources. If there is no impact or if the impact is negligible or minor, there is no adverse effect under Section 106. If there is a moderate impact, then there would be an adverse effect under Section 106. However, these impacts would be mitigated through a program of archeological investigation that would be implemented prior to construction.

Archeological Impacts of Alternative 2

In Alternative 2, the arrangement of the columns, reliefs, and grove of trees would be similar to Alternative 1, but Maryland Avenue would be closed to traffic. This alternative would include the addition of amphitheater-style seating south of the roadway, and the visitor restroom facilities would be located in the northwest section of the site. The construction of the columns, reliefs, amphitheater seating, and trees would involve excavation that could impact sub-surface archeological deposits in both the GSA and NPS parcels and in the Maryland Avenue right-of-way.

At the current time, impacts to archeological resources cannot be fully evaluated because subsurface testing has not yet been conducted and no archeological sites have yet been identified. Possible impacts to archeological resources could result from ground disturbance related to installing columns, relief elements, or landscaping components. Possible impacts of this alternative could range from negligible to moderate. However, these impacts would be mitigated through a phased approach to archeological investigation, ongoing consultation through the Section 106 process as agreed to in an MOA, and dissemination of information. If archeological impacts are negligible or minor, there would be no adverse effect under Section 106; if impacts are moderate, there would be an adverse effect under Section 106.

NPS is pursuing a phased approach to the identification and evaluation of archeological resources beginning with a Phase 1A study and geoarcheological consultation. These would focus on the areas of higher sensitivity for archeological resources, and applying the criteria of adverse effect. All such work would follow the "Guidelines for Archaeological Investigations in the District of Columbia" (1998, as amended), the "Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation" (1983), and NPS "Director's Order 28: Cultural Resource Management" (1998).

Cumulative Impacts

Under Alternative 2, the cumulative projects would be the same as those described in Alternative 1. If important archeological resources are encountered as part of these other projects, the cumulative projects could result in long-term negligible to moderate adverse impacts to archeological resources. As stated above, Alternative 2 could result in long-term negligible to moderate adverse impacts on archeological resources. If important archeological resources are encountered as part of the Memorial's construction, the incremental impact of this action, when considered with other cumulative projects, could contribute to long-term moderate cumulative impacts on archeological resources.

Mitigation

The NPS is continuing Section 106 consultation to evaluate and mitigate adverse effects on historic properties, including archeological resources, through an MOA that would include stipulations to insure an appropriate level of archeological documentation. Archeological documentation would occur prior to project construction. Mitigation of adverse effects would be accomplished by archeological documentation and in-place preservation, followed by publication of the results to scientific community and the public. Among the vehicles to disseminate findings to the public is the e-Memorial, which would provide an

online source of information about Eisenhower and the Memorial site.

If during construction, archeological resources are discovered, all work in the immediate vicinity of the discovery would be halted until the resources can be identified and documented and an appropriate mitigation strategy developed. If necessary, consultation with the DC Historic Preservation Officer, NPS, and/or the NPS Regional Archeologist will be coordinated to ensure that the protection of resources is addressed. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3001) of 1990 would be followed.

Conclusion

Due to the fact that there is the potential for sub-surface archeological deposits on the Memorial site, and that the installation of the blocks, reliefs, amphitheater seating, and large trees would involve up to 10 feet of excavation, as well as up to 60 feet of disturbance for the columns, there could be an adverse impact, ranging from negligible to moderate, on archeological resources. If there is no impact or if the impact is negligible, there is no adverse effect under Section 106. If there is a moderate impact, then there would be an adverse effect under Section 106. However, these impacts would be mitigated through a program of archeological investigation that would be implemented prior to construction.

Archeological Impacts of Alternative 3

In Alternative 3, Maryland Avenue would also be closed to traffic but the arrangement of the reliefs and grove of trees would differ from Alternatives 1 and 2. In this alternative, six columns would be linearly aligned along southern boundary, with two additional columns each on the eastern and western sides of the site. In this alternative, the support building housing the ranger station, restrooms, and book sale area would be located in the southeastern portion of the site. The installation of the blocks, reliefs, ranger station, book sale area, utilities, restrooms, and large trees would involve excavation of up to ten feet in depth. The excavation for the 78-foot columns and columns pile caps would also be approximately 10 feet, and would disturb an additional 50 feet. There is potential for impact on archeological resources with the disturbance required for installation of these elements.

At the current time, impacts to archeological resources cannot be fully evaluated because subsurface testing has not yet been conducted and no archeological sites have yet been identified. Possible impacts to archeological resources could result from ground disturbance related to installing columns, relief elements, or landscaping components. Possible impacts of this alternative could range from negligible to moderate. However, these impacts would be mitigated through a phased approach to archeological investigation, ongoing consultation through the Section 106 process as agreed to in an MOA, and dissemination of information. If archeological impacts are negligible or minor, there would be no adverse effect under Section 106; if impacts are moderate, there would be an adverse effect under Section 106.

NPS is pursuing a phased approach to the identification and evaluation of archeological resources beginning with a Phase 1A

study and geoarcheological consultation. These would focus on the areas of higher sensitivity for archeological resources, and would apply the criteria of adverse effect. All such work would follow the "Guidelines for Archaeological Investigations in the District of Columbia" (1998, as amended), the "Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation" (1983), and NPS "Director's Order 28: Cultural Resource Management" (1998).

Cumulative Impacts

Under Alternative 3, the cumulative projects would be the same as those described in Alternatives 1 and 2. If important archeological resources are encountered as part of these other projects, the cumulative projects could result in long-term negligible to moderate adverse impacts to archeological resources. As stated above, Alternative 3 could result in long-term negligible to moderate adverse impacts to archeological resources. If important archeological resources are encountered as part of construction of the Memorial, the incremental impact of this action, when considered with these other cumulative projects, could contribute to long-term moderate cumulative impacts to archeological resources.

Mitigation

The NPS is continuing Section 106 consultation to evaluate and mitigate adverse effects on historic properties, including archeological resources, through an MOA that would include stipulations to insure an appropriate level of archeological documentation. Archeological documentation would occur prior to project construction. Mitigation of adverse effects would be accomplished by archeological documentation and in-place preservation, followed by publication of the results to the scientific community and the public. Among the vehicles to disseminate findings to the public is the e-Memorial, which would provide an online source of information about Eisenhower and the Memorial site.

If during construction, archeological resources are discovered, all work in the immediate vicinity of the discovery would be halted until the resources can be identified and documented and an appropriate mitigation strategy developed. If necessary, consultation with the DC Historic Preservation Officer, NPS, and/or the NPS Regional Archeologist will be coordinated to ensure that the protection of resources is addressed. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3001) of 1990 would be followed.

Conclusion

Due to the fact that there is the potential for sub-surface archeological deposits in the GSA and NPS parcels, and that the installation of the blocks, reliefs, and large trees would involve up to 10 feet of excavation, as well as up to 60 feet of disturbance for the columns, there could be an adverse impact, ranging from negligible to moderate, on archeological resources. If there is no impact or if the impact is negligible or minor, there is no adverse effect under Section 106. If there is a moderate impact, then there would be an adverse effect under Section 106. However, these impacts would be mitigated through a program of archeological investigation that would be implemented prior to construction.

This page is intentionally left blank

4.2.2 Historic Resources

Methodology and Assumptions

Historic resources located within the APE that are listed in, or potentially eligible for listing in, the NRHP were identified as part of this study through the Section 106 process. For each of the alternatives, a determination was made regarding possible adverse effects under Section 106 and these determinations correlate to the NEPA impacts as indicated in the impact thresholds below.

A range of sources were used in analyzing the impacts to these resources, including National Register nominations, historic maps, and field surveys, as well as a Phase 1A archeological study and two determinations of eligibility that were prepared in support of this document.

Study Area

The study area for historic resources is the Secondary APE, as delineated in Figure 3-1. The area is bounded by the U.S. Capitol Building south to Independence Avenue, west on Independence Avenue to 2nd Street, south on 2nd Street to C Street, west on C Street to 9th Street, north to the centerline of the Mall, and east along the centerline of the Mall to the U.S. Capitol Building.

Impact Thresholds

- *Negligible.* The impact does not result in any noticeable changes to the resource or its visual context. For the purposes of Section 106, a determination of negligible impact would be considered *no adverse effect.*

- *Minor.* A minor adverse impact occurs when there are noticeable changes to the resource or its context, but these changes do not affect the resource's character-defining features or integrity. For the purposes of Section 106, a determination of minor impact would be considered *no adverse effect.*

- *Moderate.* A moderate adverse impact results in a change to one or more of the resource's character-defining features, but would not diminish the integrity of the resource to the extent that its NRHP eligibility would be lost. For the purposes of Section 106, a determination of moderate impact would be an *adverse effect.*

- *Major.* A major adverse impact results in substantial and highly noticeable changes to character-defining features such that the integrity of the resource would be compromised to the extent that it may no longer be eligible for listing in the National Register. For the purposes of Section 106, a determination of major impact would be an *adverse effect*.

Historic Resources Impacts of No Action Alternative

Historic Structures and Districts

Under the No Action Alternative, the Eisenhower Memorial would not be constructed on the site. As a result, historic structures and districts within the Secondary APE, including the L'Enfant Plan, the LBJ Building and its designed landscape, the Orville and Wilbur Wright Buildings, the Wilbur Cohen Building, and the U.S. Botanic Garden would remain unchanged. Thus, direct and indirect impacts on historic structures and districts would be negligible and there would be no adverse effect under Section 106.

Cultural Landscapes

Under the No Action Alternative, the Eisenhower Memorial would not be constructed on the site. As a result, the Mall, located north of the Memorial site, would remain unchanged. Thus, impacts on cultural landscapes would be negligible and there would be no adverse effect under Section 106.

Cumulative Impacts

Projects within the area surrounding the Memorial site would include the Switzer Building site improvements, the FOB 8 exterior improvements, the disposition of GSA properties along Maryland Avenue, and various perimeter security projects, which could result in impacts on historic resources. The projects would result in long-term minor to moderate adverse impacts on historic structures and districts.

As stated above, the No Action Alternative would result in negligible long-term adverse impacts on historic structures and districts, and cultural landscapes. Given that there would be no construction on the Memorial site under the No Action Alternative, when combined with the cumulative projects, long-term cumulative impacts on historic resources would be negligible.

Conclusion

Under the No Action Alternative, the Eisenhower Memorial would not be constructed on the site. Resources within the Secondary APE, including the L'Enfant Plan, the Mall and its associated buildings, the LBJ Building and its designed landscape, the Orville and Wilbur Wright Buildings, the Wilbur Cohen Building, and the U.S. Botanic Garden would remain unchanged. Thus, there would be negligible direct, indirect, and cumulative impacts on historic resources. In addition, there would be no adverse effect under Section 106.

Historic Resources Impacts of Alternative 1

Historic Structures and Districts

The removal of the existing plaza and its replacement with the Eisenhower Memorial would result in the loss of much of the historic fabric of the designed landscape at the LBJ Building. These elements include the vegetation, paving materials, and small-scale features, such as the benches. However, the plaza would continue to be used as a public gathering space, combining paved areas with landscaping, fundamentally similar to its current use.

In addition to the loss of material elements of the landscape, the installation of the Eisenhower Memorial would result in changes to the historic spatial relationships between the building and its designed landscape. The siting of new planting beds directly adjacent to the north face of the building would encroach upon the structure, and the removal of the entry terraces and placement of a bed directly north of the northeast entrance would alter the historic connection between indoor and outdoor spaces. This disconnection between the building and the landscape would also be reinforced by the adherence to a strict grid in the placement of the trees across the Memorial. Altering these spatial relationships would impact the setting of the LBJ Building. However, Alternative 1 would employ rectilinear paths that would reflect the grid in the ground plane of the existing plaza and would provide a similar tripartite composition that nearly centers on the building.

The Eisenhower Memorial under Alternative 1 would also alter reciprocal views between the LBJ Building and surrounding historic properties**.** The Memorial would introduce built forms reaching 65 feet high that would be evident in views from the site to the adjacent Wilbur Cohen Building, the Wilbur and Orville Wright Buildings, and NASM. The columns, together with the blocks and sculptural reliefs, could result in intermittent views from the site. The grid of trees would serve to restrict views of the east and west ends of the base of the building more than the No Action Alternative, but could allow the upper floors to be evident from adjacent historic properties. Overall, there would be moderate adverse impacts on the LBJ Building and its designed landscape due to the loss of historic fabric of the plaza and the alteration of historic spatial relationships between the building and its landscape through the implementation of Alternative 1. This would constitute an adverse effect under Section 106. However, the Building would remain eligible for listing on the NRHP.

Reservation 5 (the NPS parcel) would be altered from an exercise course and community gardens to a portion of the Memorial. Although the use of the property would change, it would be consistent with L'Enfant's placement of key monuments within the city's squares.

Under Alternative 1, Maryland Avenue would be restored to its historic alignment and would remain open to vehicle traffic. This would result in a beneficial impact on the L'Enfant and McMillan Plans. However, as discussed further in Section 4.2.3, the placement of the built forms of five columns just outside of the cartway, but within the historic right-of-way, would alter the openness of the right-of-way and its associated primary view corridor for pedestrians among the street trees that line Maryland Avenue (see Figure 4-1). Overall, these changes to the site would result in a minor long-term adverse impact on the L'Enfant and McMillan Plans and no adverse effect under Section 106. Although the Memorial elements would be visible from Independence Avenue and 4th Street

(see Figure 4-.2 and 4-.3), the elements would not interrupt these two historic rights-of-way or their associated view corridors.

The implementation of Alternative 1 would impact additional resources adjacent to, but outside of, the Memorial site. The Memorial elements would be visible from the Wilbur and Orville Wright Buildings, and the Wilbur Cohen Building. However, the Memorial would not directly affect the properties' character defining features. In addition, the indirect visual impacts would be to the sides of the buildings and not to their primary elevations. Long-term adverse impacts would be indirect and minor and there would be no adverse effect under Section 106.

Due to their location outside of the Maryland Avenue cartway, and the height of the tree canopy along Maryland Avenue, long-term impacts on the U.S. Capitol are anticipated to be negligible; the Memorial's built forms would have limited visibility from the U.S. Capitol. Since the Memorial would not noticeably alter the visual context of the U.S. Botanic Garden, long-term impacts on this resource would be negligible. There would be no adverse effects to these resources under Section 106. The Memorial would not be visible from the Hubert Humphrey Building, and therefore there would be no effect on that building.

Cultural Landscapes

Alternative 1 would include eight columns that would be 65' high, which would be major vertical elements within the Memorial, and would be highly visible from NASM and the Hirshhorn Museum. However, the Memorial would be placed within an existing urban context and the columns would not exceed the height of adjacent buildings. Although the Memorial would alter views of buildings from the Mall, it would not obstruct such views. Furthermore, the Memorial would not obstruct views along 4th Street. These columns would not be visible from Union Square. The historic circulation of 4th Street would not be changed as a result of the Memorial. Thus, long-term adverse impacts on these Mall buildings would be indirect and minor. There would be no adverse effect to the cultural landscapes of the Mall or to Union Square under Section 106.

Cumulative Impacts

In the vicinity of the Memorial site, projects at FOB 8 and the Switzer Building both include perimeter security elements, which could result in long-term moderate impacts on the L'Enfant Plan. Like Alternative 1, these projects would place built elements outside of the cartways, but within historic rights-of-way, thereby altering spatial relationships and historic views and vistas.

The National Mall Plan calls for a range of improvements to that iconic cultural landscape. The long-term impacts on cultural resources under the Mall Plan would be negligible to major and adverse as a result of changes to the design of Union Square, the introduction of food service facilities, and changes to historic circulation patterns; impacts would be negligible to moderate and beneficial as a result of improvements to the landscape.

As described above, Alternative 1 would result in long-term moderate adverse impacts to the LBJ Building and plaza due to the loss of the LBJ Building plaza and its relationship to the building, long-term beneficial impacts to the L'Enfant Plan due to the reestablishment of the historic alignment of Maryland Avenue, and long-term minor adverse impacts to the L'Enfant Plan due to the placement of built forms at the edge of the Maryland Avenue cartway. In addition, there could be long-term minor adverse cumulative impacts to the Mall when Alternative 1 is considered

with elements of the National Mall Plan. There could be moderate long-term cumulative impacts on the L'Enfant Plan as a result of Alternative 1 when combined with ongoing or planned perimeter security projects within the city. There would be no cumulative impacts on other historic resources as a result of Alternative 1.

Mitigation

In an effort to minimize impacts on historic properties, and as part of the NHPA Section 106 process, the NPS, the DC SHPO, NCPC, and the EMC are developing a Memorandum of Agreement (MOA). The MOA will outline measures that will seek to avoid, minimize, or mitigate the impact of proposed the Eisenhower Memorial on the LBJ Building and its plaza, the L'Enfant Plan, and adjacent historic properties. This could include measures to address the size and scale of the built elements and help fulfill the design principles, as well as a Historic American Landscape Survey (HALS) for the LBJ Building plaza. The MOA will document the mitigation measures and stipulate that consultation will continue through the detailed design process.

Conclusion

Overall, there would be moderate adverse impacts on the LBJ Building and its designed landscape due to the loss of historic fabric of the plaza and the alteration of historic spatial relationships between the building and its landscape through the implementation of Alternative 1. These impacts would constitute an adverse effect under Section 106, but would not cause the LBJ Building to be ineligible for the NRHP. There would beneficial impacts on the L'Enfant and McMillan Plans from the reestablishment of the historic alignment of Maryland Avenue, and long-term minor adverse impacts due to the placement of built forms at the edge of the Maryland Avenue cartway. These impacts would not constitute adverse effects under Section 106. There would be long-term indirect and minor adverse impacts on NASM and the Hirshhorn Museum; because the impacts would be minor, there would be no adverse effect to the cultural landscape of the Mall or Union Square under Section 106. In addition, there would be long-term minor indirect adverse impacts on the Wilbur and Orville Wright Buildings, and the Wilbur Cohen Building. Since the Memorial would not noticeably alter the visual context of the U.S. Botanic Garden or the U.S. Capitol Building, impacts on these resources would be negligible.

Historic Resources Impacts of Alternative 2

Historic Structures and Districts

The impacts to the LBJ Building and its designed landscape would be similar to those described under Alternative 1. The removal of the existing plaza and its replacement with the Eisenhower Memorial under Alternative 2 would result in the loss of much of the historic fabric of the designed landscape at the LBJ Building. It would also alter key historic spatial relationships between the building and its landscape, in particular the relationship between indoor and outdoor spaces. However, Alternative 2 would employ rectilinear paths that would reflect the grid in the ground plane of the existing plaza and would provide a similar tripartite composition that nearly centers on the building.

In Alternative 2, the Eisenhower Memorial would also alter reciprocal views between the LBJ Building and surrounding historic properties**.** The Memorial would introduce built forms reaching 50 feet high that would be evident in views between the LBJ Building and the adjacent Wilbur Cohen Building, Wilbur and Orville Wright Buildings, the NASM, and the Hirshhorn Museum. The grid of trees under Alternative 2 would serve to restrict views of the base of the building more than the No Action Alternative, but could allow the upper floors to be evident from adjacent historic properties.

Overall, adverse impacts to the LBJ Building and its designed landscape would be moderate, due to the loss of historic fabric of the plaza, the alteration of key spatial relationships between the building and its site, and the change in reciprocal views between the LBJ Building and adjacent historic properties. This would constitute an adverse effect under Section 106. The Building would remain eligible for listing on the NRHP.

Reservation 5 would be altered from an exercise course and community gardens to a portion of the Memorial. Although the use of the property would change, it would be consistent with L'Enfant's placement of key monuments within the city's squares.

Under Alternative 2, Maryland Avenue would be restored to its historic alignment; however, it would only be open to pedestrian traffic. The reestablishment of the historic alignment would result in a beneficial impact on the L'Enfant and McMillan Plans. In addition, the orientation of built structures, including the ranger station and bookstore buildings, to the Maryland Avenue cartway would reinforce the roadway's diagonal alignment. As discussed further in Section 4.2.3, the placement of five columns just outside of the historic cartway, but within the historic right-of-way, would alter the openness of the right-of-way and its associated primary view corridor for pedestrians between the street trees that line Maryland Avenue (see Figure 4-5). Although the Memorial elements would be visible from Independence Avenue and 4th Street (see Figure 4-6 and 4-7), the elements would not interrupt these two historic rights-of-way or their associated view corridors. Overall, these changes to the site would result in a long-term minor adverse impact on the L'Enfant and McMillan Plans and no adverse effect under Section 106.

The implementation of Alternative 2 would impact additional resources adjacent to, but outside of, the Memorial site. The Memorial elements would be visible from the Wilbur and Orville Wright Buildings, and the Wilbur Cohen Building. However, the Memorial would not directly e properties' character defining features. In addition, the indirect visual impacts would be to the sides of the buildings and not to their main elevations. Long-term

adverse impacts on these resources would be indirect and minor and there would be no adverse effect under Section 106.

Due to their location outside of the Maryland Avenue cartway, and the height of the tree canopy along Maryland Avenue, the Memorial's built forms would have limited visibility from the U.S. Capitol. Thus, long-term impacts on the U.S. Capitol Building would be negligible. Since the Memorial would not noticeably alter the visual context of the U.S. Botanic Garden, long-term impacts on this resource would be negligible. There would be no adverse effects on these resources under Section 106. The Memorial would not be visible from the Hubert Humphrey Building, and therefore there would be no effect on that building.

Cultural Landscapes

Alternative 2 would include eight 50-foot columns which would be visible from the adjacent NASM and Hirshhorn Museum, both located on the Mall north of the Memorial site. However, they would be placed within an existing urban context and would not exceed the height of these buildings. The columns would not be visible from Union Square. The Memorial would not change 4th Street circulation. Long-term impacts to the Mall and Union Square would be indirect and minor, and there would be no adverse effect under Section 106.

Cumulative Impacts

Under Alternative 2, the cumulative projects would be the same as those in Alternative 1. As described above, Alternative 2 would result in long-term moderate adverse impacts to the LBJ Building and plaza due to the loss of the LBJ Building plaza and its relationship to the building, long-term beneficial impacts to the L'Enfant Plan due to the reestablishment of the historic alignment of Maryland Avenue, and long-term minor adverse impacts to the L'Enfant Plan due to the placement of built forms at the edge of the historic Maryland Avenue cartway. There could be moderate long-term adverse cumulative impacts on the L'Enfant Plan as a result of Alternative 2 when combined with ongoing or planned perimeter security projects within the city. In addition, there could be long-term minor adverse cumulative impacts to the Mall when Alternative 2 is considered with elements of the National Mall Plan. There would be no cumulative impacts on other historic resources as a result of Alternative 2.

Mitigation

The mitigation measures for Alternative 2 are identical to those identified for Alternative 1. An MOA is being prepared that will outline measures seeking to avoid, minimize, or mitigate the impact of the proposed Eisenhower Memorial on the LBJ Building, the L'Enfant Plan, and adjacent historic properties, including measures to address the size and scale of the built elements and help fulfill the design principles. An additional mitigation measure could include a Historic American Landscape Survey (HALS) for the LBJ Building plaza. The MOA will document the mitigation measures and stipulate that consultation will continue through the detailed design process.

Conclusion

Overall, there would be moderate adverse impacts on the LBJ Building and its designed landscape due to the loss of historic fabric of the plaza and the alteration of historic spatial relationships between the building and its landscape through the implementation of Alternative 2. These impacts would constitute an adverse effect

under Section 106. There would be beneficial impacts on the L'Enfant and McMillan Plans from the reestablishment of the historic alignment of Maryland Avenue, and long-term minor adverse impacts due to the placement of built forms at the edge of the historic cartway. These impacts would not constitute adverse effects under Section 106. There would be long-term indirect and minor adverse impacts on NASM and the Hirshhorn Museum; because the impacts are minor, there would be no adverse effect to the cultural landscape of the Mall or Union Square under Section 106. There would be minor long-term indirect visual impacts on the adjacent Mall buildings, the Wilbur and Orville Wright Buildings, and the Wilbur Cohen Building. Since the Memorial would not noticeably alter the visual context of the U.S. Capitol Building or the U.S. Botanic Garden, impacts on these resources would be negligible.

Historic Resources Impacts of Alternative 3

Historic Structures and Districts

As under Alternatives 1 and 2, Alternative 3 would result in the removal of the existing plaza and the loss of much of the historic fabric of the designed landscape at the LBJ Building. However, the plaza would continue to be used as a public gathering space, combining paved areas with landscaping, fundamentally similar to its current use.

In addition to the loss of material elements of the landscape, the installation of the Eisenhower Memorial under Alternative 3 would result in changes to the historic spatial relationships between the building and its designed landscape. The placement of the uninterrupted tapestry between much of the building and the Memorial landscape would serve to physically divide them, dramatically altering this fundamental relationship. However, due to its 15-18' height above grade, views, as well as pedestrian access, would be afforded underneath the tapestry. A woven tapestry would be moderately transparent, thereby limiting the views between the building and the Memorial landscape. A welded tapestry would be highly transparent and views would be afforded through the tapestry. The tapestries would be set back from the LBJ Building façade one bay on each end, allowing views to the corners of the Buildings. The openness of the design directly in front of the entrances of the building would recognize the entries, and the height of the bottom of the tapestry would be consistent with the height of the first floor of the building, thereby referencing the building design in the landscape. Finally, the design would provide a similar tripartite composition to the existing plaza that centers on the LBJ Building.

Under Alternative 3, the design of the Memorial would alter reciprocal views between the LBJ Building and surrounding historic properties, primarily due to the placement of the tapestries. The views impacted would include those to and from the LBJ Building, the Wilbur Cohen Building, and the Wilbur and Orville Wright Buildings. The placement of the tapestries on the eastern, southern, and western sides of the Memorial site would serve to visually separate the Memorial from surrounding resources. However, due to its 15-18' height above grade, views and pedestrian access would be afforded underneath the tapestry. A woven tapestry would be moderately transparent, thereby limiting the views. A welded tapestry would be highly transparent and views would be afforded through the tapestry.

Overall, adverse impacts to the LBJ Building and its designed landscape would be moderate, due to the loss of historic fabric of the plaza, the alteration of key spatial relationships between the building and its site, and the change in reciprocal views between the LBJ Building and adjacent historic properties. This would constitute an adverse effect under Section 106, but the Building would remain eligible for listing on the NRHP.

Reservation 5 would be altered from an exercise course and community gardens to a portion of the Memorial. Although the property's use would change, it would be consistent with L'Enfant's placement of key monuments within the city's squares.

As discussed in Section 4.3, the placement of the built forms of four columns and the tapestry in the northeastern corner of the site, outside of the cartway, but within the historic right-of-way, would alter the openness of the right-of-way and its associated primary view corridor for pedestrians among the street trees that line Maryland Avenue (see Figure 4-9). Overall, these changes to the site would result in a long-term moderate adverse impact on elements of the L'Enfant and McMillan Plans and thus an adverse effect under Section 106. The Plans would remain listed on the NRHP. Although the Memorial elements would be visible from Independence Avenue and 4th Street (see Figures 4-10 and 4-11), the elements would not interrupt these two historic rights-of-way or their associated view corridors. In addition, the on-site building, placed parallel to 4th Street would reinforce the roadway's north-south alignment.

The implementation of Alternative 3 would impact additional resources adjacent to, but outside of, the Memorial site. The Memorial elements would be visible from the Wilbur and Orville Wright Buildings, and the Wilbur Cohen Building, due to the high visibility of the Memorial's built forms. However, the Memorial would not directly affect the properties' character defining features. In addition, the indirect visual impacts would be to the sides of the buildings and not to their main elevations. Long-term adverse impacts on these resources would be indirect and minor and there would be no adverse effect under Section 106.

Due to their location outside of the Maryland Avenue cartway and the height of the tree canopy along Maryland Avenue, the Memorial's built forms would be slightly visible in the view from the Capitol steps southwest along Maryland Avenue. Thus, long-term impacts on the U.S. Capitol Building would be minor. Since the Memorial would not noticeably alter the visual context of the U.S. Botanic Garden, long-term impacts on this resource would be negligible. There would be no adverse effects to these resources under Section 106. The Memorial would not be visible from the Hubert Humphrey Building, and therefore there would be no effect on that building.

Cultural Landscapes

Alternative 3 would include ten columns and three tapestries that would reach an average height of 78 feet and would be highly visible from NASM and the Hirshhorn Museum. However, they would be placed within an existing urban context and would be consistent in height with adjacent buildings, including the LBJ Building to the south. The columns would not be seen from Union Square. The Memorial would not change 4th Street circulation as it approaches and crosses the Mall. Long-term adverse impacts on these buildings would be indirect and minor, and there would be no adverse effect under Section 106.

Cumulative Impacts

Under Alternative 3, the cumulative projects would be the same as those in Alternatives 1 and 2. As described above, Alternative 3 would result in long-term moderate adverse impacts due to the loss of the LBJ Building plaza and its relationship to the building and long-term beneficial impacts due to the reestablishment of the historic alignment of Maryland Avenue. There would be long-term moderate adverse impacts due to the placement of built forms outside of the Maryland Avenue cartway, but within the historic right-of-way. Additionally, there could be long-term moderate cumulative impacts on the L'Enfant Plan as a result of Alternative 3 when combined with ongoing or planned perimeter security projects within the city. There could be long-term minor adverse cumulative impacts to the Mall when Alternative 3 is considered with the proposed implementation of the National Mall Plan. There would be no cumulative impacts on other historic resources as a result of Alternative3.

Mitigation

The mitigation measures for Alternative 3 are identical to those identified for Alternative 1. An MOA is being prepared that will outline measures seeking to avoid, minimize, or mitigate the impact of the proposed Eisenhower Memorial on the LBJ Building, the L'Enfant Plan, and adjacent historic properties, including measures to address size and scale of the built elements and help fulfill the design principles. Additional mitigation measures could include a Historic American Landscape Survey (HALS) for the LBJ Building plaza and a physical recognition of the former Maryland Avenue cartway. The MOA will document the mitigation measures and stipulate that consultation continue through the detailed design process.

Conclusion

Overall, there would be moderate adverse impacts on the LBJ Building and its designed landscape due to the loss of historic fabric of the plaza and the alteration of historic spatial relationships between the building and its landscape through the implementation of Alternative 3. These impacts would constitute an adverse effect under Section 106. There would be beneficial impacts on the L'Enfant and McMillan Plans from the reestablishment of the historic alignment of Maryland Avenue, and moderate adverse impacts due to the placement of built forms outside of the historic cartway but within the corridor right-of-way. These impacts would constitute adverse effects under Section 106. There would be long-term indirect and minor adverse impacts on NASM and the Hirshhorn Museum. These impacts would not constitute adverse effects to the cultural landscape of the Mall or Union Square under Section 106. In addition, there would be minor indirect visual impacts on the adjacent Mall buildings, the Wilbur and Orville

Wright Buildings, the Wilbur Cohen Building, and the U.S. Capitol Building. Since the Memorial would not noticeably alter the visual context of the U.S. Botanic Garden, impacts on this resource would be negligible.

This page is intentionally left blank

4.3 VISUAL RESOURCES

Methodology and Assumptions

The aesthetic and visual impact analysis for the Eisenhower Memorial addresses potential changes to key views and vistas that can be attributed to the project. Impacts on views and vistas are determined based on an analysis of the existing quality of the view (including changes as a result of glare), the sensitivity of the view (such as important views from historic and cultural sites), and the anticipated relationship of the proposed design elements to the existing visual environment.

The analysis that follows focuses on three key view corridors, Maryland Avenue, Independence Avenue, and 4th Street, as well as impacts to the visual environment. To evaluate these corridors, photo simulations of three representative view points are presented, including northeast on Maryland Avenue to the U.S. Capitol Building, west on Independence Avenue, north on 4th Street, and south on 4th Street from the Mall. These viewpoints were selected due the sensitivity of these view corridors, but are intended to be representative of the series of views afforded along these corridors. While the analysis included in this section focuses on urban design, references to the Historic Resources section and thereby Section 106 thresholds are provided because these view corridors are also elements of the historic L'Enfant Plan.

Study Area

The study area for visual resources is the secondary APE, as delineated in Figure 3-1.

Impact Thresholds

The impact thresholds for visual resources are described in the following categories:

- *Negligible.* The proposed project would not be visible from the representative viewpoint, or visual changes are so subtle as to be nearly undetectable.

- *Minor*. The proposed project would be visible as a background element in a view or vista that includes buildings or other site features of similar mass and scale. The project may filter views or vistas but would not interfere with the view corridor. Of particular importance are direct views of the Capitol dome.

- *Moderate.* The proposed project would be visible as part of a view or vista that includes buildings or site features of similar mass and scale and may screen or partially interfere with a view corridor, but not interfere with views of the Capitol dome.

- *Major.* The proposed project features would be visible and would contrast with or dominate the existing site features, and may completely block or interfere with a view corridor, including views of the Capitol dome.

Visual Resources Impacts of No Action Alternative

Under the No Action Alternative, the Eisenhower Memorial would not be constructed. There would be no changes to the existing visual environment or key view corridors. See figures 3-22 through 3-24 for photographs of the three view corridors under existing conditions. There would be no changes to the views or experiences from the site or adjacent buildings under the No Action Alternative. Therefore, there would be no direct or indirect impacts on visual resources as a result of the No Action Alternative.

Cumulative Impacts

Since the Eisenhower Memorial would not be constructed, there would be no direct or indirect impacts on visual resources as a result of the No Action Alternative. As such, the No Action Alternative would not contribute on cumulative impacts to visual resources, when considered with other ongoing or planned projects in the vicinity of the site.

Conclusion

Since the Eisenhower Memorial would not be constructed, there would be no changes to the visual context or key views. Long-term direct, indirect, and cumulative impacts would be negligible.

Visual Resources Impacts of Alternative 1

Maryland Avenue

Under Alternative 1, a circular colonnade would frame the vista northeast along the Maryland Avenue corridor to the U.S. Capitol Building, a key vista within L'Enfant's Plan for the city. The colonnade would include three columns north of Maryland Avenue and five columns to the south. Blocks and sculptural reliefs would be located outside of the realigned roadway, or cartway, which is the primary view corridor. The location of these built elements would obstruct views of NMAI on the north side of the corridor, and introduce built forms into the south side of the corridor where it currently appears as open space. The vista would continue to be framed by trees, which would highlight the direct view of the Capitol dome. The prominence of the built elements would be increased during the fall and winter months when the leaves are off the trees. The return of Maryland Avenue to its historic alignment would provide additional visual connection to the U.S. Capitol. Overall, long-term adverse impacts on this vista under Alternative 1 would be minor, as the Eisenhower Memorial would help define the open character of the view to the U.S. Capitol. While some consulting parties have objected the scale and placement of columns, NPS considers the columns to be a minimal intrusion into the Maryland Avenue vista. This minor adverse impact on the vista under Alternative 1 contributes to the overall minor adverse impact on the L'Enfant Plan, as described in Section 4.2.2.

Figure 4-1: Existing (above) and proposed (below) views northeast along Maryland Avenue under Alternative 1

Independence Avenue

In the vistas east and west along Independence Avenue under Alternative 1, the Eisenhower Memorial would be largely shielded from view by existing trees during the spring and summer months. Figure 4-2 provides a view west on Independence Avenue and is intended to be representative of views along the corridor. During the winter, when leaves are off of the trees, portions of the Memorial, including columns, blocks, and sculptural reliefs, would be visible on the south side of the Avenue. The columns and trees would be shorter than the adjacent Wilbur Wright and Wilbur Cohen Buildings, and the new street trees along Independence Avenue would reinforce a consistent visual line. Neither the built forms nor the trees would encroach upon or obstruct views along the corridor, and the wide existing tree-lined character of the roadway would be maintained. Overall, Alternative 1 would have negligible long-term impacts on this view during summer months and minor long-term adverse impacts during fall and winter months. This minor adverse impact on the vista contributes to the overall minor adverse impact on the L'Enfant Plan, as described in Section 4.1.2.

Figure 4-2: Existing (above) and proposed (below) views west along Independence Avenue under Alternative 1

4th Street

Alternative 1 would remove existing street trees along the west side of 4th Street and replace them with new street trees. Looking north, the Memorial street trees would reinforce the visual line toward the National Building Museum and maintain the street's tree-lined character. No portion of the colonnade or other Memorial features would be visible. Thus, long-term impacts on the 4th Street corridor looking north would be negligible under Alternative 1. As such, the negligible impact would not contribute to an overall adverse impact on the L'Enfant Plan, as discussed in Section 4.1.2.

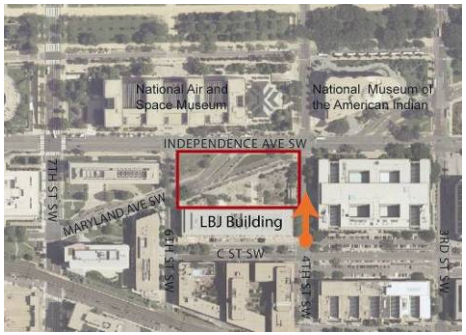


Figure 4-3: Existing (above) and proposed (below) views north on 4th Street under Alternative 1

The Mall at 4th Street

Under Alternative 1, landscape trees, columns, and block memorial elements would be visible looking southwest from the Mall on 4th Street. Two columns would be partially visible at the eastern portion of the Memorial. However, due to existing street trees near NASM and the trees planned at the Memorial, the visibility of the columns would be minimal during spring and summer months. Two Memorial relief blocks would also be visible at the eastern portion of the Memorial. Street trees and landscape trees at both the Memorial and NASM sites would partially screen these elements, although portions of them would be visible below the tree canopy. At 20-40 feet in height at installation, street trees and shade trees within the site would screen much of the face of the LBJ Building during spring and summer months; however, the upper stories and the penthouse would emerge above the tree canopy. During winter months, when the leaves are off the trees, the built elements of the Memorial would be more visible, as would the north face of the LBJ Building. Overall, Alternative 1 would have a long-term minor adverse impact on this view.

Figure 4-4: Existing (above) and proposed (below) views southwest to Memorial site under Alternative 1

Surrounding Visual Environment

Alternative 1 would increase the total number of trees at the site to 85, including the replacement of several smaller trees with larger, fuller trees. The tree canopy would be thicker than existing vegetation throughout most of the site, but would be thinner at the Memorial's central plaza and would be more consistent along Maryland Avenue. The tree canopy, columns, and other built Memorial elements of Alternative 1 would result in a more defined character of the site.

View to and from the LBJ Building would be altered by the trees and built elements of Alternative 1. The nearest trees within the Memorial would be located approximately 50 feet from the LBJ Building face, although trees within the Promenade would be approximately 44 feet from the building. The increase in the number and quality of trees at the site would not substantially alter views to and from the building, although some ground and second floor areas would experience a degree of visual change due to leaf cover. The 65-foot columns would also obscure some views to and from windows on the northern façade of the building. Generally, views of the site would change from a minimally vegetated, sparse plaza and roadway to that of a park setting. The light received by the windows of the northern building face would be minimally diminished on the first and second stories due to the increase in tree canopy. This would not interfere with views out of the windows or with the indirect light received over the majority of the Building, and would therefore not substantially alter the working environment with the LBJ Building. As a result of Alternative 1, views and light would be filtered to the lower levels of the LBJ Building through trees. Therefore, Alternative 1 would result in long-term minor adverse impacts on views to and from the LBJ Building and the working environment within it.

Views from the Wilbur Cohen and the Wilbur Wright Buildings and NASM would be altered from the existing plaza and roadway to that of a park setting. The trees and columns would not substantially impede views from those buildings across the site at the buildings' lower levels. Therefore, there would not be a substantial change in the working environment at these buildings.

Mitigation

To reduce the impact of Alternative 1 on the Maryland Avenue view corridor and to help fulfill the design principles, and as part of the NHPA Section 106 process, the NPS, the DC SHPO, GSA, and the EMC are developing an MOA that would stipulate that consultation will continue through the detailed design process. This agreement would allow for the design to advance while incorporating elements, such as changes to the placement of built features to maintain the open character of the vista, which would mitigate adverse impacts to visual resources.

Cumulative Impacts

The disposition of several GSA parcels along Maryland Avenue, to the west of the Memorial site, could result in a beneficial impact on views northeast on Maryland Avenue if the diagonal streetwall becomes more defined and the street trees are consistently sited along the roadways. Alternatively, if the disposition of GSA property on Maryland Avenue did not result in a more defined street wall, the impacts on views northeast on Maryland Avenue would be negligible.

As described above, Alternative 1 would result in long-term minor adverse impacts on the vista northeast on Maryland Avenue. When combined with the cumulative project described above, Alternative 1 would result in long-term minor adverse impacts on views northeast on Maryland Avenue. There would be no cumulative impacts on views southwest from the Mall at 4th Street, north on 4th Street, or on Independence Avenue. There would be minor cumulative impacts on views to and from the LBJ Building and the working environment within.

Conclusion

Alternative 1 would have a long-term minor adverse impact on key view corridors in the vicinity of the Memorial site. There would be a long-term minor adverse impact on the vista northeast on Maryland Avenue, due to the framing of the vista with built elements; a long-term minor adverse impact on the vista west on Independence Avenue during the winter months; a long-term minor adverse impact on the view southwest from the Mall at 4th Street, and a long-term minor adverse impact on views to and from the LBJ Building. Long-term impacts to the view north on 4th Street would be negligible. There would be long-term minor adverse impacts on views to and from the LBJ Building.

Visual Resources Impacts of Alternative 2

Maryland Avenue

Under Alternative 2, a circular colonnade would frame the vista northeast along the Maryland Avenue corridor toward the U.S. Capitol Building, a key vista within L'Enfant's Plan for the city. The colonnade would include three columns north of Maryland Avenue and five columns to the south. Blocks and sculptural reliefs would be located outside of the realigned roadway, or cartway, which is the primary view corridor. The location of these built elements would partially obstruct views of the NMAI on the north side of the corridor, and introduce built forms into the south side of the corridor where it currently appears as open space. However, the existing tree-lined character of the vista would be maintained which would highlight the direct view of the Capitol dome. The prominence of the built elements would be increased during the winter months when the leaves are off the trees. The return of Maryland Avenue to its historic alignment would provide additional visual connection to the U.S. Capitol. While some consulting parties have objected the scale and placement of columns, NPS considers the columns to be a minimal intrusion into the Maryland Avenue vista.

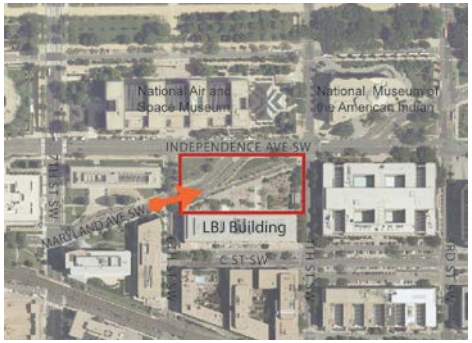


Figure 4-5: Existing (above) and proposed (below) views northeast along Maryland Avenue under Alternative 2

Overall, long-term adverse impacts on this vista under Alternative 2 would be minor, as the Eisenhower Memorial would help define the open character of the vista of the U.S. Capitol. This minor impact on this vista under Alternative 2 contributes to an overall minor impact on the L'Enfant Plan, as described in Section 4.2.2.

Independence Avenue

In the vistas east and west along Independence Avenue under Alternative 2, the Eisenhower Memorial would be largely shielded from view by existing trees during the spring and summer months. Figure 4-6 provides a view west on Independence Avenue and is intended to be representative of views along the corridor. During the winter, when leaves are off of the trees, portions of the Memorial, including columns, blocks, and sculptural reliefs, would be visible on the south side of the Avenue. The columns and trees would be shorter than the adjacent Wilbur Wright and Wilbur Cohen Buildings, and the new street trees along Independence Avenue would reinforce a consistent visual line. Neither the built forms nor the trees would encroach upon or obstruct the vista, and the wide existing tree-lined character of the roadway would be maintained. Overall, Alternative 2 would have negligible long-term impacts on this vista during summer months and minor long-term adverse impacts during winter months. While some consulting parties have objected the scale and placement of columns, NPS considers the columns to be a modest intrusion into the Independence Avenue vista.

Figure 4-6: Existing (above) and proposed (below) views east along Independence Avenue under Alternative 2

The minor impact on the Independence Avenue vista contributes to the overall minor adverse impact on the L'Enfant Plan, as discussed in Section 4.2.2.

4th Street

Alternative 2 would remove existing street trees along the west side of 4th Street and replace them with new street trees, thereby maintaining the existing tree-lined character of the vista. Looking north, the Memorial street trees would reinforce the visual line toward the National Building Museum. No portion of the colonnade or other Memorial features would be visible. Thus, long-term impacts on the 4th Street corridor looking north would be negligible under Alternative 2. As such, this would not contribute to the overall minor impact on the L'Enfant Plan, as discussed in Section 4.2.2.

Figure 4-7: Existing (above) and proposed (below) views north along 4th Street under Alternative 2

The Mall at 4th Street

Under Alternative 2, landscape trees and block memorial elements would be visible looking southwest from the Mall at 4th Street. At 50 feet, the columns on the right side of the view would not be visible. At 20-40 feet in height at installation, street trees and shade trees at both the Memorial and NASM sites would partially screen the Memorial's built elements, although portions of the elements would be visible below the tree canopy. Street trees and landscape trees within the site would screen much of the face of the LBJ Building during spring and summer months, however the upper stories and the penthouse would emerge above the tree canopy. During winter months, when the leaves are off the trees, the built elements of the Memorial would be more visible, as would the north face of the LBJ Building. Overall, Alternative 2 would have a long-term minor adverse impact on this view.

Figure 4-8: Existing (above) and proposed (below) views southwest to Memorial site under Alternative 2

Surrounding Visual Environment

Alternative 2 would increase the total number of trees at the site to 104. The increased number and improved quality of trees would result in a thicker tree canopy. The tree cover would be thinner at the central Memorial area, and would be more consistent along the Maryland Avenue pedestrian-only cartway. The trees, columns, and other built Memorial elements of Alternative 2 would result in a more defined character of the site.

Within the Memorial, the trees nearest to the LBJ Building would be located approximately 50 feet from the building face, although trees within the Promenade would be approximately 35 feet from the building. The increase in the number and quality of trees at the site would minimally reduce the views to and from the first and second floors of the LBJ Building. The 50-foot columns would also obscure some views to and from windows on the northern façade of the building. From the upper floors, views of the plaza would change from a minimally vegetated, sparse plaza and roadway to that of a landscaped park setting. The light received by the windows of the northern building face would be not be substantially reduced at the first and second floors due to the increased tree canopy This would not interfere with views out of the windows or with the indirect light received over the majority of the building. Therefore, Alternative 2 would result in long-term minor adverse impacts on views to and from the LBJ Building and to the working environment in the LBJ Building.

Views from the Wilbur Cohen and the Wilbur Wright Buildings and NASM would be altered from the existing plaza and roadway to that of a park setting. Unlike existing conditions, trees and columns would not substantially impede views from those buildings across the site at the buildings' lower levels, and would therefore not substantially alter working environment within the adjacent buildings.

Mitigation

To reduce the impact of Alternative 2 on the Maryland Avenue view corridor and to help fulfill the design principles, and as part of the NHPA Section 106 process, the NPS, the DC SHPO, GSA, and the EMC are developing an MOA that would stipulate that consultation will continue through the detailed design process. This agreement would allow for the design to advance while incorporating elements, such as changes to the placement of built features to maintain the open character of the vista, which would mitigate adverse impacts to visual resources.

Cumulative Impacts

The cumulative projects would be the same as those described under Alternative 1, which could result in long-term beneficial impacts to the Maryland Avenue vista. As described above, Alternative 2 would result in long-term minor adverse impacts on the vista northeast on Maryland Avenue. When combined with the cumulative project described above, Alternative 2 would result in minor long-term adverse cumulative impacts on the vista northeast on Maryland Avenue. There would be no cumulative impacts on views southwest from the Mall at 4th Street, north on 4th Street, or on Independence Avenue. There would be long-term minor adverse cumulative impacts on views to and from the LBJ Building and to the working environment in the LBJ Building.

Conclusion

Alternative 2 would have a long-term minor adverse impact on key view corridors in the vicinity of the Memorial site.. There would be a long-term minor adverse impact on the vista northeast on Maryland Avenue, due to the framing of the vista with built elements; a long-term minor adverse impact on the vista west on Independence during the winter months; and a long-term minor adverse impact on the view southwest from the Mall at 4th Street. Long-term impacts on the vista north on 4th Street would be negligible. There would be long-term minor adverse impacts on views to and from the LBJ Building and its working environment.

Visual Resources Impacts of Alternative 3

Maryland Avenue

Under Alternative 3, two columns that would be part of the linear colonnades lining portions of 4th and 6th Streets and the south edge of the Memorial site would be visible, as would their associated tapestries. One relief block at the northeast portion of the site would also be slightly visible within the view corridor. The columns and relief block would be located 21 feet beyond either side of the former roadway (cartway) and would frame the vista northeast along the Maryland Avenue corridor towards the U.S. Capitol Building, a key vista within L'Enfant's Plan for the city. In addition, the existing tree-lined character of the vista would be maintained. The extensive number of trees would strengthen the perception of the Memorial as open space and help define the view toward the Capitol dome. The prominence of the built elements would be increased during the winter months when the leaves are off the trees. While the existing trees that have grown into the view corridor would be removed, opening the view of the Capitol Building, the monumental scale of the columns would exaggerate the relative size of the Capitol.

Figure 4-9: Existing (above) and proposed (below) views northeast along Maryland Avenue under Alternative 3

Overall, long-term adverse impacts on this vista under Alternative 3 would be moderate, as the Memorial would highlight the primary vista and would not block views of the Capitol dome. This moderate adverse impact on the Maryland Avenue vista contributes to the overall moderate adverse impact on the L'Enfant Plan as discussed in Section 4.2.2.

Independence Avenue

In the vistas east and west along Independence Avenue under Alternative 3, the features of the Memorial would be slightly visible. Figure 4-10 provides a view west on Independence Avenue and is intended to be representative of views along the corridor. Columns would be located along part of the roadway, visible below the trees, supporting metal tapestries at the east and west ends of the site. The northwestern-most column, placed 31 feet south of the Independence Avenue curb, would not be located in the Independence Avenue right-of-way. During the winter months, when the leaves are off the trees, the Memorial elements would be more visible. While they would partially obstruct views of the east façade of the Wilbur Wright Building, neither the built forms nor the trees would obstruct views along the corridor, which has an inconsistent street wall, and the existing wide tree-lined character of the roadway would be maintained.

Figure 4-10: Existing (above) and proposed (below) views west along Independence Avenue under Alternative 3

Overall, Alternative 3 would have long-term minor adverse impacts on this view corridor. This minor impact contributes to the overall minor adverse impact on the L'Enfant Plan as documented in Section 4.2.2.

4th Street

Alternative 3 would remove existing street trees along the west side of 4th Street and replace them with new street trees, thereby maintaining the existing tree-lined character of the vista. Alternative 3 would also place a colonnade along 4th Street, aligned with the second bay of the LBJ Building. Looking north, the Memorial street trees would reinforce the visual line toward the National Building Museum. The eastern façade of the building housing the restrooms, ranger contact station, and book sales would be aligned on 4th Street with the LBJ Building and would be visible. The columns aligned with 4th Street would not be visible from views looking north along 4th Street. The introduction of these built forms at the edge of the vista would help frame the Memorial block. Thus, long-term adverse impacts on the vista north on 4th Street would be minor. This minor adverse impact contributes to the overall minor adverse impact on the L'Enfant Plan as documented within Section 4.2.2.

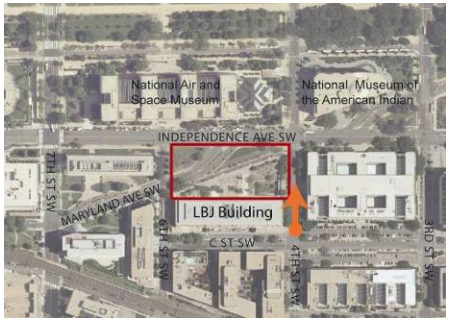


Figure 4-11: Existing (above) and proposed (below) views north along 4th Street under Alternative 3

View from the Mall at 4th Street

Under Alternative 3, landscape trees, two tapestries, and their supporting columns would be visible looking southwest from the Mall on 4th Street. From this location, views of the tapestries would be perpendicular. The bottom of the tapestries would be 15-18 feet off the ground, and the columns and tapestries would be 80 feet high. The tapestries, as well as street and shade trees ranging in height from 20 to 40 feet at installation, would screen a portion of the face of the LBJ Building; the eastern corner of the Building and a small area of the penthouse would be unobstructed. If the transparency of the tapestry installed were similar to that of the woven mock-up as shown in Figure 2-17, views to the LBJ Building would be filtered. If the transparency of the tapestry installed were similar to that of the welded mock-up as shown in Figure 2-18, views to the LBJ Building would be clearly afforded through the tapestry.

Based on the degree of transparency demonstrated by the tapestry samples and mock-ups and a low level of reflectivity, long-term adverse impacts would be moderate. NPS has determined that the columns and tapestries would partially filter views from the Mall along 4th Street to the Memorial and thus would have a moderate impact on the

Figure 4-12: Existing (above) and proposed (below) view southwest to the Memorial site under Alternative 3

resource. However, some consulting parties consider the impacts to be major due to a differing opinion regarding the scale and placement of the columns, and the degree of transparency of the tapestries.

Surrounding Visual Environment

Alternative 3 would increase the total number of trees at the site to 81. The increased number and improved quality of trees would result in a thicker tree canopy. The trees would form an allee observing the Maryland Avenue cartway. The tree canopy would be thinner at the central Memorial area near the relief blocks and the central Memorial area, and would be more consistent along the edges outside the Maryland Avenue cartway.

Under Alternative 3, the columns, built Memorial elements and tapestries would result in a more defined character on the Memorial site and would provide visual cues. The tapestries would help define the site and create the atmosphere of an urban room. Although they would provide a symbolic barrier, the tapestries would be largely transparent, and would retain views of the skies and adjacent buildings.

Within the Memorial, three relatively shorter trees would be located approximately 50 feet from the LBJ Building face; taller trees would be located in the center of the Memorial, approximately 95 feet from the LBJ Building. In addition, trees within the Promenade would be approximately 20 feet from the building. The increase in the number and quality of trees at the site would cause a limited reduction in views to and from the first and second floors of the LBJ Building and therefore cause a limited change in its working environment.

The 80-foot columns on the southern side of the site would be located approximately 55 feet from the LBJ Building's façade. These columns would obscure some views from additional windows on the northern façade of the building. The southern tapestries would be attached to the columns at a distance of 70 feet from the LBJ Building's northern façade. This distance is similar to the height of the LBJ Building cornice, and consistent with the surrounding urban context. Given the moderate transparency of the woven tapestry, views to and from the LBJ Building would be partially filtered. However because the welded tapestry would be substantially transparent, the Memorial elements would minimally diminish views from the lower floors. Views from the upper floors would not be obscured. The views of the Memorial site from the LBJ Building would be enhanced by a greener landscaped park setting.

As a result of Alternative 3, indirect light would be filtered to the lower levels of the LBJ Building through trees and through a transparent tapestry. Currently, the north-facing side of the LBJ Building receives little direct light its windows. The tapestry, in either woven or welded form, would not further decrease direct light. This would result in no change to the working environment at the upper levels of the building and a minimal change to the LBJ Building working environment on the lower levels.

From the Wilbur Cohen and the Wilbur Wright Buildings and NASM, the tapestries would be visible. However, given the moderate transparency of the woven tapestry and the substantial transparency of the welded tapestry, views from the lower floors of the Wilbur Cohen and Wilbur Wright Buildings would be minimally filtered, but views from the upper floors would not be obscured and therefore would not alter the existing working environment. The views would change from the existing plaza and roadway to that of

a park setting. From NASM, the views of the Memorial site would be unobstructed, and the view to the LBJ Building would be filtered by the tapestries.

Overall, Alternative 3 would result in long-term moderate adverse impacts on views within the surrounding visual context.

Mitigation

To reduce the impact of Alternative 3 on the Maryland Avenue view corridor and to help fulfill the design principles, and as part of the NHPA Section 106 process, the NPS, the DC SHPO, GSA, and the EMC are developing an MOA that would stipulate that consultation will continue through the detailed design process. This agreement would allow for the design to advance while incorporating elements, such as changes to the placement of built features to maintain the open character of the vista, which would mitigate adverse impacts to visual resources. An additional mitigation measure could include physical recognition of the former Maryland Avenue cartway.

Cumulative Impacts

The cumulative projects would be the same as those described under Alternative 1, which could result in long-term negligible to beneficial impacts on views along Maryland Avenue. As described above, Alternative 3 would result in long-term moderate adverse impacts on visual resources. When combined with the cumulative projects, Alternative 3 would result in long-term moderate adverse cumulative impacts on views northeast on Maryland Avenue. There would be minor adverse cumulative impacts to views along Independence Avenue. There would be no cumulative impacts on views southwest from the Mall at 4th Street or, north on 4th Street. There would be long-term moderate adverse cumulative impacts on views within the surrounding visual context and minor changes to the working environment of adjacent buildings.

Conclusion

Alternative 3 would impact key view corridors in the vicinity of the Memorial site. There would be a long-term moderate adverse impact on the vista northeast on Maryland Avenue due to the framing of the view with built elements; a long-term minor adverse impact on the vistas along Independence Avenue and north on 4th Street; and a long-term moderate adverse impact on the view southwest from the Mall at 4th Street. There would be long-term moderate adverse impacts on views to and from the LBJ Building. There would be long-term moderate adverse impacts on views within the surrounding visual context.

4.4 PARK OPERATIONS AND MANAGEMENT

Methodology and Assumptions

Park operations and management, for the purpose of this analysis, refers to the quality and effectiveness of the park staff to maintain and administer park resources and facilities and to provide for an effective visitor experience. This includes an analysis of the condition and maintenance of facilities used to support park operations. The impact analysis is based on the current description of park operations presented in Section 3.0: Affected Environment.

Study Area

The study area for operations and management is the NAMA boundaries, including staffing, facilities, and budget.

Impact Thresholds

Impact thresholds are as follows:

- *Negligible*: Park operations would not be impacted or the impact would not have a noticeable or appreciable impact on park operations.
- *Minor*: Impacts would be noticeable, but would be of a magnitude that would not result in an appreciable or measurable change to park operations.
- *Moderate*: Impacts would be readily apparent and would result in a substantial change in park operations that would be noticeable to staff and the public. Mitigation could be required and may be effective.
- *Major*: Impacts would be readily apparent and would result in a substantial change in park operations that would be noticeable to staff and the public and would require the park to readdress its ability to sustain current park operations.
- *Duration*: Short-term impacts would occur during the construction of the alternative and the first two years of its operation; long-term impacts extend beyond the construction of the alternative.

Park Operations and Management Impacts of No Action Alternative

Under the No Action Alternative, existing park management and operations would continue. NPS would continue its operation of NAMA with current staffing levels, unless otherwise dictated by budgetary constraints. Current maintenance levels would continue for parks and memorials.

NPS would continue to maintain the northwest portion of the project site. This would include mowing the grass and maintaining the exercise equipment. NPS would continue to offer public safety services for the site, although no staff member would be specifically posted at the site. The community garden would continue to operate at the site, pending a change in the special use permit status.

GSA and DDOT would continue to maintain their respective areas within the project site. GSA would maintain the plaza and the landscaping within the plaza and the planter boxes around the LBJ Building. DDOT would continue to maintain the Maryland Avenue ROW and all sidewalks adjacent to the site. Maintenance by DDOT

includes mowing, snow removal, and repairs to paved areas as needed.

Because there would be no change to the operation of the NPS parcel, there would be no impacts on park operations and management as a result of the No Action Alternative.

Cumulative Impact

Under the No Action Alternative, there would be no change in park operations and management. Thus, there would be no cumulative impacts on this resource area as a result of the No Action Alternative.

Conclusion

The No Action Alternative would continue existing NAMA operation and management practices, both for the project site and for NAMA as a whole. Because no changes would result as part of the No Action Alternative, no impact on park management and operations would occur.

Park Operations and Management Impacts of Alternative 1

Alternative 1 would result in an expansion of the land area administered by NAMA. Currently, the site is made up of three parcels, each managed by a different federal entity: NPS, GSA, and the District of Columbia. As part of Alternative 1, GSA and the District of Columbia would transfer the land management responsibilities of these parcels, which total a combined 3.6 acres, to NPS. GSA would retain and manage the LBJ Promenade and NAMA would then manage the contiguous project site. As such, NAMA would be responsible for the increased maintenance and operations of the additional land area.

The implementation of Alternative 1 would result in more maintenance responsibilities than the current NPS parcel. Although the construction of the Memorial would be funded by EMC, the ongoing maintenance and operation of the Memorial would fall to NPS. The design of Alternative 1 would contain built elements, such as colonnades, reliefs, and water features. The colonnades and reliefs, clad in high-quality stone or other material, would require cleaning and graffiti removal as needed. The water features would require diligent care to ensure that water flow and quality is maintained. The water features would also require winterization and reactivation. The re-use of on-site stormwater treatment for irrigation would also require additional maintenance. It is anticipated that no special equipment or skills would be needed to maintain the Memorial, and that maintenance at the site would be similar to that of other memorials within NAMA, such as the Franklin D. Roosevelt and the World War II Memorials.

Alternative 1 would include restroom facilities, a canopy structure, a ranger contact station, and a bookstore. These structures would

require ongoing maintenance. General upkeep of the site, such as trash pickup, snow removal, and cleaning, would increase from the existing minimal needs of the site. Due to the anticipated use by day workers during breaks, it is expected that higher levels of site cleaning/maintenance, relative to other memorials, would be needed.

In addition to the structural maintenance, the Eisenhower Memorial would require a higher level of landscaping than currently exists at the NPS parcel. The Memorial would include a central grove of large deciduous trees, which would need to be monitored to ensure their health. Additional trees and landscaped vegetation would be planted throughout the site. Watering of new trees during periods of drought, mowing, and other landscape services would be needed.

Implementation of Alternative 1 would require staffing at the site for both visitor services and to perform the maintenance described above. Alternative 1 would have a minimum of one Park Ranger stationed at the site during the operating hours daily, which would generate additional staff demands for NAMA. The facility maintenance would require one maintenance mechanic, one gardener, two maintenance workers, and three laborers. The on-site bookstore would be operated by an independent organization, although some NPS staff time would be necessary to manage the contract.

In the short-term, the additional staff required for operation of the Memorial would place more burden on NAMA operations and management. The staff time required for the site would either add more responsibility to existing staff or would add more staff to NAMA operations, potentially resulting in strains on existing budgets. In both scenarios, changes to NAMA management would be required as resources currently allocated to the park are redistributed. NPS would also be responsible for monitoring activities during the construction phase to ensure that mitigation measures and NPS policies are followed. As a result, the short-term impacts of Alternative 1 on park operations and management would be moderate and adverse.

In the long-term, budgets would be adjusted to address the Eisenhower Memorial and staffing levels would be adjusted or redistributed to adequately serve the Memorial. Therefore, the long-term impacts on park operations and management would be minor and adverse as future maintenance and operational resources increase and are modified.

Cumulative Impact

A number of actions and conditions within NAMA generate demand for the time, staffing and funding needed for construction and management, which could affect park management. Budgets are not assigned to specific memorials or areas of the park, but rather come as one appropriation.

The implementation of the National Mall Plan and the construction of the Martin Luther King, Jr. National Memorial, the American Veterans Disabled for Life Memorial, the Vietnam Veterans Memorial Visitors Center, the Potomac Park Levee, the Jefferson Seawall, the Lincoln Memorial Reflecting Pool Rehabilitation, the Mall Turf Rehabilitation, the Jefferson Memorial Vehicular Security Barriers, the Washington Monument Security Screening, and the Redesign of Union Square, Constitution Gardens, and the Sylvan Theater Area would also place strain on NAMA resources and budgets, due to additional staffing and maintenance requirements.

The energy-efficient components and the sustainable systems incorporated into these projects would lower the operational costs of these facilities. Constitution Avenue and Madison Drive street improvements would enhance roadway conditions and introduce energy efficient features, which would reduce park maintenance and operating costs. Construction activity related to these projects would result in short-term increases in NPS staff responsibilities due to construction monitoring and contract management.

Over the long-term, the projects above would improve NAMA's facilities and require less frequent maintenance. However, their operation would increase staff requirements. Similarly, budgets would be adjusted over time to support additional resources. These projects would have short- and long-term minor adverse cumulative effects on park management and operations, both as part of the National Mall and the other areas within NAMA.

Under Alternative 1, additional duties would be added to NPS staff's managerial and operational responsibilities. This would result in short-term moderate adverse impacts during construction and the first year of operation, and long-term minor adverse impacts on park operations and management. Therefore, the cumulative effect of Alternative 1 and the other projects in the area would result in short-term moderate adverse impacts and long-term minor adverse impacts.

Conclusion

Implementation of Alternative 1 would place additional budgetary, maintenance, and staffing responsibilities on NPS and NAMA. Changes in funding and staffing would be required. However, as the park incorporates new operational needs into their annual budget and park staffing, these burdens would decline over time as they become less noticeable and incorporated into the long-term activities of NAMA and NPS park staffing and operations. Therefore, short-term adverse impacts on park operations and maintenance would be moderate. Long-term impacts on park operations and maintenance would be minor as future maintenance and operational resources would increase, and as future projects within NAMA would be implemented. The cumulative effect of Alternative 1 and the other projects in the area would result in short-term moderate adverse impacts and long-term minor adverse impacts.

Park Operations and Management Impacts of Alternative 2

Like Alternative 1, Alternative 2 would result in short-term, moderate adverse impacts and long-term minor adverse impacts on park operations and management. Due to land administration transfers from GSA and DDOT, the quantity of land managed by NPS would increase by the same amount as in Alternative 1. The built Memorial features would be similar in number, material, and scale, and, although they would have slightly different elements, they would require similar maintenance, such as cleaning, graffiti removal, and maintenance for the water features and stormwater re-use for irrigation. Like Alternative 1, it is expected that higher levels of site cleaning/maintenance, relative to other memorials, would be needed due to use of the site during office workers' breaks. The bookstore, ranger contact station, and restrooms would also be similar in size and operation.

The Alternative 2 landscape would be more extensive than in Alternative 1, with a larger amount of green space and more trees. However, there would be only a minimal difference in maintenance requirements for the Memorial. The central grove of trees would need to be monitored to ensure their health. Additional trees and landscaped vegetation would be planted throughout the site. Watering of new trees during periods of drought, mowing, and other landscape services would be needed.

Because Alternative 2 is similar to Alternative 1 in terms of scale of park operations and maintenance, staffing requirements for the Memorial would be the same as Alternative 2. A minimum of one Park Ranger would be stationed at the site during operating hours; up to seven additional people would be needed to adequately maintain the site.

Like Alternative 1, Alternative 2 would place additional burdens on NAMA operations and management in the short-term due to the additional staff required for operating the Memorial. Impacts on park operations and management in the short-term would be moderate and adverse.

Like Alternative 1, Alternative 2, budgets and staffing levels would be adjusted or redistributed to adequately serve the Memorial over time. Therefore, the long-term impacts on park operations and management would be minor and adverse as future maintenance and operational resources increase are modified.

Cumulative Impact

Impacts on park operations and management from cumulative actions would be similar to those under Alternative 1, resulting in short- and long-term minor adverse cumulative impacts. Alternative 2 would place additional duties on NPS staff, management and operations, resulting in short-term moderate impacts during the construction and first year of operation. There would be long-term minor impacts on park operations and management. Therefore, the cumulative effect of Alternative 2and the other projects in the area would result in short-term moderate adverse impacts and long-term minor adverse impacts.

Conclusion

Like Alternative 1, Alternative 2 would result in short-term, moderate adverse impacts during construction of the Eisenhower Memorial and long-term, minor adverse impacts on park operations and management. Implementation of Alternative 2 would place additional budgetary, maintenance, and staffing responsibilities on

NPS and NAMA. Changes in funding and staffing would be required. However, as the park incorporates the new operational needs into their annual budget and park staffing, these burdens would noticeably decline over time. The cumulative effect of Alternative 2 and other projects would result in short-term moderate adverse impacts and long-term minor adverse impacts on park operations and management.

Park Operations and Management Impacts of Alternative 3

Like Alternatives 1 and 2, Alternative 3 would result in short-term, moderate adverse impacts and long-term minor adverse impacts on park operations and management. The land managed by NPS would increase by the same amount as Alternatives 1 and 2, due to land transfers from GSA and DDOT. Most of the built Memorial features would be similar in number, material, and scale, and, although they would have slightly different elements, would require similar maintenance, such as cleaning, graffiti removal, and maintenance for the water features and stormwater re-use for irrigation. Like Alternatives 1 and 2, it is expected that higher levels of site cleaning/maintenance, relative to other memorials, would be needed due to use of the site during office workers' breaks. The bookstore, ranger contact station, and restrooms would also be similar in size and operation.

The major differences in the built Memorial features would be the tapestries and the lack of a water feature. The tapestry elements would be constructed of metal. The anticipated primary maintenance activity associated with the tapestry would be periodic washing. Additional maintenance could include the removal of debris caught in the tapestries or graffiti, should someone find the panels 15 feet above ground accessible. Inspection and monitoring of fasteners and supports could also be required. These activities would require qualified and specially trained staff, pressure-washing equipment, and a cherry picker (or other motorized lift vehicle). NAMA staff has indicated that they currently possess the skills and equipment necessary to complete these tasks. Depending upon the manufacturing method, the tapestries themselves could need repairs, such as welding. NAMA staff includes metal workers,

but staff has indicated that NAMA would consider hiring outside services to perform the work.

The Alternative 3 landscape would be more extensive than in Alternatives 1 and 2, with more green space and more trees. However, these variances between the three alternatives would result in minimal additional maintenance requirements for the Memorial. The central grove of trees would need to be monitored to ensure their health. Additional trees and landscaped vegetation would be planted throughout the site. Watering of new trees during periods of drought, mowing, and other landscape services would be needed.

Because Alternative 3 is similar to Alternatives 1 and 2 in terms of scale of park operations and maintenance, the staffing requirements for the Memorial would be the same as Alternatives 1 and 2. A minimum of one Park Ranger would be stationed at the site during operating hours; up to seven additional people would be needed to adequately maintain the site.

Like Alternatives 1 and 2, Alternative 3 would place additional burdens on NAMA operations and management in the short-term due to the additional staff required for operating the Memorial. This would result in short-term moderate adverse impacts.

Like Alternatives 1 and 2, Alternative 3 would mean that NAMA staffing levels would be adjusted or redistributed to adequately serve the Memorial over time. Therefore, the long-term impacts on park operations and management would be minor and adverse as future maintenance and operational resources increase and budgets are modified.

Cumulative Impact

Impacts on park operations and management from cumulative actions would be similar to those under Alternatives 1 and 2, resulting in short- and long-term minor adverse cumulative impacts. Alternative 3 would place additional duties on NPS staff, management, and operational responsibilities. This would result in short-term moderate adverse impacts during construction and the first year of operation, and long-term minor impacts on park operations and management. Therefore, when combined with the cumulative projects, there would be short-term moderate cumulative impacts and long-term minor adverse cumulative impacts as a result of Alternative 3.

Conclusion

Like Alternatives 1 and 2, Alternative 3 would result in short-term, moderate adverse impacts during construction of the Eisenhower Memorial and long-term, minor adverse impacts on park operations management. Implementation of Alternative 3 would place additional budgetary, maintenance, and staffing responsibilities on NPS and NAMA. Changes in funding and staffing would be required. As the park incorporates new operational needs into their annual budget and park staffing, these burdens would decline over time as they became incorporated into the long-term activities of NAMA and NPS. The cumulative effect of Alternative 3 and other projects would result in short-term moderate adverse impacts and long-term minor adverse impacts.

This page intentionally left blank

4.5 SOILS

Methodology and Assumptions

Potential impacts on soils are determined based on the extent of disturbance to natural/undisturbed soils, the potential for soil erosion, limitations associated with the soils, and the change in productive soils. Analysis of potential impacts is based on on-site inspection of soils within the project area, review of existing literature and maps, and information provided by NPS and other agencies.

Study Area

The study area for soils is the Memorial site boundaries. It is expected that construction activities would not occur outside this area.

Impact Thresholds

The following thresholds were used to determine the magnitude of impacts on soil resources:

- *Negligible.* Soils would not be impacted or the impact would be below or at the lower levels of detection.
- *Minor.* Impacts on soils would be detectable. Impacts on undisturbed areas would be small. Mitigation would be needed to offset adverse impacts and would be relatively simple to implement and would likely be successful.
- *Moderate.* Impacts on soils 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 impacts and would likely be successful.
- *Major.* Impacts on soils would be readily apparent and substantially change the character of the soils over a large area both in and around the Memorial site. Mitigation measures to offset adverse impacts would be needed, with no guarantee of success.
- *Duration.* Short-term impacts would occur during construction of the Memorial; long-term impacts extend beyond the implementation of the alternative.

Soils Impacts of No Action Alternative

The No Action Alternative would continue existing uses and management practices, which would not result in further soil disturbance. As part of the No Action Alternative, the soils, which are primarily urban fill, would continue to be primarily covered by impervious surfaces or by grass. Productive soils make up 0.9 acres of the site, including the existing 0.15 acres of soil used by the community garden that would continue to be in production. Any amendments, such as fertilizer or compost, added to soils by gardeners would improve soils and their productivity in the short- and long-term. Therefore, the short- and long-term impacts on soils would be beneficial.

<u>Cumulative Impact</u>

Cumulative construction projects on adjacent properties, such as the Mary E. Switzer Building Renovation and Site Improvements, FOB 8 Renovation and Site Improvements, and National Mall Turf

Rehabilitation, would disturb and remove soils from their respective project areas during construction. Therefore, these projects would result in short-term minor adverse impacts on soils. Both the Switzer Building and FOB improvements include the transformation of parking lots into landscaped plazas, which would have long-term beneficial impacts on soils. The National Mall Turf Rehabilitation would improve soils in order to better match the needs of vegetation, resulting in long-term beneficial impacts on soils.

As described above, the No Action Alternative would result in short- and long-term beneficial impacts on soils. Therefore, the cumulative effect of the No Action Alternative and the other projects in the area would result in short-term minor adverse impacts and long-term beneficial impacts.

Conclusion

The No Action Alternative would not cause any new soil disturbance within the site. The use of 0.15 acres of soil for food production by the community gardens would continue, including the possible addition of soil amendments. The No Action Alternative would result in short-term minor adverse impacts and long-term beneficial impacts on soils. Combined with cumulative projects, the No Action Alternative would result in short-term minor adverse cumulative impacts and long-term beneficial cumulative impacts on soils.

Soils Impacts of Alternative 1

Alternative 1 would impact soils through ground disturbance and removal. Alternative 1 calls for the removal of pavement from roadways, curbs, sidewalks and plazas, as well as vegetated areas. This would occur through the demolition, potential grading, and excavation of the site. Alternative 1 would remove 0.9 acres of acres of soil out of production, replacing it with 0.84 acres of productive soil, for a net loss of 0.06 acres. The new productive soil would then be revegetated with landscaped plant materials. This disturbance of soils and loss of productive soils would lead to short- and long-term minor adverse impacts on soils as a result of Alternative 1.

The existing soils on-site that are primarily urban fill possibly contain petroleum hydrocarbons from previous land uses (AECOM, 2010b). Approximately 15 to 25 feet of fill material was likely placed over the original ground surface decades ago (EarthTech, 2005). Therefore, excavated soils may not be an appropriate source of material for re-use as fill on the site and new fill material would be used. Environmental soil sampling and laboratory testing would determine whether soils to be excavated are contaminated and at what levels, in order to address site worker safety and soil reuse and/or disposal requirements.

Mitigation

The following construction-related measures would be taken to mitigate impacts on soils:

- Prior to construction, an erosion and sedimentation control plan that establishes measures to prevent erosion of cleared

areas and the transport of soil and sediment would be prepared.

- During construction, soils exposed by clearing, grading, excavation, or construction would be stabilized. Soils would be stockpiled using appropriate best management practices.
- Soils excavated would be subject to sampling and testing, should indicators of petroleum-impacted soils present themselves during excavation and construction.
- If determined to contain petroleum hydrocarbons, the soils would be removed and disposed of in accordance with a DDOE-approved safety and remediation plan.
- Appropriate regulatory notification would occur.
- Impacted soils would be segregated through field screening.
- Waste characterization samples would be collected.
- Soils would be disposed of at an appropriate waste disposal facility.
- Removal activities would be documented.

Cumulative Impact

For Alternative 1, cumulative project impacts would be the same as for the No Action Alternative. As described above, Alternative 1 would result in short- and long-term minor adverse impacts to soils. Therefore, the cumulative effect of Alternative 1 and the other projects in the area would result in short- and long-term minor adverse impacts on soils.

Conclusion

Under Alternative 1, existing soils would be disturbed and a small amount would be removed from production. There would be a net loss of 0.06 acres of open space. The disturbance of existing soils would be limited to the construction phase. Mitigation measures, described above, would be employed if contaminated soils were found. Therefore, both the short-term and long-term impacts to soils would be adverse and minor. Alternative 1 would result in short- and long-term minor adverse cumulative impacts to soils.

Soils Impacts of Alternative 2

Like Alternative 1, Alternative 2 would impact soils through ground disturbance and removal. Alternative 2 calls for the same removal of pavement from roadways, curbs, sidewalks and plazas, and vegetated areas as Alternative 1. This would occur during the demolition, potential grading, and excavation of the site. The disturbance of soils would lead to short-term, minor adverse impacts on soils.

Additionally, Alternative 2 would remove 0.9 acres of acres of soil replacing it with 1.51 acres of soil, for a net gain of 0.61 acres. The new productive soil would then be revegetated with landscaped plant materials. The increase of productive soils would lead to long-term beneficial impacts to soils.

As described in Alternative 1, the existing soils on-site are primarily urban fill, possibly containing petroleum hydrocarbons from previous uses and may therefore not be an appropriate source of material for re-use as fill. Environmental soil sampling and laboratory testing would determine whether soils to be excavated are contaminated and at what levels, in order to address site worker safety and soil reuse and/or disposal requirements.

Mitigation

The same soil disturbances would take place under Alternatives 1 and 2 and the soils found on-site would not change between alternatives. Therefore, the mitigation measures for Alternative 2 would be the same as those described in Alternative 1.

Cumulative Impact

Cumulative project impacts on soils would be the same as for the No Action Alternative and Alternative 1. As described above, Alternative 2 would result in short-term minor adverse impacts and long-term beneficial impacts on soils. Therefore, the cumulative effect of Alternative 2 and the other projects in the area would result in short-term minor adverse cumulative impacts and long-term beneficial cumulative impacts on soils.

Conclusion

Alternative 2 would result in short-term minor adverse impacts and long-term beneficial impacts on soils. Alternative 2 would disturb existing soils and would increase the amount of productive soils . Mitigation measures would be employed if contaminated soils were found. The disturbance of existing soils would be limited to the construction phase. When combined with cumulative projects, Alternative 2 would result in short-term minor adverse cumulative impacts and long-term beneficial impacts on soils.

Soils Impacts of Alternative 3

Like Alternatives 1 and 2, Alternative 3 would impact soils through ground disturbance and removal. Alternative 3 calls for the same removal of pavement from roadways, curbs, sidewalks and plazas, and vegetated areas as Alternatives 1 and 2. This would occur during the demolition, potential grading, and excavation of the site. Soil disturbance would lead to short-term minor adverse impacts on soils.

Alternative 3 would remove 0.9 acres of soil, replacing it with 1.68 acres of soil, for a net gain of 0.78 acres. The new productive soils would then be revegetated with landscaped plant materials. The increase of productive soils would lead to long-term, beneficial impacts on soils.

The existing soils on-site are primarily urban fill and possibly contain petroleum hydrocarbons from previous uses. Approximately 15 to 25 feet of fill material was likely placed over the original ground surface decades ago. Therefore, excavated soils may not be an appropriate source of fill for re-use at the site and new fill material would be used. Alternative 3 would use the same environmental soil sampling and laboratory testing as Alternatives 1 and 2. These tests would determine whether soils to be excavated are contaminated and at what levels in order to address site worker safety and soil reuse and/or disposal requirements.

Mitigation

The same soil disturbances would take place under Alternatives 1, 2, and 3. Therefore, the mitigation measures for Alternative 3 would be the same as those described in Alternatives 1 and 2.

Cumulative Impact

Cumulative project impacts on soils would be the same as for the other alternatives described above. As described above, Alternative 3 would result in short-term minor adverse impacts and long-term beneficial impacts on soils. Therefore, the cumulative effect of Alternative 3 and the other projects in the area would result in short-term minor adverse cumulative impacts and long-term beneficial cumulative impacts on soils.

Conclusion

Like Alternatives 1 and 2, Alternative 3 would cause short-term minor adverse and long-term beneficial impacts on soils. Alternative 3 would disturb existing soils and would increase the amount of productive soils. Mitigation measures would be employed if contaminated soils were found. The disturbance of existing soils would be limited to the construction phase. When combined with cumulative projects, Alternative 2 would result in short-term minor adverse cumulative impacts and long-term beneficial impacts on soils.

This page is intentionally left blank

4.6 TRANSPORTATION

4.6.1 Vehicular Traffic

The primary purpose of this analysis is to determine the potential impacts on traffic as a result of the alternatives considered. This section examines the configuration and geometry of the roadways that would occur due to road closures or realignments, as well as the impact on traffic conditions. Sources of information for this environmental consequences description include communication with project engineers, analysis of traffic in the study area based on the DDOT's Average Daily Traffic reports, and a traffic analysis.

Methodology and Assumptions

The analysis for the impact on roadways and intersections was performed in compliance with traffic operations/geometrics, DDOT standards, and safety standards. Where applicable, design modifications are presented to improve site and network conditions. Delays at intersections are measured in terms of LOS.

The 2015 Future Without Project traffic volumes forecast out from the existing conditions, which are described in Section 3.4.1. To determine Future With Project traffic volumes, traffic anticipated to be generated by the Memorial was added to Year 2015 Future Without Project traffic volumes. Those volumes were then redistributed based on either closing Maryland Avenue to traffic between 6th Street and Independence Avenue, or keeping Maryland Avenue open to traffic. Traffic signal timing for existing conditions was not modified in the analysis for Future with Project and Future without Project conditions to allow for a direct comparison.

The traffic analysis makes several assumptions for future traffic volumes in 2015, the year in which the Memorial would be fully operational. To produce Year 2015 Future without Project traffic volumes, a 1.6% annual growth rate estimate was applied to existing Year 2010 traffic volumes. Trip generation data for the Eisenhower Memorial was established in the 2006 Transportation Impact Study (EarthTech, 2006), which was then used as the basis for trip generation in the 2010 analysis. The assumptions include the following:

- Daily visitor trips are assumed to be 1% of annual visitation.
- Hourly visitor trips are 10% of daily trips.
- Visitor trips by automobile make up 16% of all visitor trips.
- Average visitor automobile occupancy rate is three.
- Employee modal split is assumed to be 50/50 between private automobile and transit.
- Employees using automobiles would drive alone.
- Most employees would enter during the morning peak hour and leave during the evening peak hour.
- Employee mid-day trips are minimal.

Study Area

The study area, discussed in more detail in Chapter 3: Affected Environment, includes the following roadways:

- Independence Avenue;
- Maryland Avenue;
- 4th Street;
- 6th Street;
- 7th Street; and
- Regional roadway access.

Intersections for the study area include those directly adjacent to the site (previously described):

- Independence Avenue at 4th Street (signalized);
- Independence Avenue at Maryland Avenue(west) (yield sign);
- 6th Street at Independence Avenue (signalized);
- 6th Street at Maryland Avenue (signalized);
- 7th Street at Independence Avenue (signalized); and
- 7th Street at Maryland Avenue (signalized).

Additional intersections around the site, but in the study area include:

- 3rd Street at Independence Avenue (signalized);
- Independence Avenue at Maryland Avenue (east, at NMAI) (yield sign); and
- 4th Street at Jefferson Drive (signalized).

Impact Thresholds

Generally, LOS C and above are considered satisfactory. In urbanized areas, such as Washington, DC, LOS D is considered satisfactory. The following thresholds were used to determine the magnitude of impacts on transportation:

- *Negligible*: The impact would be a change that would not be perceptible or would be barely perceptible by transportation system users.
- Minor: The impact would have a change to travel times or transportation system utility. The impact would be noticeable but would result in little inconvenience to transportation system users.
- Moderate: The impact would result in a change to the travel time or system utility of a large number of transportation system users and would result in a noticeable change in travel time or convenience. A moderate increase in delay may be anticipated, but it is not expected to cause failure of nearby facilities that cannot be mitigated through proactive management. .Major: There would be a substantial impact on the travel time or system utility of a large number of transportation system users, and this would result in a highly noticeable change in travel times or convenience, leading to failure or near-failure of nearby facilities, with little or no potential for mitigation.

"Failure" as used in these thresholds and in the transportation analysis is defined as traffic delays with long average wait times at signals, with travelers during the peak hour frequently having to wait through one or more cycles to clear the intersection. Please see the description of Levels of Service, see Table 3-3.

- *Duration.* Short-term impacts occur during construction of the alternative; long-term impacts would be those persisting or resulting after construction of the alternative.

Traffic Impacts of No Action Alternative

Under the No Action Alternative, the roadway configuration at the site would remain. The Maryland Avenue segment between 6th Street and Independence Avenue and associated spur road would not be changed. The roadways would continue to provide vehicular access via the intersections at 4th and 6th Streets and Independence Avenue. The site would continue to provide on-street parking opportunities for GSA and visitors of the LBJ Building.

In order to establish traffic conditions under the No Action Alternative, the same intersections identified in Section 3.4.1 were analyzed for year 2015, the year in which the Eisenhower Memorial would begin operation. The models used in this analysis assumed an average increase in vehicular traffic in the area of 1.6 percent. Analysis for the No Action Alternative (Future Without Project) condition indicates LOS results similar to existing conditions, with slightly more delay, consistent with normal traffic growth (AECOM, 2010d). Results indicate that in 2015 without the project, nearly all intersections in the study area would operate at an overall LOS C or better; one intersection would operate at LOS D during each peak hour period (the intersection varies based on the hour). The LOS results for 2015 are summarized in Table 4-2.

LOS models are not typically conducted for the years between the existing and Future Without Project conditions. The traffic conditions in the intervening years between 2010 and 2015 would be expected to increase at a linear rate, falling between the 2010 and 2015 conditions. In 2011, the conditions would be closer to 2010 conditions; in 2014, the conditions would be closer to those in 2015.

The No Action Alternative would result in four intersections functioning at LOS D, which would not result in failure at these intersections. The additional delay at these intersections would be a few seconds and would not impede the ability to go through a signal during one cycle. Therefore, the No Action Alternative would result in minor adverse impacts on traffic.

Table 4-2: Level of Service for Future Without Project (Year 2015)

Location	AM Peak		Mid-Day Peak		PM Peak		Saturday Peak	
	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS
4th Street at Independence Avenue	13	B	13	B	18	B	19	B
Independence Avenue at Maryland Avenue (west)	15	C	15	B	15	C	14	B
6th Street at Independence Avenue	17	B	8	A	14	B	8	A
6th Street at Maryland Avenue	15	B	16	B	18	B	11	B
7th Street at Independence Avenue	20	B	17	B	23	C	17	B
7th Street at Maryland Avenue and C Street	11	B	9	A	9	A	8	A
3rd Street at Independence Avenue	25	**C***	22	C	48	D	29	C
Independence Avenue at Maryland Avenue (east at NMAI)	32	D	26	**D**	14	**B**	25	**D**
4th Street at Jefferson Drive	9	A	16	B	10	B	15	B
4th Street at C Street	16	B	13	B	14	B	13	B
6th Street at C Street and Garage Entrance	15	B	14	B	15	B	15	B

Source: AECOM, 2010

* LOS levels in red and bold represent a decline in LOS; those in green and bold represent an improvement in LOS.

Cumulative Impacts

Other projects in the site vicinity, such as the American Veterans Disabled for Life Memorial and improvements to federal buildings, would potentially cause cumulative impacts on roads and intersections. As planned, the American Veterans Disabled for Life Memorial would result in a realignment of C Street and the elimination of an on-ramp to I-295. The on-ramp to I-295 is minimally used. C Street would become a continuous linear roadway crossing 2nd and 1st Streets and Washington Avenue. Renovations of FOB 8 and the Mary E. Switzer Building would include bulb-outs, which are curb extensions that narrow the roadway to slow traffic while providing additional pedestrian refuge, and other traffic-calming measures.

These cumulative projects would result in short-term minor- to-moderate adverse impacts on traffic in the vicinity of the site as a result of road closures, lane blockages, and changes to the roadway during construction.

Once completed, these cumulative projects would have long-term beneficial impacts on vehicular traffic in the vicinity of the project site due to improved accessibility and safety.

As described above, the No Action Alternative would result in long-term minor adverse impacts on vehicular traffic. When combined with the cumulative projects, the No Action Alternative would result in long-term beneficial cumulative impacts on vehicular traffic. Construction activity resulting from the combined actions would result in short-term minor adverse cumulative impacts on vehicular traffic.

Conclusion

Under the No Action Alternative, no changes to roadway or intersection configurations would occur. Traffic levels would increase, resulting in a minimal decline in LOS at three intersection peak periods and an improvement at one intersection peak period. Therefore, minor adverse impacts on roadways and intersections would occur as a result of the No Action Alternative. In addition, short-term cumulative impacts would be minor and adverse and long-term cumulative impacts would be beneficial.

Traffic Impacts of Alternative 1

Alternative 1 would alter existing roadway patterns by restoring Maryland Avenue to its original L'Enfant alignment, changing the location of the intersection of Maryland Avenue with Independence Avenue, and removing the spur road and the intersection of Maryland Avenue with 4th Street. Instead, the alignment of Maryland Avenue east of 6th Street would extend diagonally across the Memorial, intersecting with Independence Avenue near the northeast corner of the site, creating a fifth-leg condition with 4th Street.

The overall LOS results would decline with implementation of this alternative when compared to expected future conditions without the project, as shown in Table 4-3. Similar to the No Action Alternative, results of the analysis indicate that most intersections in the study area would operate at an overall LOS C or better. Two intersections would operate at LOS D during the morning peak hour, one intersection would operate at LOS D during the mid-day peak hour, one intersection would operate at LOS D in the evening peak hour, and one intersection would operate at LOS D during the Saturday peak hour (AECOM, 2010d). Additionally, the fifth leg intersection of Independence Avenue and 4th Street with Maryland Avenue would result in an LOS E during peak evening and peak Saturday hours. Overall, this represents a decline at six intersection peak hour periods and an improvement at one intersection peak hour period.

The proposed realignment of Maryland Avenue's intersection at Independence Avenue would affect the existing LOS. This intersection would otherwise be expected to function at LOS B or C, but the realignment of Maryland Avenue would drop the service to LOS C, D, or E, depending upon the time and day. At LOS E, vehicles would not be able to pass through the intersection in one traffic light cycle. Two, or even three, traffic light cycles would be needed, resulting in delays of approximately 86 seconds. Traffic performance would change due to lost time for clearance and the additional phase to accommodate the Maryland Avenue approach. There would also be additional waiting time for pedestrians to cross the intersection due to the additional signal phase and longer clearance times. A relocated stop bar for eastbound traffic on Independence Avenue would improve safety, enabling vehicles from Maryland Avenue to safely merge onto or cross Independence Avenue, and the curb bulb-outs would enhance pedestrian safety. As a result of the decline in LOS at the intersection of Maryland and Independence Avenues and 4th Street, Alternative 1 would result in moderate adverse impacts on traffic.

Although some visitors would arrive to the site via a chartered bus, the Memorial would not likely become a tour bus destination. Visitors would likely come to the site via public transportation, walking, individual vehicle, or vehicular tour providers, similar to existing conditions. It is not anticipated that the Memorial would be a required stop for tour buses. However, tour buses may bring visitors to the site on key days for commemoration, such as anniversaries of historic events. Therefore, there would be a negligible impact on traffic due to tour buses.

During the construction of he Memorial, the movement of construction materials, equipment, and workers to the Memorial would likely constrict rights-of-way in the immediate area. Specific travel lanes would include northbound 6th Street traffic, southbound 4th Street traffic, and eastbound Independence Avenue. The reconfiguration and reconstruction of Maryland Avenue would lead

Table 4-3: Level of Service for Future Without Project (Year 2015) (directly below) and Alternative 1 Future With Project Conditions (Year 2015)

Location	AM Peak		Mid-Day Peak		PM Peak		Saturday Peak	
	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS
4th Street at Independence Avenue	13	B	13	B	18	B	19	B
Independence Avenue at Maryland Avenue (west)	15	C	15	B	15	C	14	B
6th Street at Independence Avenue	17	B	8	A	14	B	8	A
6th Street at Maryland Avenue	15	B	16	B	18	B	11	B
7th Street at Independence Avenue	20	B	17	B	23	C	17	B
7th Street at Maryland Avenue and C Street	11	B	9	A	9	A	8	A
3rd Street at Independence Avenue	25	**C**	22	C	48	D	29	C
Independence Avenue at Maryland Avenue (east at NMAI)	32	D	26	**D**	14	**B**	25	**D**
4th Street at Jefferson Drive	9	A	16	B	10	B	15	B
4th Street at C Street	16	B	13	B	14	B	13	B
6th Street at C Street and Garage Entrance	15	B	14	B	15	B	15	B

Location	AM Peak		Mid-Day Peak		PM Peak		Saturday Peak	
	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS
4th Street at Independence Avenue and Maryland Avenue	40	**D***	26	**C**	73	**E**	71	**E**
6th Street at Independence Avenue	21	C	8	A	15	B	8	A
6th Street at Maryland Avenue	11	B	16	B	18	B	11	B
7th Street at Independence Avenue	22	**C**	17	B	30	C	17	B
7th Street at Maryland Avenue and C Street	8	**A**	9	A	7	A	8	A
3rd Street at Independence Avenue	25	C	22	C	48	D	27	C
Independence Avenue at Maryland Avenue (east, at NMAI)	32	D	26	D	13	B	34	D
4th Street at Jefferson Drive	9	A	16	B	10	B	15	B
4th Street at C Street	16	B	13	B	14	B	13	B
6th Street at C Street and Garage Entrance	15	B	14	B	14	B	15	B

Source: AECOM, 2010

* LOS levels in red and bold represent a decline in LOS; those in green and bold represent an improvement in LOS.

to temporary road closures and rerouting of vehicles around the site, resulting in short-term minor adverse impacts on traffic and potential confusion by motorists.

Mitigation

The following mitigation measures are proposed to enable Maryland Avenue to function as a fifth leg at Independence Avenue and 4th Street. The stop bar for eastbound Independence Avenue would be moved approximately 100 feet to the west, resulting in a loss of vehicle storage space and longer signalization clearance time for traffic passing through the intersection in the eastbound direction. The relocated stop bar would improve safety, enabling vehicles from Maryland Avenue to safely merge onto or cross Independence Avenue.

The intersection design would be altered, making Maryland Avenue one-way in a west-to-east direction, to enhance safety and traffic operations. Making the street one-way may improve the LOS at the intersection of 6th Street and Maryland Avenue as a result of the one-way operation that would eliminate the Maryland Avenue westbound traffic demand approaching the intersection (AECOM 2010d). A curb bulb-out would be provided at each end of this segment of Maryland Avenue to create a single lane entrance and exit condition. The crossing width would be shorter for pedestrians crossing Maryland Avenue, enhancing pedestrian safety.

The LOS at the intersection of 6th Street and Maryland Avenue could improve as a result of the one-way operation, eliminating the westbound traffic demand approaching the intersection. The conflicting vehicular movement between the through traffic and left turn movement would be eliminated at 4th Street and Independence Avenue when intersecting with Maryland Avenue.

Signage would be placed at key locations and intersections to alert and safely re-direct vehicles during construction.

Cumulative Impacts

For Alternative 1, cumulative project impacts would be the same as for the No Action Alternative. As described above, Alternative 1 would result in short- term minor adverse impacts and long-term moderate adverse impacts on vehicular traffic. Cumulatively, Alternative 1 would result in short-term minor adverse cumulative effects and long-term moderate adverse effects on vehicular traffic.

Conclusion

Under Alternative 1, the intersection of Maryland Avenue with Independence Avenue would be realigned at the northwest corner of the site. The LOS of the intersection would decline at six intersection peak hour periods and improve at one intersection peak hour period.

Crossing times for pedestrians would increase. Three intersections would function at LOS D; one intersection would function at LOS E at evening and Saturday peak hours, resulting in moderate adverse impacts on traffic with mitigation including traffic calming and changes to the stop bar for Independence Avenue traffic to improve the safety of the intersection and that could improve the LOS at the nearby Maryland Avenue and 6th Street intersection. Negligible long-term impacts would occur due to tour bus traffic. Overall, construction-related impacts would be short-term and minor, due to road closures and re-routing of traffic due to construction.

Therefore, short-term minor and long-term major adverse impacts on vehicular traffic would occur as a result of the Alternative 1. Alternative 1 would result in short-term minor adverse and long-term moderate adverse cumulative impacts on adjacent streets.

Traffic Impacts of Alternative 2

Alternative 2 would alter the existing roadway pattern by closing Maryland Avenue to vehicular traffic between 4th and 6th Streets. The spur road and the mid-block intersection between 4th and 6th Streets would be removed as part of Alternative 2. Instead, eastbound traffic from Maryland Avenue would turn right or left on 6th Street.

As shown in Table 4-4 below, results of the analysis for Alternative 2 indicate that most intersections in the study area would operate at an overall LOS C or better, with Independence Avenue at Maryland Avenue (east, NMAI) operating at LOS D during each of the peak hours except the evening peak hour. During the evening peak hour, 3rd Street at Independence Avenue would operate at LOS D. In comparison to future conditions without the project, two intersections would drop from LOS B to LOS C and one intersection would improve from LOS B to LOS A (7th Street at Maryland Avenue and C Street, morning peak) (AECOM, 2010d). In each case, the amount of additional time required at each intersection would be a matter of a few seconds and would allow vehicles to move through the intersection in one light cycle.

As result of the change in the roadway configuration, motorists heading east on Maryland Avenue at 6th Street would be required to turn left, then turn right at Independence Avenue, in order reach the location where Maryland Avenue and Independence Avenue currently meet mid-block. Extrapolating from the LOS data, it is estimated that these new turns would add a few seconds to a trip.

Overall, the long-term impacts on traffic as a result of Alternative 2 would be adverse and minor.

Because there would be no intersection of Maryland and Independence Avenues at the site, the changes to the road network at Independence Avenue and 4th Street described in Alternative 1 would not be necessary.

The closure of Maryland Avenue through the site would produce continuous sidewalks along Independence Avenue between 6th and 4th Streets, and along 6th Street between Independence Avenue and C Street, thereby enhancing pedestrian access to the Eisenhower Memorial and the LBJ Building. In addition, the LOS experienced by the motoring public would generally remain constant. The need for roadway modifications to Independence Avenue, as well as maintaining the awkward intersection, would be eliminated by the closure of Maryland Avenue (AECOM, 2010d).

As in Alternative 1, some visitors would arrive to the site via a chartered bus, but the Memorial would not likely become a tour bus destination under Alternative 2. Visitors would likely use another form of transportation. However, tour buses may bring visitors to the site on key days for commemoration, such as anniversaries of historic events. Therefore, there would be a negligible impact on traffic due to tour buses.

The movement of construction materials, equipment, and workers to the Memorial would likely constrict rights-of-way in the immediate area. Specific travel lanes would include northbound 6th Street traffic, southbound 4th Street traffic, and eastbound Independence Avenue. This construction activity would result in short-term minor adverse impacts on vehicular traffic and potential confusion by motorists when encountering the new configuration.

Mitigation

Changes to the street network could potentially confuse motorists who were accustomed to the previous road configuration. Therefore, these changes would require temporary signage placed at key locations and intersections to alert and safely re-direct vehicles during construction. Motorists would become accustomed to the new traffic pattern in advance of the Memorial's completion because the site would be closed off by construction barriers and fencing during construction.

Cumulative Impacts

For Alternative 2, cumulative projects and their respective impacts, independent of Alternative 2, would be the same as for the No Action Alternative and Alternative 1. As described above, Alternative 2 would result in short- and long-term minor adverse impacts on vehicular traffic. Cumulatively, Alternative 2 would result in short-term minor adverse cumulative effects and long-term minor adverse cumulative effects on vehicular traffic at areas adjacent to the site.

Table 4-4: Existing Level of Service Conditions (directly below) and LOS for Alternative 2 Future With Project Conditions (Year 2015)

Location	AM Peak		Mid-Day Peak		PM Peak		Saturday Peak	
	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS
4th Street at Independence Avenue	13	B	13	B	18	B	19	B
Independence Avenue at Maryland Avenue (west)	15	C	15	B	15	C	14	B
6th Street at Independence Avenue	17	B	8	A	14	B	8	A
6th Street at Maryland Avenue	15	B	16	B	18	B	11	B
7th Street at Independence Avenue	20	B	17	B	23	C	17	B
7th Street at Maryland Avenue and C Street	11	B	9	A	9	A	8	A
3rd Street at Independence Avenue	25	C	22	C	48	D	29	C
Independence Avenue at Maryland Avenue (east at NMAI)	32	D	26	D	14	B	25	D
4th Street at Jefferson Drive	9	A	16	B	10	B	15	B
4th Street at C Street	16	B	13	B	14	B	13	B
6th Street at C Street and Garage Entrance	15	B	14	B	15	B	15	B

Location	AM Peak		Mid-Day Peak		PM Peak		Saturday Peak	
	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS
4th Street at Independence Avenue	14	B	12	B	18	B	16	B
Independence Avenue at Maryland Avenue (west)	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a
6th Street at Independence Avenue	21	**C***	8	A	15	B	8	A
6th Street at Maryland Avenue	11	B	16	B	18	B	11	B
7th Street at Independence Avenue	22	**C**	17	B	30	C	17	B
7th Street at Maryland Avenue and C Street	8	**A**	9	A	7	A	8	A
3rd Street at Independence Avenue	25	C	22	C	48	D	27	C
Independence Avenue at Maryland Avenue (east, at NMAI)	32	D	26	D	13	B	34	D
4th Street at Jefferson Drive	9	A	16	B	10	B	15	B
4th Street at C Street	16	B	13	B	14	B	13	B
6th Street at C Street and Garage Entrance	15	B	14	B	14	B	15	B

Source: AECOM, 2010

* LOS levels in red and bold represent a decline in LOS; those in green and bold represent an improvement in LOS.

Conclusion

Under Alternative 2, Maryland Avenue would be closed to vehicular traffic within the Memorial site. The intersections of Maryland Avenue at the site would be removed, resulting in a minor change in traffic. Tour buses would result in negligible long-term impacts on traffic. Short-term, minor impacts would occur as a result of construction requiring re-routing of traffic and possible lane closures. Therefore, long- and short-term minor adverse impacts on traffic would occur as a result of Alternative 2. The cumulative impacts would be short- and long-term minor adverse impact on traffic on adjacent streets.

Traffic Impacts of Alternative 3

From a traffic-engineering standpoint, Alternatives 2 and 3 are identical. Like Alternative 2, Alternative 3 would alter the existing roadway pattern by closing Maryland Avenue to vehicular traffic between 4th and 6th Streets. The mid-block intersection between 4th and 6th Streets, and the spur road, would be removed as part of Alternative 2. Instead, eastbound traffic from Maryland Avenue would turn right or left on 6th Street. The changes in LOS at intersections are the same as Alternative 2: in comparison to future conditions without the project, two intersections would drop from LOS B to LOS C and one intersection would improve from LOS B to LOS A (AECOM, 2010d). Also as result of the change in the roadway configuration in Alternatives 2 and 3, the travel time for motorists heading east on Maryland Avenue at 6th Street would add a few seconds to a trip.

As a result of the travel time and intersection LOS changes, Alternative 3 would result in long-term minor adverse impacts on vehicular traffic.

Because there would be no intersection of Maryland and Independence Avenues at the site, the changes to the road network at Independence Avenue and 4th Street described in Alternative 1 would not be necessary.

Although some visitors would arrive to the site via a chartered bus, the Memorial would not likely become a tour bus destination. Visitors would likely come to the site via public transportation, walking, individual vehicle, or vehicular tour providers, similar to existing conditions. It is not anticipated that the Memorial would be a required stop for tour uses. However, tour buses may bring

visitors to the site on key days for commemoration, such as anniversaries of historic events. Therefore, there would be a negligible impact on traffic due to tour buses.

Under Alternative 3, the movement of construction materials, equipment, and workers to the Memorial would likely constrict rights-of-way in the immediate area. It is also possible that at the time of their installation, motorists would slow down as they pass the site to view the tapestries. This would be a temporary condition, as motorists become inured to the Memorial over time, similar to other noted structures in Washington. As a result, Alternative 3 would result in short-term minor adverse impacts on vehicular traffic and potential confusion by motorists when encountering the new configuration.

Mitigation

Mitigation for Alternative 3 would be the same as for Alternative 2. Changes to the street network could potentially confuse motorists who were accustomed to the previous road configuration. Therefore, these changes would require temporary signage placed at key locations and intersections to alert and safely re-direct vehicles during construction. Motorists would become accustomed to the new traffic pattern in advance of the Memorial's completion because the site would be closed off by construction barriers and fencing during construction.

Cumulative Impacts

For Alternative 3, cumulative projects and their respective impacts, independent of Alternative 2, would be the same as for the No Action Alternative and Alternatives 1 and 2. As described above, Alternative 3 would result in short- and long-term minor adverse impacts on vehicular traffic In combination with the short-term minor adverse impacts as a result of cumulative construction projects and the long-term beneficial impacts of their completion, Alternative 3 would result in short- and long-term minor adverse cumulative impacts at adjacent streets.

Conclusion

Under Alternative 3, Maryland Avenue would be closed to vehicular traffic within the Memorial. The awkward intersections of Maryland Avenue at the site would be removed. Tour buses visits to the site would be limited. Overall, construction-related impacts would be short-term and minor, resulting from construction-related land closures and the re-routing of traffic. Therefore, Alternative 3 would result in short-and long-term minor adverse impacts on traffic. Cumulative impacts would be short- and long-term minor and adverse.

4.6.2 Parking

Methodology and Assumptions

The primary purpose of this environmental consequences analysis is to determine the potential impacts on parking as a result of the alternatives considered. The parking analysis examined the existing number of spaces available against the number of parking spaces available upon implementation of the alternatives. Additionally, the analysis considered the demand for parking spaces generated by visitors to the Memorial.

Trip generation data for the Eisenhower Memorial was established in the 2006 Transportation Impact Study (EarthTech, 2006), which was then used as the basis for trip generation in the 2010 analysis. The assumptions identified in the 2006 Transportation Impact Study, which was then carried through in the 2010 analysis. These are described below.

Because no Memorial of this scale is located off the Mall, there is no precedent for parking generation for the Memorial. Instead, estimates for the number of visits each year to the Memorial is based on the visits to the nearby NASM and NMAI. EMC assumes that the people entering those Museums from the south entrances, estimated to be approximately 30 percent of museum visitors, would be the most likely to visit the Memorial (Benton, 2011). Additionally, not all people who are visiting these museums would be interested in visiting the Memorial. Based on cultural institution visitor patterns (Doering and Perkarik, 1997), it is estimated that approximately thirty percent of visitors would be interested in seeing the NASM or NMAI, as well as the Memorial. Using these parameters, EMC estimates that approximately 600,000 people would visit the Memorial.

Visitation to the Memorial would be expected to vary depending on the date and time. The parking analysis is designed to analyze the highest number of people that would be expected at the Memorial at one time, thus estimating the maximum number of parking spaces that would be needed by visitors at the site. The peak day would be the single day of the year in which the most people visited the Memorial, which was estimated to be one percent of annual visitors. The peak hour would be the hour in that day in which the most people visited the Memorial, which was estimated to be ten percent of peak day visitors.

The analysis also makes assumptions about vehicle usage. It is estimated that approximately 16 percent of people visiting the Memorial will drive a vehicle. Of these, it is assumed that three people would be in each vehicle (NPS, 2003). Once they have arrived, it is assumed that visitors will share parking among two or three attractions within walking distance. Therefore, the shared parking assumption is 2.5 places. A table illustrating these calculations is shown on the next page.

In addition to the 13 parking spaces needed by visitors to the site, NPS staff has indicated that three parking spaces would be needed to operate the Memorial.

Table 4-5: Parking Assumption Calculations

Calculation	Multiplier/Divisor	Total
Combined NASM and NMAI Annual Visits:	4.9 million and 1.7 million	6.6 million visitors
Percent entering Museums from the southern entrances:	30 percent	2 million visits (rounded)
Percent of those entering the Museums from the southern entrances anticipated to visit the Memorial:	30 percent	600,000 visits
Percent of Annual Visitors comprising the Peak Daily Visitors:	1 percent	6,000 visitors
Percent of Peak Daily Visitors Comprising the Peak Hourly Visitors:	10 percent	600 visitors
Percent of visitors traveling via automobile:	16	96 persons
Number of people per vehicle:	3	32 cars
Number of attractions people would visit, thereby sharing parking among the attractions:	2.5	13 parking spaces (rounded)

The parking analysis uses the Parking Principles publication (National Highway Research Board, 1971) to determine acceptable walking distances from parking to final trip destinations: 390 feet for curb parking and 700 feet for garage parking. When applied to the Eisenhower Memorial, the parking meeting, this criteria limits parking to those spaces located within one block of the memorial site.

Study Area

The study area includes parking available within one block of the project site in each direction. The boundaries of the parking study area are Jefferson Drive to the north, 7th Street to the west, C Street to the south, and 3rd Street to the east.

Impact Thresholds

The following thresholds were used to determine the magnitude of impacts on parking:

- *Negligible.* Parking availability would not be impacted or the impact would be below or at the lower levels of detection.
- *Minor.* Impacts on parking availability would be detectable, although motorists would be able to find parking within one block of the site. Mitigation would be needed to offset adverse impacts. It would be relatively simple to implement and would likely be successful.
- *Moderate.* Impacts on parking availability would be readily apparent and visitors would have difficulty finding available parking near the site. Mitigation measures would be

necessary to offset adverse impacts and would likely be successful.

- *Major.* Impacts on parking availability would be readily apparent and substantially change the character of parking in the vicinity, with visitors having great difficulty finding available parking. Mitigation measures necessary to offset adverse impacts would be needed and extensive, with no guarantee of success.

- *Duration.* Short-term impacts occur during the construction of the alternative; long-term impacts extend beyond the construction of the alternative.

Parking Impacts of No Action Alternative

Under the No Action Alternative, improvements would not be undertaken at the project site. The 67 existing on-site parking would remain along Maryland Avenue and along 4th Street to the east of the site. These would continue to be used by federal employees that continuously pay meter fees, visitors to the LBJ Building and surrounding office buildings, tourists visiting nearby attractions, and others. In addition to on-site parking, 104 on-street metered parking spaces in the vicinity of the site would remain. No on-street parking spaces outside the Memorial site would be removed. The 634 parking garage would also remain. The existing weekday availability of parking spaces off-site would continue to be between 37 and 38 percent, as shown described in Section 3.4.2 As a result of the No Action Alternative, there would be no impact on parking.

Cumulative Impacts

Because there would be no impacts as a result of the No Action Alternative, there would be no cumulative impacts.

Conclusion

As a result of the No Action Alternative, no changes to parking would take place and there would be no cumulative impacts. The No Action Alternative would result in no impacts on parking.

Parking Impacts of Alternative 1

Under Alternative 1, Maryland Avenue would be reconfigured to its original L'Enfant alignment, resulting in the loss of 67 existing parking spaces. As such, the installation of a two-lane Maryland Avenue would remove the available parking along the current roadway and spur. The reconfigured parking would remove on-site parking spaces used by employees in and visitors to nearby buildings, museum visitors, and others. Alternative 1 would add bus parking for tour buses on 4th Street, directly adjacent to the site.

Based on expected visitation and vehicular use patterns described in this section's Methodology and Assumptions and calculations show in Table 4-5, , the Eisenhower Memorial would be expected to generate demand for 13 spaces from visitors who drive to the site. NPS personnel driving to the site would generate demand for three additional spaces (AECOM, 2010d). Two designated parking spaces for NPS personnel would be placed onsite. As a result of the Memorial, 13 parking spaces for visitors and one parking space for NPS personnel would be needed, for a total of 14 spaces.

The on-street curb parking supply reduction and increased demand as a result of the Memorial would be marginal. Combining the 67 spaces removed and the demand for 14 parking spaces generated as a result of Alternative 1, a total of 81 parking spaces would be needed to offset these changes, which could be absorbed by the existing 906 on-street and garage parking spaces within one block of the Memorial (AECOM, 2010d).

Those employees that continuously pay meter fees, visitors to the LBJ Building and surrounding office buildings, tourists visiting nearby attractions, and others who had previously parked at the site would find parking in street sections adjacent to the site (the 300 blocks of 4th and 6th Streets and the 400 block of Independence Avenue) or in neighboring areas. Accessible parking would continue be available in the area at the parking garage at 6th and C Streets.

When the spaces directly adjacent to the Memorial are full, motorists would park in on-street metered parking spaces beyond the directly adjacent street sections and in the nearby garage that has excess capacity. However, the cost of the garage ($8 per hour, with a daily maximum of $34) would be more than the on-street parking ($2 per hour, with a two-hour maximum). Some motorists would find the cost prohibitive, and would therefore need to find parking beyond one block of the site.

As a result of Alternative 1, motorists would be able to find parking within one block of the Memorial site despite the removal of spaces on Maryland Avenue. Those unwilling or unable to park in garage spaces would park further than one block from the Memorial. Therefore, Alternative 1 would result in long-term minor adverse impacts to parking.

Construction of the Memorial would result in additional parking restrictions along Independence Avenue, 4th Street, and 6th Street as the Memorial would be constructed. Construction would have short-term moderate adverse affects on parking during periods when these spaces would be unavailable.

Mitigation

In order to inform visitors of the parking opportunities available, visitors would be informed of parking areas in pre-arrival information, such as on the website or in brochures. Signs for parking would be posted. Visitors would be encouraged to use alternate forms of transportation, such as bus or rail, to reach the site. These alternate transportation opportunities would also be made available in pre-arrival information. NPS already provides Metro information its Washington parks websites. The L'Enfant and Federal Center SW Metro stations are within three blocks of the Memorial site A total of 28 bus routes (Metrobus, DC CIRCULATOR, and Maryland Transit Administration) and the L'Enfant Virginia Rail Express station provide service within one block of the Memorial site.

Although the parking study measures only within one block of the Memorial, it is generally acceptable to park more than one block away in a dense urban environment. This is consistent with other neighborhoods and attractions throughout Washington.

Cumulative Impacts

Other projects in the area would potentially affect parking in the study area. The reduction in parking as a result of the site improvements, which would convert surface parking to landscaped plazas, for FOB 8 and the Mary E. Switzer Building, would decrease parking availability for employees and visitors to those facilities, sending drivers elsewhere to search for parking. However, a reduction in parking at the facilities is also expected to result in an overall decline in parking demand due to changes in behavior (GSA, 2010).

The construction associated with these projects would block some on-street parking in the vicinity temporarily. This would result in short-term moderate adverse cumulative impacts.

As stated above, Alternative 1 would result in short-term moderate and long-term minor adverse impacts on parking. When combined with the cumulative projects, impacts to parking in the short- term would be adverse and moderate and the long-term impacts would be adverse and minor.

Conclusion

As a result of Alternative 1, on-street parking at the site would decrease by 67 spaces and the demand for public parking would increase by 14 parking spaces. The existing on-street and garage parking supply would be able to absorb this increase in demand and reduction in available spaces, although costs at the garage would be greater than metered spaces on-street. Based on this information, Alternative 1 would result in long-term minor adverse impacts on parking availability. Construction would have a short-term moderate adverse affect on parking. When combined with the cumulative projects, Alternative 1 would have short-term moderate and long-term minor adverse impacts on parking.

Parking Impacts of Alternative 2

Like Alternative 1, Alternative 2 would result in short- and long-term minor impacts on parking. The parking impacts of Alternative 2 would be the same as Alternative 1, as the same number (67) of spaces on-site would be removed and the same bus parking would be provided on 4th Street. The reconfigured parking would remove spaces current on-site parking spaces used by federal employees, museum visitors, and others.

Based on expected visitation and vehicular use patterns described in this section's Methodology and Assumptions, the Eisenhower Memorial would be expected to generate demand for 13 spaces from visitors who drive to the site. NPS personnel driving to the site would generate demand for three additional spaces (AECOM, 2010d). Two designated parking spaces for NPS personnel would be placed on-site. As a result of the Memorial, 13 parking spaces for visitors and one parking space for NPS personnel would be needed, for a total of 14 parking spaces.

The incremental changes in supply and demand would be absorbed by the 906 existing parking meters and garage spaces within one block of the Memorial. Those employees that continuously paid meter fees, visitors to the LBJ Building and surrounding office buildings, tourists visiting nearby attractions, and others who had previously parked at the site would find parking in neighboring areas. Those unwilling or unable to park in garage spaces would park further than one block from the Memorial and walk to their destination. Accessible parking would be provided in the area. These changes in parking supply and demand would result in long-term minor adverse impacts on parking.

Construction of the Memorial would result in additional parking restrictions along Independence Avenue, 4th Street, and 6th Street as the Memorial would be constructed. Construction would have a potentially moderate short-term, adverse affect on parking during periods when these spaces would be unavailable.

Mitigation

In order to inform visitors of the parking opportunities available, parking areas would be included in pre-arrival information, such as on the website or in brochures. Signs for parking would be posted. Visitors would be encouraged to use alternate forms of transportation, such as bus or rail, to reach the site. NPS already provides Metro information its Washington parks websites. The L'Enfant and Federal Center SW Metro stations are within three blocks of the Memorial site A total of 28 bus routes (Metrobus, DC CIRCULATOR, and Maryland Transit Administration) and the L'Enfant Virginia Rail Express station provide service within one block of the Memorial site.

Although the parking study measures only within one block of the Memorial, it is generally acceptable to park more than one block away in a dense urban environment. This is consistent with other neighborhoods and attractions throughout Washington.

Cumulative Impacts

Alternative 2 would have the same cumulative project impacts as Alternative 1. As stated above, Alternative 1 would result in short-term moderate adverse impacts and long-term minor impacts to parking. When combined with the cumulative projects, impacts to

parking in the short- term would be moderate and adverse; long-terms would be minor and adverse.

Conclusion

Like Alternative 1, as a result of Alternative 2, on-street parking at the site would decrease by 67 spaces and parking demand would increase by 14 spaces. The existing on-street and garage parking supply would be able to absorb this increased demand and reduction in available spaces, although costs at the garage would be greater than the on-street metered parking. Construction would have a short-term moderate, adverse affect on parking. Therefore, Alternative 2 would result in short-term moderate adverse impacts and long-term minor, adverse impacts on parking. When combined with the cumulative projects, Alternative 2 would have short-term moderate adverse and long-term minor adverse impacts on parking.

Parking Impacts of Alternative 3

Like Alternatives 1 and 2, Alternative 3 would result in short- and long-term minor impacts on parking. The parking impacts of Alternative 3 would be the same as Alternative 1. The same number (67) of spaces on-site would be removed and the same bus parking would be provided on 4th Street. The reconfigured parking would remove spaces current on-site parking spaces used by federal employees, museum visitors, and others.

Based on expected visitation and vehicular use patterns described in this section's Methodology and Assumptions, the Eisenhower Memorial would be expected to generate demand for 13 spaces from visitors who drive to the site. NPS personnel driving to the site would generate demand for three additional spaces (AECOM, 2010d). Two designated parking spaces for NPS personnel would be placed on-site. As a result of the Memorial, 13 parking spaces for visitors and one parking space for NPS personnel would be needed, for a total of 14 parking spaces.

These incremental changes in supply and demand would be absorbed by the 906 existing parking meters and garage spaces within one block of the Memorial. Rangers and other NPS personnel would reach the site through alternative transportation or would park in areas designated for NPS. Those employees that continuously paid meter fees, visitors to the LBJ Building and surrounding office buildings, tourists visiting nearby attractions, and others who had previously parked at the site would find parking in neighboring areas. Those unwilling or unable to park in garage spaces would park further than one block from the Memorial and walk to their destination. Accessible parking would be

provided in the area. These changes in parking supply and demand would result in long-term minor adverse impacts on parking.

Construction of the Memorial would result in additional parking restrictions along Independence Avenue, 4th Street, and 6th Street as the Memorial would be constructed. Construction would have a short-term moderate adverse affect on parking during periods when these spaces would be unavailable.

Mitigation

In order to inform visitors of the parking opportunities available, visitors would be informed of parking areas in pre-arrival information, such as on the website or in brochures. Signs for parking would be posted. Visitors would be encouraged to use alternate forms of transportation, such as bus or rail, to reach the site. NPS already provides Metro information its Washington parks websites. The L'Enfant and Federal Center SW Metro stations are within three blocks of the Memorial site A total of 28 bus routes (Metrobus, DC CIRCULATOR, and Maryland Transit Administration) and the L'Enfant Virginia Rail Express station provide service within one block of the Memorial site.

Although the parking study measures only within one block of the Memorial, it is generally acceptable to park more than one block away in a dense urban environment. This is consistent with other neighborhoods and attractions throughout Washington.

Cumulative Impacts

Alternative 3 would have the same cumulative project impacts as Alternatives 1 and 2. As stated above, Alternative 1 would result in short- term moderate adverse and long-term minor adverse impacts on parking. When combined with the cumulative projects, impacts to parking in the short-term moderate and adverse and long-term impacts would be adverse and minor.

Conclusion

Like Alternatives 1 and 2, on-street parking at the site would decrease by 67 spaces for Alternative 3. The existing on-street and garage parking supply would be able to absorb this increased demand and reduction in available spaces, although costs at the garage would be greater than those at on-street metered parking. Construction would have a potentially minor, short-term adverse affect on parking. Alternative 3 would result in a minor, adverse impact on parking availability. When combined with the cumulative projects, Alternative 3 would have short-term moderate adverse impacts and long-term minor adverse impacts on parking.

This page is intentionally left blank

4.7 VEGETATION

Methodology and Assumptions

Available information on the vegetation present at the existing site, especially mature trees and landscape, was compiled and reviewed. Impacts on vegetation were determined based on the general characteristics of the site and vicinity, site observations, and the removal of vegetation.

Study Area

The study area for vegetation is the Eisenhower Memorial site. The cumulative study area is adjacent properties.

Impact Thresholds

The following thresholds were used to determine the magnitude of impacts on vegetation:

- *Negligible.* Vegetation would not be impacted or the impact would be below or at the lower levels of detection.
- *Minor.* Impacts on vegetation would be detectable. Impacts to undisturbed areas would be small. Mitigation would be needed to offset adverse impacts and would be relatively simple to implement and would likely be successful.
- *Moderate.* Impacts on vegetation would be readily apparent and result in a change to vegetation over a relatively wide area. Mitigation measures would be necessary to offset adverse impacts and would likely be successful.
- *Major.* Impacts on vegetation would be readily apparent and substantially change the character of vegetation over a large area both in and out of the project site. Mitigation measures necessary to offset adverse impacts would be needed and extensive, with no guarantee of success.
- *Duration.* Long-term impacts would extend beyond the construction of the alternative.

Vegetation Impacts of No Action Alternative

Under the No Action Alternative, no vegetation would be removed from the site. The existing street trees would remain, as would the plaza trees in tree boxes. Bushes in plant boxes and other landscaping materials would remain. The grass area on the NPS parcel and the spur road median would remain. The vegetable plants and flowers included in the community garden would continue to be replanted, per the discretion of the gardener. Because the No Action Alternative would maintain existing conditions, there would be no conflict with the NCPC design principles. Therefore, the No Action Alternative would result in no impacts on vegetation.

Cumulative Impacts

The No Action Alternative would result in no impacts on vegetation. Therefore, no cumulative impacts would occur as a result.

Conclusion

No on-site change to vegetation would occur as a result of the No Action Alternative. Cumulative impacts of other projects would be

negligible. Therefore, the No Action Alternative would result in no impact on vegetation.

Vegetation Impacts of Alternative 1

Implementation of Alternative 1 would remove existing vegetation from the site, including 38 trees, some of which have diameters of 20 inches or more. The Alternative 1 design would place approximately 63 trees in a grid pattern throughout the site, with approximately 12 street trees framing the site (six mature trees on 4th and 6th Streets would be maintained). Additionally, there would be a central grove of trees at the core of the Memorial that would be mature and large in scale. These trees would expand the existing tree canopy at the site. Other trees throughout the site and along the street would be medium in size, larger than trees typically installed as street trees. All of these would be deciduous trees chosen to be compatible with the local climate and would be subject to NPS approval. A row of trees would also serve to separate the LBJ Promenade in front of the LBJ Building from the Memorial. Street trees installed along Independence Avenue and 4th and 6th Streets would be consistent with the established street trees for those roadways. Before changes would be made, a special tree removal permit and a public space permit would be obtained from DDOT.

As part of Alternative 1, new systems would be introduced to improve the growing conditions for new trees. The soil mix installed would be more appropriate for the establishment and growth of new trees and would help to improve site drainage. Root beds would be expanded to accommodate large trees.

Existing planter boxes along the northern edges of the LBJ Building would be removed. Instead, three new planter boxes would be installed, framing the entrances to the building. Grass, groundcover, and other landscape materials, such as flowers or shrubs, would be installed in the remaining portion of the site. Additionally, the LBJ

Promenade in front of the LBJ Building may contain trees, grass, or other plant materials. Vegetation would cover 0.84 acres of the site. The plants used for the landscape of the site would be native or non-invasive adaptive species.

The proposed landscape plan would place additional trees on-site and a comparable acreage of vegetated area. Therefore, Alternative 1 would result in long-term beneficial impacts on vegetation.

During construction of the Memorial, existing vegetation would be removed. As a result, Alternative 1 would cause short-term moderate impacts on vegetation.

Cumulative Impacts

The redevelopment of FOB 8 and the Mary E. Switzer Building would remove existing trees and vegetation and surface parking lots as part of the construction process. Street trees would be replaced with new trees. Additional lawn, plantings, and trees would be installed as part of the reconfiguration of parking lots into landscaped plazas. These actions would result in long-term beneficial impacts on vegetation.

As described above, Alternative 1 would result in short-term moderate adverse impacts and long-term beneficial impacts on vegetation. Therefore, the cumulative effect of Alternative 1 and the other projects in the area would result in long-term beneficial cumulative impacts on vegetation.

Conclusion

Under Alternative 1, grass, modest landscape plantings, community garden vegetables and flowers, and 38 trees would be replaced by 79 trees and more extensive landscape plantings. Although mature trees would be removed to construct Alternative 1, many large trees would be installed as part of the project. Also, several smaller trees at the site, particularly those along the street, would be replaced by larger trees. The quality of the trees would improve as a result of Alternative 1 and would be sustained due to soil and drainage improvements. The vegetation would establish the character of the Memorial, serve to frame the site, separate the LBJ Promenade, and introduce and define the LBJ Building's entrances. Therefore, Alternative 1 would result in short-term moderate adverse impacts and long-term beneficial impacts on vegetation. When combined with cumulative projects, Alternative 1 would result in short-term moderate adverse impacts and long-term beneficial cumulative impacts on vegetation.

Vegetation Impacts of Alternative 2

Alternative 2 would remove the existing vegetation from the site by removing 38 trees and placing approximately 79 trees in a grid pattern throughout the site; approximately 12 street trees would be planted around the edges of site (six mature trees on 4th and 6th Streets would be maintained). Additionally, there would be a central grove of trees within the Memorial, for a total of approximately 95 new trees. These trees would expand the existing tree canopy at the site. The trees in the grove would be mature and large in scale. The other trees throughout the site and along the street would be medium in size, but more mature than trees typically installed as street trees. All of these would be deciduous trees chosen to be compatible with the local climate. A row of trees would also serve to separate the LBJ Promenade from the Memorial. Street trees installed along Independence Avenue and 4th and 6th Streets would be consistent with the street trees established for those roadways. Before changes would be made, a special tree removal permit and a public space permit would be obtained from DDOT.

As part of Alternative 2, new systems would be introduced to improve the growing conditions for new trees. The soil mix installed would be more appropriate for the establishment and growth of new trees. On-site drainage would be improved. Root beds would be expanded to accommodate large trees.

Existing planter boxes along the northern edges of the LBJ Building would be removed. Instead, a paved surface would extend to the building front. Grass, groundcover, and other landscape materials, such as flowers or shrubs, would be installed throughout the site. Beyond the Memorial, grass or other landscape plantings would primarily cover the ground, with paths running throughout the site. The LBJ Promenade in front of the LBJ Building may also contain trees, grass, or other plant materials. Vegetation would cover 1.51 acres of the site. The plants used for the landscape of the site would be native or non-invasive adaptive species.

Given the improved quality of the new vegetation and the increased amount of vegetated area, Alternative 2 would result in long-term beneficial impacts on vegetation.

During construction of the Memorial, existing vegetation would be removed. As a result, Alternative 2 would cause short-term moderate impacts on vegetation.

Cumulative Impacts

The cumulative projects and impacts would be the same as those described in Alternative 1. Alternative 2 would result in long-term beneficial impacts to vegetation. Therefore, the cumulative effect of Alternative 2 and the other projects in the area would result in long-term beneficial cumulative impacts on vegetation.

Conclusion

Under Alternative 2, grass, modest landscape plantings, community garden vegetables and flowers, and 38 trees would be replaced by 95 trees and more extensive landscape plantings. Although mature trees would be removed to construct Alternative 2, many larger trees would be installed as part of the project. Also, many immature trees at the site, particularly those along the street, would be replaced by larger trees. The quality of the trees would improve as a result of Alternative 2 and would be sustained due to soil and drainage improvements. The vegetation would establish the

character of the Memorial, serve to frame the site, separate the LBJ Promenade, and introduce and define the LBJ Building's entrances. Therefore, Alternative 2 would result in short-term moderate adverse impacts and long-term beneficial impacts on vegetation. When combined with cumulative projects, Alternative 2 would result in short-term moderate adverse impacts and long-term beneficial cumulative impacts on vegetation.

Vegetation Impacts of Alternative 3

Implementation of Alternative 3 would remove the existing vegetation from the site, and place approximately 81 trees throughout the site, including the seven mature trees on 4th and 6th Streets. The trees throughout the site would placed in a non-linear pattern. There would also be a central grove of trees within the Memorial, but the trees in the grove would be mature and large in scale. The other trees throughout the site and along the street would be medium in size and more mature than trees typically installed as street trees. These trees would expand the existing tree canopy at the site. All of these would be deciduous chosen to be compatible with the local climate. A row of trees would also serve to separate the LBJ Promenade in front of the LBJ Building from the Memorial. Street trees installed along Independence Avenue and 4th and 6th Streets would be consistent with the established street trees for these roadways.

As part of Alternative 3, new systems would be introduced to improve the growing conditions for the establishment of new trees and drainage on-site. The soil mix installed would be more appropriate for new trees. Drainage at the site would be improved. Root beds would be expanded to accommodate large trees.

Existing planter boxes along the northern edges of the LBJ Building would be removed. Beyond the central Memorial area, grass or other landscape plantings would primarily cover the ground, with paths running throughout the site. The promenade in front of the LBJ Building may also contain trees, grass, or other plant materials. Vegetation would cover 1.98 acres of the site. The plants used for the landscape of the site would be native or non-invasive adaptive species.

During construction of the Memorial, existing vegetation would be removed. As a result, Alternative 3 would cause short-term moderate impacts on vegetation.

Given the improved quality of the new vegetation and the increased amount of vegetated area, Alternative 3 would result in long-term beneficial impacts on vegetation.

Cumulative Impacts

The cumulative projects and their impacts would be the same as those described in Alternatives 1 and 2. Alternative 3 would result in long-term beneficial impacts on vegetation. When combined with cumulative projects, Alternative 3 would result in long-term beneficial cumulative impacts on vegetation.

Conclusion

Under Alternative 3, grass, modest landscape plantings, community garden vegetables and flowers, and 44 trees would be replaced by 81 trees and more extensive landscape plantings. Although mature trees would be removed as part of Alternative 3, many large trees would be installed as part of the project. Also, many immature trees at the site, particularly those along the street, would be replaced by larger trees. Therefore, the quality of the trees would improve as a result of Alternative 3 and would be sustained due to improvements in soil and drainage. The vegetation would serve to establish the character of the Memorial, frame the site, separate the LBJ Promenade, and introduce and define the LBJ Building's entrances. Therefore, Alternative 3 would result in short-term moderate adverse impacts and long-term beneficial impacts on vegetation. When combined with cumulative projects, Alternative 3 would result in short-term moderate adverse impacts and long-term beneficial cumulative impacts on vegetation.

4.8 VISITOR USE AND EXPERIENCE

Methodology and Assumptions

This analysis considered the area's current uses and the potential effects of constructing a presidential memorial on the visitor experience and use at the site. The Eisenhower Memorial could affect the activities and the type of visitor experience and use/visitation at the Memorial and the surrounding area. The visual character of the National Mall area and noises experienced by the visitors were also considered.

As described in Section 4.6.2, EMC estimates the total annual visitors to be approximately 600,000.

Study Area

The study area for visitor use and experience is the project site and the broader National Mall area.

Impact Thresholds

The following thresholds were used to determine the magnitude of impacts on visitor use and experience:

- *Negligible:* Visitors would likely be unaware of any effects associated with implementation of the alternative. There would be no noticeable change in visitor use and experience or in any defined indicators of visitor satisfaction or behavior.

- *Minor.* Changes in visitor use and/or experience would be slight and detectable but would not appreciably limit critical characteristics of the visitor experience. Visitor satisfaction would remain stable.

- *Moderate.* A few critical characteristics of the desired visitor experience would change and/or the number of participants engaging in a specified activity would be altered. Some visitors who desire their continued use and enjoyment of the activity/visitor experience might pursue their choices in other available local or regional areas. Visitor satisfaction would begin to decline.

- *Major.* Multiple critical characteristics of the desired visitor experience would change and/or the number of participants engaging in an activity would be greatly reduced or increased. Visitors who desire their continued use and enjoyment of the activity/visitor experience would be required to pursue their choices in other available local or regional areas. Visitor satisfaction would markedly decline.

- *Beneficial.* Characteristics of the desired visitor experience would improve and/or the number of participants engaging in an activity would increase. Visitor satisfaction would increase.

- *Duration.* Short term impacts would occur during the time of construction. Long-term impacts would last beyond the construction phase.

Visitor Use and Experience Impacts of No Action Alternative

Under the No Action Alternative, the project site would continue to offer the same visitor use and experience as the current site. No new facilities or attractions would be installed at the site. Visitor use would not increase. Instead, existing use patterns and numbers would remain stable. Visitors to the site, particularly workers on break from nearby offices, and DEd would be able to use the existing outdoor plaza and seating.

The 38 community garden plots at the site would remain. Those people using the 38 community garden plots would continue to garden at the site. The exercise course by the gardens would also remain. Visitors to the site would be able to use the bars, benches, and other equipment offered by the course.

The site would also continue to serve as open space in support of other NAMA sites. The project site lies between the National Mall and two Metro Stations: Federal Center SW to the southeast of the site and L'Enfant Plaza to the southwest. The Smithsonian Museums, such as the NASM and NMAI, are located across Independence Avenue from the project site. The No Action Alternative would continue to afford visitors access to NAMA and the National Mall access from numerous public transportation service locations by providing sidewalks and an open plaza to walk across in order to most efficiently reach the destination.

The existing signalized intersections with crosswalks across Independence Avenue would remain. Similarly, the pedestrian connections across Maryland Avenue would continue to occur at yield or stop sign-controlled intersections. Sidewalks along roadways and the plaza would remain intact. No amenities or accommodations for cyclists would be installed.

Because visitors would be able to use the plaza, community gardens, exercise equipment, and open space in support of other NAMA sites, the No Action Alternative would result in long-term beneficial impacts on visitor use and experience.

Cumulative Impacts

There are a number projects related to visitor use and experience that are relevant to the Eisenhower Memorial. First, the American Veterans Disabled for Life Memorial is planned for a site two blocks east of the project site. The American Veterans Disabled for Life Memorial is scheduled for completion in November 2011. Unlike the Eisenhower Memorial, the American Veterans Disabled for Life Memorial is not directly adjacent to the National Mall or Independence Avenue. This project would enhance the visitor experience, resulting in long-term beneficial impacts.

Within NAMA and just beyond its borders, a number of other visitor attractions would be created. The National Museum of African American History and Culture, Martin Luther King, Jr. National Memorial, Vietnam Veterans Memorial Visitors Center, National Museum of Women's History, National Museum of the American Latino, the Redesign of Constitution Gardens, Union Square and the Sylvan Theater Area, the restoration of the DC War Memorial and the renovation of the National Aquarium would all offer nearby attractions for visitors to Washington, DC and the Eisenhower Memorial. The Mall Turf Rehabilitation, Jefferson Memorial Vehicular Security Barriers, the and Washington Monument Security Screening would augment the existing visitor facilities.

These projects would enhance the visitor experience, resulting in long-term beneficial impacts.

As described above, the No Action Alternative would result in long-term beneficial impacts on visitor use and experience. When combined with the short-term adverse impacts and long-term minor adverse impacts and beneficial impacts of the cumulative projects, the No Action Alternative would result in short-term moderate adverse cumulative impacts and long-term beneficial cumulative impacts on visitor use and experience.

Conclusion

Employees of nearby offices would continue to use the site for lunch and breaks. Community gardeners would continue to use the NPS parcel and visitors would continue to use the exercise course. DEd would be able to use the site as an outdoor gathering space. Pedestrians would continue to use existing amenities. The long-term cumulative impacts would be beneficial. As a result of these factors, the No Action Alternative would result in beneficial impacts on visitor use and experience.

Visitor Use and Experience Impacts of Alternative 1

Alternative 1 would create a new memorial to President Eisenhower that would attract many new visitors to the site. The Memorial is not expected to lure the majority of its visitors on its own; instead, it is assumed that most visitors would come to the project site as part of a larger visit to the National Mall and its other nearby memorials. From this perspective, the Eisenhower Memorial would help attract additional visitors to other, nearby memorials, museums, and site in the National Mall area.

As a distinct destination within the National Mall area, the Eisenhower Memorial would likely experience greater than average visitation in the first few years before stabilizing at typical visitation levels. EMC projects that, after the initial years, the Eisenhower Memorial would be expected to draw approximately 600,000 visitors annually. The visitation number for the Eisenhower Memorial would be expected to be lower than other Memorials, such as the Korean War Memorial and the World War II Memorial, which received 3,117,046 and 4, 118, 528 visitors, respectively (NPS, 2011), due to their more prominent location on the Mall.

Alternative 1 would replace the existing open plaza with a more defined memorial space dedicated to President Eisenhower that focuses on a central grove of trees to symbolize the man, surrounded by large built elements to educate visitors about his life and accomplishments. The reliefs and other built elements would tell Eisenhower's story, providing an informative experience while at the site. The benches under the tree canopy would offer an opportunity of a quiet gathering place for contemplation. This would maintain the existing open space and enhance the visitor

experience at the site, which, in its current condition, provides little draw to visitors.

Under Alternative 1, the landscaping of the Memorial would offer office workers from nearby buildings a greener landscape. Trees would provide more shade than the current conditions at the site. Alternative 1 would also offer additional amenities for both destination and casual visitors, including restrooms for comfort, a bookstore to learn about President Eisenhower and buy related materials, and a dedicated on-site Park Ranger to answer visitor questions and provide tours.

Benches, restrooms, and seat-level walls would provide seating and a canopy would provide visitors with shelter from rain or the sun. The canopy would accommodate groups of up to 300 people, with other space at the site available to accommodate many more. Potential users of the canopy include tour groups, DEd and other federal agencies, and attendees of special events hosted at the site, such as an annual remembrance event. Because there are no easily accessible public restrooms east of the Washington Monument, the facilities at the Memorial would serve visitors to this portion of NAMA. The Memorial would provide amenities and educational experiences to a large number of people, resulting in long-term beneficial impacts on visitor use and experience.

Under Alternative 1, the entrances would limit access to Independence and Maryland Avenues, 4th and 6th Streets, and the promenade. Sidewalks would surround the Memorial and would be provided along Maryland Avenue, which would continue to operate as a functional roadway. Visitors to the Eisenhower Memorial would be required to pay attention to vehicular traffic when crossing Maryland Avenue within the site. Vehicular traffic through the site would be intrusive and detract from the quiet, contemplative space intended as a place of reverence to President Eisenhower. Bicycle racks would also be provided at the Memorial.

As part of Alternative 1, the permitted community gardens would be removed. The exercise course and equipment would also be removed. The DEd's commemorative bell would also be removed. As a result of the removal of the community gardens and exercise course, visitors would be required to go elsewhere for these activities. This would result in moderate adverse impacts on visitor use and experience for these particular user groups.

Under Alternative 1, visitors to the site could directly enter the site from most directions. Along 4th and 6th Streets and Independence Avenue, sidewalks directly connect to the paved Memorial. Signalized intersections across Independence Avenue at 6th Streets and Maryland Avenue at 6th Street would continue to provide walk signals to visitors. Bisecting the site, Maryland Avenue would also provide pedestrian access. Because the open roadway would go through the Memorial, pedestrian improvements, such as a cross walk and signage, would be installed for safety. Signalized crosswalks would be incorporated in the 4th Street and Independence and Maryland Avenues intersection. Access from the LBJ Building would predominantly be from the sloped entrance to the Memorial along the southern border. The LBJ Promenade would access 4th Street via stairs and 6th Street directly. In order to comply with the Architectural Barriers Act, a ramp would be located next to the stairs at the 4th Street access to the LBJ Promenade and all sidewalks would be compliant. Bicycle racks would be provided at the Memorial.

Although lighting would primarily focus on the Memorial features, additional lighting would be used to illuminate pedestrian pathways, seating areas, and handrails. The relief blocks, water feature, and planter areas would be lit, making them clearly visible at night to visitors. Wherever seating areas or handrails occur, pedestrian lighting would be used to provide visible pathways. Additional lighting would be distributed at the site to provide illumination to areas where memorial- or seating-based lighting would not occur. By providing well-lit pathways, visitors would be able to navigate the site safely at night. The Memorial design does not offer extensive shelter from the elements, except for the temporary shelter from sun and rain provided by the canopies along the LBJ Promenade, in keeping with the Memorial's scale of visitation.

Alternative 1 would temporarily disrupt site use during construction. During construction, existing amenities, such as seating, would be removed. Additionally, the roadways, plaza, and existing vegetated areas would be disturbed and removed during the construction process. Visitors would be prohibited from entering during this period, resulting in short-term moderate adverse impacts.

Cumulative Impacts

The cumulative projects and their long-term impacts would be beneficial, the same as those described in the No Action Alternative. Construction of the American Veterans Disabled for Life Memorial, National Museum of African American History and Culture, Vietnam Veterans Memorial Visitors Center, National Museum of Women's History, National Museum of the American Latino, the Redesign of Constitution Gardens, Union Square, and the Sylvan Theater Area, the restoration of the DC War Memorial and the renovation of the National Aquarium projects described above, as well as the Jefferson Memorial Seawall Rehabilitation, Potomac Park Levee, Madison Drive Streetscape Improvements, the Constitution Avenue Street Improvements ,and Lincoln Memorial Reflecting Pool Rehabilitation would result in re-rerouting and temporary closures of areas within NAMA. Construction activities would result in short-term minor impacts on visitor use and experience.

As described above, Alternative 1 would result in short-term minor adverse impacts and long-term beneficial impacts on visitor use and experience. When combined with the short-term adverse impacts and long-term minor adverse impacts and beneficial impacts of the cumulative projects, Alternative 1 would result in short-term moderate adverse cumulative impacts and long-term beneficial cumulative impacts on visitor use and experience.

Conclusion

Under Alternative 1, visitors to the site would have the opportunity to learn about President Eisenhower in a quiet and contemplative environment. Alternative 1 would offer visitor amenities and provide another attraction for visitors to the National Mall, as well as offer a greener and more shaded landscaped gathering space. Pedestrian connections and bicycle racks would be provided. The promenade would offer a respite area for nearby office workers. All of these changes would result in beneficial impacts. Additionally, the removal of community gardens and the exercise course would result in moderate adverse impacts.

Alternative 1 would result in short-term moderate adverse impacts during construction due to limited site access. The overall long-

term impacts on visitor use and experience would be beneficial. Combined with the cumulative projects, Alternative 1 would result in short-term moderate adverse impacts and long-term beneficial impacts on visitor use and experience.

Visitor Use and Experience Impacts of Alternative 2

Alternative 2 would result in a similar visitor use and experience as Alternative 1. Like Alternative 1, Alternative 2 would provide a central Memorial grove and built elements to create a quiet park setting in which to contemplate Eisenhower's accomplishments. Alternative 2 would be expected to receive the same number of visitors to the Memorial as Alternative 1 and would help attract additional visitors to other nearby memorials, museums, and sites in the National Mall area. The same level of amenities, such as restroom facilities and a book sales area, would be provided in Alternative 2. This enhanced open space would result in beneficial impacts on visitor use and experience.

Under Alternative 2, the landscape of the Memorial would offer office workers from nearby buildings a greener landscape. Trees would provide more shade than the current conditions at the site.

The entrances would limit access to Independence and Maryland Avenues, 4th and 6th Streets, and the LBJ Promenade. Under Alternative 2, the entrances to the Memorial would be more defined than in Alternative 1; visitors to the site could directly enter the site from most directions. Along 4th Street, two paths would extend from the street into the site. From 6th Street, the main point of entry would be the Maryland Avenue cartway, which would be visible through a paved pedestrian corridor. From Independence Avenue, the main point of entry to the Memorial would be its intersection with the Maryland Avenue cartway at the northeast corner of the site. A less formal entry point would be a path from Independence Avenue at the northwest portion of the site. Bisecting the site, the observed Maryland Avenue cartway would also provide pedestrian access. Access from the LBJ Building would predominantly be from

stairs and a ramp at the LBJ Promenade leading down to the Memorial. The LBJ Promenade would connect to 6th Street at the same grade, while it would connect to 4th Street, which is lower, by stairs and a ramp, in compliance with the Architectural Barriers Act.

Alternative 2 would continue to offer signalized crosswalks at the intersections of Independence Avenue with 4th and 6th Streets, and Maryland Avenue's intersection with 6th Street. Unlike Alternative 1, Alternative 2 would close Maryland Avenue to vehicular access. This would provide a calmer, more contemplative experience in which to reflect upon President Eisenhower. Additionally, it would increase pedestrian safety by removing the potential hazards of an open roadway through the site. The adjacent roads have sidewalks and signalized intersections to facilitate safe pedestrian crossing. Bicycle racks would be installed at the Memorial. Additional pedestrian safety and bicycle amenities would result in beneficial impacts.

As part of Alternative 2, the permitted community gardens would be removed. The exercise course and equipment would also be removed. As a result of the removal of the community gardens and exercise course, visitors would be required to go elsewhere for these activities. This would result in moderate adverse impacts on visitor use and experience for this particular user groups.

Like Alternative 1, Alternative 2's lighting would primarily focus on the Memorial feature; additional lighting would be used to illuminate pedestrian pathways, seating areas, and handrails. By providing well-lit pathways, visitors would be able to navigate the site safely at night. The Memorial design does not offer extensive shelter from the elements, except for the temporary shelter from sun and rain provided by the canopies attached to relief blocks, in keeping with the Memorial's scale of visitation.

Alternative 2 would temporarily disrupt site use during construction. During construction, existing amenities, such as seating, would be removed. Additionally, the roadways, plaza, and existing vegetated areas would be disturbed and removed during the construction process. Visitors would be prohibited from entering during this period, resulting in moderate short-term impacts.

Cumulative Impacts

The cumulative projects and their impacts would be the same as those described in Alternative 1. Alternative 2 would result in short-term moderate impacts and long-term beneficial impacts on visitor use and experience. When combined with cumulative projects, Alternative 2 would result in short-term minor adverse and long-term beneficial cumulative impacts on vegetation.

Mitigation

In order to minimize impacts to visitors during construction, NPS would provide information regarding construction on its NAMA website and distribution lists. This would ensure that visitors understand the changes in use that would occur at the site as a result of the Memorial construction.

Conclusion

Under Alternative 2, visitors to the site would have the opportunity to learn about President Eisenhower in a quiet and contemplative environment without the distraction of cars passing through

Maryland Avenue. Alternative 2 would provide another cultural attraction to visitors at the National Mall, as well as offer a greener landscaped gathering space. Alternative 2 would provide pedestrian connections and bicycle racks. The promenade would offer a respite area for nearby office workers. All of these amenities would result in beneficial impacts. In contrast, the removal of community gardens and the exercise course would result in moderate adverse impacts. Alternative 2 would result in short-term moderate adverse impacts during construction due to closure of the site. Although there would be long-term moderate adverse impacts to a relatively small number of visitors as a result of some amenities being removed, the long-term impacts on visitor use and experience would be beneficial. Cumulatively, Alternative 2 would result in short-term moderate adverse impacts and long-term beneficial impacts on visitor use and experience.

Visitor Use and Experience Impacts of Alternative 3

Alternative 3 would result in very similar visitor use and experience. Somewhat similar to Alternatives 1 and 2, Alternative 3 would provide a central Memorial plaza area with built elements and trees to create a quiet gathering space within a park setting in which users would contemplate Eisenhower's accomplishments. Alternative 3 would be expected to receive the same number of visitors to the Memorial as Alternatives 1 and 2 and would help attract additional visitors to other nearby memorials, museums, and sites in the National Mall area. The same level of amenities, such as restroom facilities and a book sales area, would be provided in Alternative 3.

Under Alternative 3, the Memorial landscape would offer office workers from nearby buildings a greener landscape than Alternatives 1 and 2. Trees would provide more shade than the current conditions at the site. Additional seating would be incorporated into the landscape design. This seating would be partially shaded by trees, providing visitors respite from the sun.

Under Alternative 3, the entrances to the Memorial would be from clearly identifiable paths; although visitors to the site could directly enter the site from most directions. From 4th Street, a paved connection to the Memorial would be located mid-block, near the restrooms and book sales area. From 6th Street the main point of entry would be a paved path north of the Maryland Avenue cartway. From Independence Avenue, the main points of entry to the Memorial would be from two paved pathways leading into the central Memorial area. Bisecting the site, the observed Maryland Avenue cartway would also provide informal pedestrian access. Access from the LBJ Building would be predominantly from the

stairs and a ramp at the LBJ Promenade leading down to the Memorial. The LBJ Promenade would connect to 6th Street at the same grade. It would connect to 4th Street, which is lower, by stairs and a ramp, in compliance with the Architectural Barriers Act.

Alternative 3 would continue to offer signalized crosswalks at the intersections of Independence Avenue with 4th and 6th Streets, and Maryland Avenue's intersection with 6th Street. Alternative 3 would close Maryland Avenue to vehicular access. This would provide a calmer, more contemplative experience in which to reflect upon President Eisenhower. The adjacent roads have sidewalks and signalized intersections to facilitate safe pedestrian crossing. Bicycle racks would be installed at the Memorial. These pedestrian safety and bicycle amenities would result in beneficial impacts.

Under Alternative 3, although lighting would primarily focus on the Memorial features, additional lighting would be used to illuminate pedestrian pathways, seating areas, and handrails. The relief blocks, tapestries, and planter areas would be lit, making them clearly visible to visitors. Wherever seating areas or handrails occur, pedestrian lighting would be used to provide visible pathways. Additional lighting would be distributed throughout the site to provide illumination to areas where memorial- or seating-based lighting would not occur. These would include areas of the LBJ Building. By providing well-lit pathways, visitors would be able to navigate the site safely at night. The Memorial design does not offer extensive shelter from the elements, except for the temporary shelter from sun and rain provided by canopies attached to columns along the LBJ Promenade, in keeping with the Memorial's scale of visitation.

As part of Alternative 3, the permitted community gardens would be removed. The exercise course and equipment would also be removed. As a result of the removal of the community gardens and exercise course, visitors would be required to go elsewhere for these activities. This would result in moderate adverse impacts on visitor use and experience for these particular user groups.

Alternative 3 would temporarily disrupt site use during construction. During construction, existing amenities, such as seating, would be removed. Additionally, the roadways, plaza, and existing vegetated areas would be disturbed and removed during the construction process. Visitors would be prohibited from entering during this period, resulting in short-term moderate adverse impacts.

Cumulative Impacts

Under Alternative 3, the cumulative projects and their impacts would be the same as those described in Alternatives 1 and 2. Alternative 3 would result in short-term moderate impacts and long-term beneficial impacts on visitor use and experience. When combined with cumulative projects, Alternative 3 would result in short-term minor adverse long-term beneficial cumulative impacts on vegetation.

Conclusion

Under Alternative 3, visitors to the site would have the opportunity to learn about President Eisenhower in a quiet and contemplative environment, without the distraction of cars passing through on Maryland Avenue. Alternative 3 would provide another cultural attraction to visitors at the National Mall, as well as offer a greener

landscaped gathering space. Alternative three would include pedestrian connections and bicycle racks. The promenade would offer a respite area for nearby office workers. All of these amenities would result in beneficial impacts. In contrast, the removal of community gardens and the exercise course would result in moderate adverse impacts. Alternative 3 would result in short-term moderate adverse impacts due to construction. Although there would be some long-term moderate adverse impacts to a relatively small number of visitors as a result of some amenities being removed, the long-term impacts on visitor use and experience would be beneficial. Alternative 3 would result in short-term moderate adverse impacts and long-term beneficial cumulative impacts on visitor use and experience.

4.9 WATER RESOURCES

Methodology and Assumptions

The NPS Management Policies (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). A water quality standard defines the water quality goals of a given water body by designating uses to be made of the water, setting minimum criteria to protect the uses, and preventing degradation of water quality through anti-degradation provisions. The anti-degradation policy is only one portion of a water quality standard. Part of this policy (40 CFR 131.12(a)[2]) strives to maintain water quality at existing levels if it is already better than the minimum criteria. Anti-degradation should not be interpreted to mean that "no degradation" can or will occur, as even in the most pristine waters, degradation may be allowed for certain pollutants as long as it is temporary and short-term.

This analysis assumes that the non-vegetated areas proposed in the concept plans for the site would be covered by impervious surfaces. Once more detailed plans are finalized, certain non-vegetated elements, such as pathways, may ultimately consist of pervious material. This would result in less impervious surface than is described below.

Study Area

The issue of impervious surfaces and water infiltration is focused on the project site; however, the study area for water resources is the Chesapeake Watershed.

Impact Thresholds

The following thresholds were used to determine the magnitude of impacts on water resources:

- *Negligible.* Impacts (chemical, physical, or biological) would not be detectable, would be within water quality standards or criteria, and would be within historical or desired water quality conditions. All permit requirements would be met. Impacts on water or wastewater treatment facilities would not be detectable.
- *Minor.* Impacts (chemical, physical, or biological) would be detectable but would be within water quality standards or criteria and within historical or desired water quality conditions. All permit requirements would be met. Impacts on water or wastewater treatment facilities would be detectable, but would not affect or disrupt plant operations or water demands. Mitigation, if needed, would be simple and successful.
- *Moderate.* Impacts (chemical, physical, or biological) would be detectable but would be at or within water quality standards or criteria; however, historical baseline or desired water quality conditions would be temporarily altered. Necessary permits could be obtained and requirements would be met most of the time. Impacts on water or wastewater treatment facilities would be detectable, and could infrequently affect or disrupt plant operations or water demands from other customers. Mitigation measures to offset potential adverse impacts could be extensive, but would be successful.
- *Major.* Impacts (chemical, physical, or biological) would be detectable and would be frequently altered from the

historical baseline or desired water quality conditions and/or chemical, physical, or biological water quality standards or criteria would temporarily be slightly and singularly exceeded. There would be substantial difficulty obtaining permits or meeting permit requirements. Necessary permits could be obtained and requirements would be met some of the time. Impacts on water or wastewater treatment facilities would be detectable, and would frequently affect or disrupt plant operations or water demands from other customers. Mitigation measures to offset potential adverse impacts would be extensive and their success could not be guaranteed.

- *Duration.* Short-term impacts would take less than one year to recover after the disturbance or change occurs; long-term impacts would take longer than one year to recover after the disturbance or change occurs.

Water Resources Impacts of No Action Alternative

Stormwater runoff is precipitation that does not soak into the ground, but instead flows over the land's hard, paved or saturated surface into the nearest water body. It can affect the water quality, by carrying pollutants to the surface water into which it flows.

The No Action Alternative would not change the existing stormwater management conditions. The existing amount of impervious surface area, which is 3.27 acres (79%) of the 4.17-acre site, would remain. Stormwater runoff would continue to be collected through curbside drains, or by trench drains in the plaza, that connect to the District's pipe drain system. Existing pervious surfaces on the site, such as tree boxes and grass areas would continue to absorb water at their respective varying rates. In addition, the No Action Alternative would not change the existing groundwater conditions of the site. No construction activities would occur that would displace ground water or affect groundwater penetration. The continuation of existing stormwater management would result in long-term negligible adverse impacts on water resources.

No soils would be disturbed, minimizing potential soil erosion and sedimentation during stormwater events. The site would remain relatively level.

Cumulative

The Mary E. Switzer Building and FOB 8 improvements would reduce the amount of impervious surfaces at those sites, which would reduce the amount of stormwater runoff. These projects would incorporate low-impact design techniques to minimize runoff, resulting in long-term beneficial impacts on water resources.

The construction of these projects would result in short-term minor adverse impacts on water resources due to soil disturbance and the increased potential for sediment in stormwater runoff.

As stated above, the No Action Alternative would result in long-term negligible adverse impacts on water resources. When combined with the short-term minor adverse impacts and long-term beneficial impacts on water resources, the No Action Alternative would result in long-term beneficial cumulative effects on water resources. Construction activity resulting from these cumulative actions would result in short-term minor adverse cumulative impacts on water resources.

Conclusion

The No Action Alternative would not change the existing stormwater management or groundwater conditions, alter the amount of impervious surfaces, or disturb soils on the project site. Pollutants from roadways would continue to contaminate stormwater runoff from the site, resulting in long-term negligible adverse impacts. When combined with cumulative projects, the No Action Alternative would result in short-term minor adverse cumulative impacts to water resources, and long-term beneficial cumulative impacts to water resources.

Water Resources Impacts of Alternative 1

Alternative 1 would alter water resource conditions at the site by adding approximately 0.06 acres of impermeable surface, totaling 3.33 acres, which would cover approximately 80% of the site. This would be a result from the realignment of Maryland Avenue and the other paved surfaces within the site, including the hardscape elements within the central portion of the site. This change would produce a minimal increase in stormwater runoff, resulting in negligible impacts on water quality.

In accordance with Executive Order 13514 DDOE requires more stringent provisions for water quality treatment for all impervious areas generated by project design, regardless of the extent of existing impervious conditions. Similarly, as a result of the Energy Independence and Security Act of 2007(EISA), federal projects of 5,000 square feet or more must maintain or return to pre-development hydrological conditions.

The stormwater control methods described below would meet the pre-development requirements for EISA and DDOE. The grade of the site's paved perimeter, which had previously been sidewalk, would drain to the surrounding streets, and use DDOT/DC Water water quality catch basins/inlets to treat those areas. Curbs would also contain breaks at tree wells, allowing stormwater runoff from the street to enter the tree well and filter through the soil. Because only the perimeter area of the site would drain into existing facilities, the amount of stormwater quantity addressed by the existing facilities would decline, resulting in long-term negligible adverse impacts.

The interior portions of the site would drain toward on-site stormwater management systems. Within the Eisenhower

Memorial, a stormwater retention facility would be installed below ground. Stormwater would be collected and would reach the vault via interior storm drains and inlets, or vaults. This collected stormwater would then be re-used for on-site landscape irrigation and/or for toilet flushing.

The site is currently relatively flat, although there are slight changes in elevation from the sidewalk to the building entrances; these elevations would remain the same. Although the Alternative 1 would incorporate slopes to direct stormwater runoff, the overall topography of the site would change little. The existing low velocities of stormwater flow would continue, resulting in minimal conveyance of sediment. These low velocities would pose a minor potential for conveyance of sediment into the stormwater collection system, resulting in a long-term negligible adverse impact.

Construction activities would cause temporary soil disturbance through the removal and replacement of sidewalks, plazas, and vegetation, thus exposing soil under the paved areas and vegetation. The exposed soils would potentially be subject to erosion due to stormwater runoff. However, the potential erosion would be temporary, as the disturbance of soil upon the completion of the project would be minimized through mitigation. This would result in short-term minor adverse impacts to water resources.

Based on the results of a 2010 geotechnical study at the site, the water table is expected to be between 21 and 28 feet below grade (AECOM, 2010a). Excavation for the Memorial is expected to be above the water table. However, the installation of some features, such as the columns, would reach the water table. Temporary de-watering of the site would be necessary, pumping groundwater encountered from construction using a sump pit or a temporary pumping station, and would be limited in scope.

Mitigation

In order to address the potential erosion caused during construction, an erosion and sedimentation control plan and a stormwater management plan should be prepared. An erosion and sedimentation control plan includes measures to prevent erosion of cleared areas and the transport of soil and sediment. The stormwater management plan would address stormwater runoff and potential pollutant discharge. Implementation of mitigation measures specified in the sedimentation control plan and the stormwater management plan would avoid or minimize impacts on water resources.

Cumulative Impact

The cumulative projects and their affects would be the same as those described in the No Action Alternative. As stated above, Alternative 1 would result in short-term minor adverse impacts and long-term negligible adverse impacts on water resources. When combined with the short-term minor adverse impacts and long-term beneficial impacts on water resources, Alternative 1 would result in long-term beneficial cumulative effects on water resources. Construction activity resulting from these cumulative actions would result in short-term minor adverse cumulative impacts on water resources.

Conclusion

Alternative 1 would increase the impervious surface area from 79% to 80%. The amount of pervious surface available for groundwater

to infiltrate would decrease slightly. Stormwater from the sidewalk area would drain into existing stormwater inlets, resulting in a decrease of the overall amount of stormwater entering the existing DC Water system. The interior portion of the project site would slope to drain into on-site stormwater storage facilities that would be installed underground. Construction activities may include de-watering, if groundwater is encountered. However, given the limited range of such activities, they would likely have a short-term minor impact on groundwater. Stormwater could indirectly affect soils during site construction. Therefore, Alternative 1 would result in a short-term minor adverse impact on water resources, and a long-term negligible adverse impact on water resources. When combined with cumulative projects, Alternative 1 would result in short-term minor adverse cumulative impacts to water resources, and long-term negligible adverse cumulative impacts to water resources.

Water Resources Impacts of Alternative 2

Alternative 2 would change the water resource conditions of the site by removing approximately 0.61 acres of impermeable surface, primarily through the removal of the paved plaza and Maryland Avenue. As a result, impervious surfaces would cover approximately 64% of the site. The change in impervious surface would cause a decline in stormwater runoff.

Like Alternative 1, Alternative 2 would address water quality treatment for the existing impervious areas, as well as those generated by the Memorial design concepts, regardless of the extent of existing impervious conditions. Like Alternative 1, Alternative 2 would drain the interior portions of the Memorial toward on-site stormwater management systems. This collected stormwater would then be re-used for landscape irrigation and/or for toilet flushing.

Alternative 2 would have limited changes in topography, and therefore a minor potential for conveyance of sediment into the stormwater collection system, resulting in a long-term negligible adverse impact.

Like Alternative 1, construction activities under Alternative 2 would cause temporary soil disturbance through the removal and replacement of sidewalks, plazas, and vegetation, thus exposing soil under the paved areas and vegetation. However, this effect would be temporary and largely mitigated. The disturbance of soil upon project completion would be limited.

If construction activities reach the water table, temporary de-watering of the site would be necessary. Temporary de-watering would pump groundwater encountered from construction using a sump pit or a temporary pumping station, and would be limited in

scope. Therefore, the short-term impacts of Alternative 2 on water resources would be minor and adverse.

Mitigation

The mitigation would be the same as Alternative 1.

Cumulative Impact

The cumulative projects and their affects would be the same as those described in the No Action Alternative. As stated above, Alternative 2 would result in short-term minor adverse impact and long-term negligible adverse impacts on water resources. Cumulatively, Alternative 2 would result in short-term minor adverse effects and long-term negligible adverse effects on water resources.

Conclusion

Alternative 2 would reduce the impervious surface area of existing conditions from 79% to 64%. This would reduce the amount of stormwater on-site. The interior portion of the site would slope to drain internally to on-site stormwater storage facilities, decreasing the amount of stormwater entering the DC water system. Stormwater could indirectly affect soils during site construction. De-watering would be used if the water table is encountered during construction. Therefore, Alternative 2 would result in a short-term, minor adverse impacts on water resources and long-term negligible adverse on water resources. When combined with cumulative projects, Alternative 2 would result in short-term, minor adverse impacts and long-term negligible adverse on water resources.

Water Resources Impacts of Alternative 3

Alternative 3 would change the stormwater management conditions of the site by removing approximately 1.07 acres of impermeable surface, primarily from the removal of the paved plaza and Maryland Avenue as a through roadway. As a result, impervious surfaces would cover approximately 53% of the site, or 2.2 acres. This change would result in moderate decrease in stormwater runoff, resulting in long-term negligible adverse impacts.

Like Alternatives 1 and 2, Alternative 3 would address water quality treatment for the existing impervious areas, as well as those generated by the project design, regardless of the extent of existing impervious conditions. Interior portions of the Memorial would drain toward on-site stormwater management systems. Upon treatment, this water would then be re-used for landscape irrigation and/or as gray-water for toilet flushing.

Like Alternatives 1 and 2, Alternative 3 would have limited changes in topography and therefore a minor potential for sediment runoff into the stormwater collection system, resulting in long-term negligible adverse impacts.

Like Alternative 1 and 2, construction activities under Alternative 3 would cause temporary soil disturbance through the removal and replacement of sidewalks, plazas, and vegetation, thus exposing soil under the paved areas and vegetation. However, this would be temporary, as the disturbance of soil upon the completion of the project would be limited. If construction activities reach the water table, de-watering of the site would be necessary. This would pump groundwater encountered from construction using a sump pit or a temporary pumping station, and would be limited in scope.

Therefore, the short-term impacts of Alternative 3 would be minor and adverse.

Mitigation

The mitigation would be the same as Alternatives 1 and 2.

Cumulative Impact

The cumulative projects and their affects would be the same as those described in the No Action Alternative. As stated above, Alternative 3 would result in short-term minor adverse impacts and long-term negligible adverse impacts on water resources. When combined with the short-term minor adverse impacts and long-term beneficial impacts to water resources of the cumulative projects, Alternative 3 would result in long-term negligible adverse cumulative effects on water resources. Construction activity resulting from these cumulative actions would result in short-term minor adverse cumulative impacts on water resources.

Conclusion

Alternative 3 would reduce the impervious surface area from 79% to 58%, which would reduce the amount of stormwater on-site. The interior portion of the site would slope to drain internally to on-site stormwater storage facilities, which would decrease the amount of stormwater from within the Eisenhower Memorial site. Overall, Alternative 3 would result in short-term, minor adverse impacts and long-term negligible adverse impacts on water resources. When combined with cumulative projects, Alternative 3 would result in short-term minor adverse impacts and long-term negligible adverse on water resources.

This page is intentionally left blank

5.0 CONSULTATION AND COORDINATION

This page is intentionally left blank

5.1 AGENCY CONSULTATION AND COORDINATION

Public agencies and individuals were involved in the development of this EA through the public scoping process and the Section 106 consultation process. In February, 2010, a series of meetings were held to acquaint the parties involved with the project and to receive initial thoughts on the design concepts. The first such meeting occurred with the property owners (NPS and GSA); a second meeting followed with the agencies that have responsibility for reviewing the Memorial design, including DC SHPO, CFA, NCPC, and others; and a final meeting was held with a number of District of Columbia agencies, such as DCOP and DDOT, and other interested parties, such as DC Preservation League, ANC 6A, Committee to Save Our Mall, and the American Council on Historic Preservation.

NPS initiated the formal scoping process on April 19, 2010, when NPS distributed letters to cooperating agencies and stakeholders. In addition to mailing these notices, there were also notices included in the Federal Register and on NPS's Planning, Environment, and Public Comment (PEPC) website, which NPS uses to notify the public about NPS activities and actions. The public comment period was closed on May 30, 2010. Comments received during this period were taken into consideration in the development of this EA.

In addition, meetings took place with stakeholders through the coordinated Section 106 and NEPA processes. NPS initiated the Section 106 process by sending a letter to the DC SHPO and to the advisory Council on Historic Preservation on April 12, 2010. The first coordinated Section 106 and NEPA meetings occurred on April 22, 2010. Attendees included representatives from the Smithsonian Institution, NCPC, the Committee for 100, and DC Water; a community gardener; and private citizens. The focus of the meeting was to provide background for the project and to describe the three initial design concepts. A second Section 106 Consulting Parties meeting took place on May 21, 2010. The purpose of this meeting was to: (1) review the design alternatives, (2) present the history of the site and the historic alignments of Maryland Avenue, SW, (3) discuss the historic resources in the area, and (4) determine the Area of Potential Effect. Additional Section 106 Consulting Parties meetings took place on March 30, 2011, June 20, 2011, and August 30, 2011 to review progressions of the design. The Section 106 process is ongoing, and outcomes will be formalized in an MOA. That document will identify measures to be undertaken in order to mitigate adverse effects to cultural resources. It is anticipated that continued consultation with the Consulting Parties would be called for in the MOA.

In addition to the NEPA and Section 106 processes, the design team made several presentations to government bodies and agencies. On April 21, 2010, the design teams presented three preliminary concepts to National Capital Memorials Advisory Commission for review (due to its advisory, rather than approval, capacity, NCMAC is not required to comply with NEPA). An informational presentation was made to CFA on May 20, 2010. NCPC heard an informational presentation on June 3, 2010. At these times, each body provided initial feedback and questions regarding the design concepts. These comments were considered as part of the design process. As the tenant of the neighboring Lyndon Baines Johnson Building, the Department of Education was also briefed on the design concepts in May, 2010.

CFA considered the conceptual plan on January 10, 2011, when it approved the design. NCPC had a reviewed and provided comments

on conceptual designs of the three alternatives contained in the EA. No formal action was taken by NCPC in its review of the concept designs.

The following federal and district agencies heard informational presentations of the three designs and provided initial feedback:

- U.S. Department of the Interior-NPS,
- General Services Administration (GSA),
- U.S. Department of Education,
- U.S. Commission on Fine Arts (CFA),
- National Capital Memorial Advisory Commission (NCMAC),
- National Capital Planning Commission (NCPC),
- District of Columbia State Historic Preservation Office, and
- District of Columbia Department of Transportation

Before construction, these bodies will review the final concept. Some of the approvals from NPS, NCMAC, CFA, and NCPC will occur before the NEPA process is completed, while others will occur after the process.

6.0 LIST OF PREPARERS

This page is intentionally left blank

6.1 LIST OF PREPARERS

AECOM (EA Preparers)

Alan Harwood, AICP
Project Director/Senior Environmental Planner

Claire Sale, AICP
Project Manager/Environmental Planner

Stephanie Dyer-Carroll, AICP
Cultural Resource Specialist

Christy Dolan, RPA
Cultural Resource Specialist

Heather Gibson, Ph.D., RPA
Cultural Resource Specialist

Melissa Hatcher
Senior Environmental Planner

Judith Charles
Senior Environmental Planner

Susan Bemis
Planner

Edward Switzer, LEED AP
Environmental Planner

Cary Simmons
Landscape Architect

Mike Jelen, PE
Senior Transportation Manager

Ian Bricknell, PE, C. Eng
Senior Transportation Engineer

Nick Dais, PE, PTOE
Senior Traffic Engineer

Sean Rousseau, PE
Traffic Engineer

Joseph Huesmann, PE
Senior Civil Engineer

This page is intentionally left blank

7.0 GLOSSARY AND ACRONYMS

This page is intentionally left blank

7.1 GLOSSARY OF TERMS

Affected Environment — The existing environmental conditions to be affected by a proposed action and alternatives at the time the project is implemented.

Alignment —The arrangement or relationship of several disparate configuration components along a common vertical or horizontal line or edge.

Best Management Practices (BMP) — 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 (CEQ) — 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 Resources — Archaeological, historic, or visual resources including 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.

Enabling Legislation — The law that gives appropriate officials the authority to implement or enforce regulations.

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.

Environmental Assessment (EA) — 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) or would not significantly affect the environment and thus conclude with a FONSI.

Environmental Impact Statement (EIS) — A report that documents the information required to evaluate the environmental impact of a project. It informs decision makers and the public of the reasonable alternatives that would avoid or minimize adverse impacts or enhance the quality of the environment.

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.

Finding of No Significant Impact (FONSI) — A document prepared by a federal agency showing why a proposed action would not have a significant impact on the environment and thus would not require preparation of an

Environmental Impact Statement (EIS). A FONSI is based on the results of an Environmental Assessment (EA).

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.

Mall — The area west of the United States Capitol between Madison and Jefferson Drives from 1st to 14th streets NW/SW. The east end of the Mall from 1st to 3rd streets NW/SW between Pennsylvania Avenue and Maryland Avenue is also known as Union Square. The Mall is characterized by the east–west stretch of lawn bordered by rows of American elm trees and framed by museums and other cultural facilities.

Massing — The conceptual form of a building that conveys proportion and size.

Monumental Core — The monumental core is the central area of federal Washington that includes the National Mall and the areas immediately beyond it, including the United States Capitol, the White House and President's Park, Pennsylvania Avenue and the Federal Triangle area, East and West Potomac Parks, the Southwest Federal Center, the Northwest Rectangle, Arlington Cemetery, and the Pentagon.

National Environmental Policy Act (NEPA) — The Act as amended, articulates the federal law that mandates protecting the quality of the human and natural 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 that would be less damaging to the environment.

National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.) — The Act that established a program for the preservation of historic properties throughout the nation, and for other purposes.

National Mall — The area comprised of the Mall, the Washington Monument, and West Potomac Park. It is managed by the National Park Service's National Mall & Memorials Parks.

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.

Record of Decision (ROD) — The ROD closes the EIS process. The ROD presents the basis for the decision, summarizing any mitigation measures to be incorporated in the project, and documenting any required section 4(f) approval.

Remediation — The removal of contaminants or pollution from soil, groundwater, sediment, or surface water for the protection of human health and the environment.

Scoping — Scoping, as part of NEPA, requires soliciting public and agency comments on the proposed action and its possible effects; establishing the depth of environmental analysis needed; determining analysis procedures, data needs, and task assignments.

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.

Viewshed — A viewshed includes a total visible area from a particular fixed vantage point.

Vista – A distant or long view, especially one seen through some opening such as an avenue or corridor, street wall, or the trees that frame an avenue or corridor; a site offering such a view.

Wetlands — The U.S. Army Corps of Engineers and the Environmental Protection Agency jointly define wetlands as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands generally include swamps, marshes, bogs, and similar areas.

7.2 ACRONYMS

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effect
ADT	Average Daily Traffic
CFR	Code of Federal Regulations
CFA	Committee of Fine Arts
CEQ	Council on Environmental Quality
CWA	Commemorative Works Act
DDOE	District Department of the Environment
DCOP	District of Columbia Office of Planning
DEd	U.S. Department of Education
DDOT	District Department of Transportation
EA	Environmental Assessment
EJ	Environmental Justice
EMC	Dwight D. Eisenhower Memorial Commission
EPA	Environmental Protection Agency
FOB	Federal Office Building
FONSI	Finding of No Significant Impact
FIRM	Flood Insurance Rate Map
GSA	U.S. General Services Administration
HHS	U.S. Department of Health and Human Services
LOS	Level of Service
NAMA	National Mall & Memorial Parks
NASM	National Air and Space Museum
NCMAC	National Capital Memorial Advisory Commission
NCPC	National Capital Planning Commission
NEPA	National Environmental Policy Act
NMAAHC	National Museum of African American History and Culture
NMAI	National Museum of the American Indian
NHPA	National Historic Preservation Act
NHRP	National Register of Historic Places
NAGPRA	Native American Graves Protection and Repatriation Act
NPS	National Park Service
PEPC	Planning, Environment, and Public Comment website
PA	Programmatic Agreement
SHPO	State Historic Preservation Office
SOF	Statement of Findings
TCP	Traditional Cultural Property
USFWS	United States Fish and Wildlife Service
VOA	Voice of America
VRE	Virginia Railway Express
WMATA	Washington Metropolitan Area Transit Authority

8.0 REFERENCES

This page is intentionally left blank

8.1 REFERENCES

AECOM. 2010a. *Geotechnical Engineering Report: Eisenhower Memorial Project.* Arlington, VA.

AECOM. 2010b. *Environmental Hazards Report: Eisenhower Memorial Project.* Arlington, VA.

AECOM. 2010c. *Maryland Avenue Closure Parking Revenue Study: Eisenhower Memorial Project.* Arlington, VA.

AECOM. 2010. d. *Maryland Avenue Closure Analysis/Traffic Study Final Report: Eisenhower Memorial Project.* Arlington, VA.

Benton, John F., Associate Director for Management and Public Programs, NASM, 2011. Personal communication with Daniel Feil, Executive Architect, EMC, January 5.

Casey Trees Foundation. 2002, 2005, and 2006. Tree Inventory, http://www.caseytrees.org/geographic/, accessed May 2010. Washington, DC.

Dafin, Joseph G., Fire Protection Engineer, GSA NCR. 2006. Personal communication with Daniel Feil, Executive Architect, EMC, August 3.

DC Water Resources Research Center (DC WRRC). 1993. *Urban Land Use Activities and the Ground Water: A Background Survey of the District of Columbia.* Washington, DC.

District of Columbia Office of Planning (DCOP). 2006. *Comprehensive Plan for the National Capital: District Elements.* Washington, DC.

Earth Tech, Inc. 2005. *Preliminary Underground Conditions Assessment, Utilities and Soils Investigation, Traffic Circulation and Parking Assessment, Eisenhower Memorial Site Study.* Alexandria, VA.

Earth Tech, Inc. 2006. *Draft Traffic Impact Study, Eisenhower Memorial Site Study.* Alexandria, VA.

Eisenhower Memorial Commission (EMC). 2006. *Site Evaluation, Preferred Site.* Washington, DC.

EMC. 2005. *Site Selection Report*. Washington, DC.

Federal Emergency Management Agency (FEMA). 2010 Flood Insurance Rate Map. Washington, DC, Community Panel Number 1100010019C); Effective date September, 2010.

General Services Administration (GSA). 2010. *Mary E. Switzer Building Site Improvements Finding of No Significant Impact and Environmental Assessment.* Washington, DC.

Klem, Daniel, Professor of Ornithology and Conservation Biology, Muhlenberg College,. 2011. Personal communication with Kristen Murphy, NEPA Specialist, NPS, September 6.

Koppie, Craig, Endangered Species Biologist, NPS. 2011. Personal communication with Scott Bates, Regional Wildlife Biologist, NPS, September 6.

National Highway Research Board. 1971. *Parking Principles.* Highway Research Board Special Report Issue Number: 125. Washington, DC.

National Park Service (NPS), 2011. NPS Public Use Statistics Office. http://www.nature.nps.gov/stats/viewReport.cfm, accessed January, 2011. Washington, DC.

NPS, 2010. *National Mall Plan/ Environmental Impact Statement.* Washington, DC.

NPS, 2006. *NPS Management Policies.* Washington, DC.

NPS, 2006a. *Director's Order 12: Conservation Planning, Environmental Impact Analysis and Decision-making*. Washington, DC.

NPS, 2003. *DC Visitor Transportation Survey*. Washington, DC.

NPS and Disabled Veterans Memorial Foundation. 2005. *Proposed American Veterans Disabled for Life Memorial Environmental Assessment.* Washington, DC.

NPS and Eisenhower Memorial Commission. 2006. *Proposed Dwight D. Eisenhower Memorial Site Selection Environmental Assessment.* Washington, DC.

NPS, Advisory Council on Historic Preservation, and National Council of State Historic Preservation Officers, 2008. *Programmatic Agreement among the National Park Service, Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the NHPA*. Washington, DC.

National Capital Planning Commission (NCPC). 1997. *Extending the Legacy: Planning America's Capital for the 21st Century.* Washington, DC.

NCPC. 2001. *Memorials and Museums Master Plan*. Washington, DC.

NCPC. 2004. *Comprehensive Plan for the National Capital: Federal Elements*. Washington, DC.

NCPC. 2009. *Monumental Core Framework Plan: Connecting New Destinations with the National Mall.* Washington, DC.

NCPC. 2010. *Capital Space: A Park System for the Nation's Capital.* Washington, DC.

Smithsonian Institution, Office of Design and Construction. 1993. *Finding of No Significant Impact and Environmental Assessment for the National Museum of the American Indian on the National Mall.* Washington, DC.

Smithsonian Institution. 2011. http://newsdesk.si.edu/about/stats, accessed August 1, 2011. Washington, DC.

APPENDIX A

DRAFT IMPAIRMENT DETERMINATION

This page is intentionally left blank

APPENDIX A: DRAFT IMPAIRMENT DETERMINATION

NPS Management Policies 2006, Section 1.7, explains the prohibition on impairment of park resources and values: "While Congress has given the Service the management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the Park Service must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the Nation Park Service. It ensures that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them."

According to NPS *Management Policies, 2006,* Section 1.4.5, *What Constitutes impairment of Park Resources and Values,* impairment is "an impact that, in the professional judgment of the responsible National Park Service Manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values." It also states that an impact to any park resource or value may, but does not necessarily , constitute impairment. An impact would be more likely to constitute impairment to the extent that iat affects a resource or value show conservation is

- necessary to fulfill specific purposes identified in the park's establishing legislation;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified in the park's management plan or other relevant NPS planning documents as being of significance.

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated.

Per section 1.4.6 of *Management Policies 2006*, park resources and values that may be impaired include:

- The park's scenery, natural and historic objects, and wildlife, and the processes and condition that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes an smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structure, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that ca n e done without impairing them;
- the park's role in contributing g to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Section 1.4.7 of Management Policies 2006 states, "[i]n making a determination of whether there would be an impairment, an NPS

decision make must use his or her professional judgment. This means that the decision-maker must consider any environmental assessments or environmental impact statements required by the National Environmental Policy Act of 1969 (NEPA); consultations required under Section 106 of the National Historic Preservation Act (NHPA); relevant scientific and scholarly studies; advice or insights offered by subject matter experts and others who have relevant knowledge or experience; and the results of civic engagement and public involvement activities relating to the decision.

NPS Management Policies 2006 further define "professional judgment" as "a decision or opinion that is shaped by study and analysis and full consideration of all the relevant facts, and that takes into account the decision-maker's education, training, and experience; advice or insights offered by subject matter experts and others who have relevant knowledge and experience; good science and scholarship; and, whenever appropriate, the results of civic engagement and public involvement activities relation to the decision."

As described in the EA, implementation of the NPS preferred alternative will not result in impairment of park resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's management plan or other relevant NPS planning documents as being of significance.

This determination on impairment has been prepared for the preferred alternative described in Chapter 2 of this EA. An impairment determination is made for all resource impact topics analyzed for the Preferred Alternative. An impairment determination is not made for visitor use and experience or Park management and operations because impairment findings relate back to park resources and values, and these impact areas are not generally considered to be park resources or values according to the Organic Act, and cannot be impaired in the same way that an action can impair park resources and values.

The NPS has determined that implementation of the Preferred Alternative will not result in impairment of park resources and values of the National Mall and Memorial Parks. In reaching this determination, the design of the Eisenhower Memorial EA was reviewed to reaffirm the Park's purpose and significance, resource values, and resource management goals and desired future conditions. Based on a thorough analysis of the environmental impacts described in this EA, the public comments received, and the application of the provisions of the NPS Management Policies 2006, the NPS concluded that the implementation of the Preferred Alternative will not result in impairment of any of the resources and values of the National Mall and Memorial Parks. Although the action alternative entails physical changes and would add a new memorial to the existing the National Mall and Memorial Parks, the Preferred Alternative would have beneficial impacts to the project area's natural resources, would not alter historic fabric, and would be in keeping with NPS management policies and goals.

Cultural Resources

Archeology

Overall, the Preferred Alternative would not result in an impairment archeology. Given the proximity of the project site to Tiber, Goose, and St. James Creeks, prehistoric use of the area is likely. However,

intensive urban development may have already impacted such sites and features. Given the historic development on the project site, it is possible that sub-surface features associated with the mid-19th to mid-20th century residential and commercial uses remain capped below fill in at the Memorial site. Archeological resources at the site provide information about the history of the area, and are therefore necessary to the purpose and cultural integrity of the park. The Preferred Alternative would involve up to 10 feet of excavation for the installation of the blocks, reliefs, and large trees, as well as up to 60 feet of disturbance for the columns. To ensure the protection of archeological resources and minimize any potential adverse impacts, NPS is pursuing a phased approach to the identification and evaluation of archeological resources beginning with a Phase 1A study and geoarcheological consultation focusing on the areas of higher sensitivity for archeological resources, and applying the criteria of adverse effect. All work would follow the "Guidelines for Archaeological Investigations in the District of Columbia" (1998, as amended), the "Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation" (1983), and NPS "Director's Order 28: Cultural Resource Management" (1998).

Historic Structures and Districts

There would be no impairment to any historic structures or districts as a result of implementing the Preferred Alternative. The Memorial site is bordered and bisected by streets identified in the historic L'Enfant Plan. The National Mall, a cultural landscape, lies to the north of the site. The Orville and Wilbur Wright Buildings and the Wilbur Cohen Building border the site, the Hubert Humphrey Building, the U.S. Botanical Garden, and the U.S. Capitol, all of which are listed, eligible, or likely to be eligible for listing in the future in the National Register of Historic Places, have visual connections to the site. The National Mall is under the stewardship of the NPS, and represents a physical expression of the L'Enfant Plan, and is therefore necessary to fulfill the park's purpose. The National Mall is a material element of the cultural integrity and enjoyment of the park.

Overall, the Preferred Alternative would result in beneficial impacts on the L'Enfant and McMillan Plans from the reestablishment of the historic alignment of Maryland Avenue and the removal of parking from the roadway, and moderate adverse impacts due to the placement of built forms at the edge of the Maryland Avenue cartway. In addition, there would be minor indirect visual impacts on the adjacent Mall buildings, the Wilbur and Orville Wright Buildings, the Wilbur Cohen Building, and the U.S. Capitol Building. Since the Memorial would not noticeably alter the visual context of the U.S. Botanic Garden, impacts to this resource would be negligible. Because it would result in minor to moderate adverse impacts, as well as beneficial impacts, to cultural resources. These impacts however, are not necessary to fulfill specific purposes identified in the park's establishing legislation, nor are key to the natural or cultural integrity of the park or would inhibit opportunities for enjoyment of the park..

Cultural Landscapes

The Mall was a key component of the L'Enfant and McMillan plans for the city. In 2006, a cultural landscape inventory was completed for the Mall which identified contributing features and concluded that the Mall clearly has national significance. This resource is fundamental to the purpose of the Park, as NPS is charged with preserving and managing the Mall, and is a key element in the parks cultural integrity and the visitor experience. A cultural landscape inventory was also conducted for Union Square, which functions as

an intermediate landscape between the central landscape of the Mall and the U.S. Capitol Grounds

The Preferred Alternative would include ten columns and three tapestries that would reach an average of 78 in height and would be highly visible from NASM and the Hirshhorn Museum, but would not be visible from Union Square. The columns would be placed within an existing urban context and would be consistent in height with adjacent buildings, including the LBJ Building to the south. The Preferred Alternative would not result in impairment of park resources because the long-term adverse impacts on these buildings would be indirect and minor.

Visual Resources

Overall, the Preferred Alternative would not result in an impairment of visual resources associated with this area of the park. Two major view corridors that define the site, Maryland Avenue and 4th Street, are recognized as contributing vistas within the National Register nomination for the L'Enfant Plan. Maryland Avenue, which bisects the site, has visual connections to the U.S. Capitol. Other important views and vistas include Independence Avenue and views from the National Mall. The National Mall is under the stewardship of the NPS, and represents a physical expression of the L'Enfant Plan, and is therefore necessary to fulfill the park's purpose. The National Mall is a material element of the cultural integrity and enjoyment of the park.

The Preferred Alternative would result in a long-term moderate adverse impact on the vista northeast on Maryland Avenue due to the framing of the view with built elements; a long-term minor adverse impact to the vistas west on Independence Avenue and north on 4th Street; and a long-term moderate adverse impact on the view southwest from the Mall at 4th Street. There would also be long-term moderate adverse impacts on views to and from the LBJ Building. These impacts however, are not necessary to fulfill specific purposes identified in the park's establishing legislation, nor are key to the natural or cultural integrity of the park or would inhibit opportunities for enjoyment of the park.

Soils

The Preferred Alternative would not result in an impairment of soils. The majority of the Memorial site is currently covered with 8-19 feet of fill material, followed by varying degrees of sand/silty clays, gravel, and sand. Productive soils make up 0.9 acres of the site. Because one of the purposes of NAMA is to preserve, interpret, and manage federal park lands in the national capital, including green spaces, soils are a resource necessary to fulfill the purposes of the park, as they are a key component of a functional green space. As such, they are an element of the opportunity for enjoyment of the park. The Preferred Alternative would decrease the amount of impervious surfaces and improve the soil matrix and drainage at the site, resulting in long-term beneficial impacts to soils in the project area. Although the proposed Memorial would result in soil disturbance and excavation, short-term impacts would only occur during construction and would not harm the long-term integrity of the soils in the project area.

Vegetation

The Preferred Alternative would not result in impairment to vegetation in the project area because the increased vegetation, including increases in the number and quality of the trees, would have long-term beneficial impacts. The total existing vegetated area of the Memorial site is 0.9 acres. The vegetation consists of

landscaped grasses, shrubbery, 44 trees, and community gardens. Because one of the purposes of NAMA is to preserve, interpret, and manage federal park lands in the national capital, including green spaces, vegetation is a resource necessary to fulfill the purposes of the park, as it is a key component of green space. The Preferred Alternative would replace the existing trees with 69 new trees that would be more robust and, in some cases, larger. The total vegetative area of the site would increase to 1.74 acres. The Preferred Alternative would result in the removal of existing vegetation during construction, but these impacts would be short-term and would not harm the long-term viability of vegetation in the project area.

Water Resources

The Preferred Alternative would not result in impairment water resources. There are no permanent bodies of surface water at the site. 79 percent of the site is covered by impervious surfaces. The stormwater runoff, which can carry pollutants from roadways, from the site drains into the combined storm and sanitary sewer system, or directly into the Potomac River. Groundwater has been detected between 21 and 28 feet at the site.

The Preferred Alternative would reduce the impervious surface area from 79% to 47%, which would reduce the amount of stormwater on-site. The interior portion of the site would slope to drain internally to on-site stormwater storage facilities, which would decrease the amount of stormwater runoff from within the Eisenhower Memorial site. Groundwater would be encountered at the site, which would require temporary de-watering of affected areas. Because the Preferred Alternative would result in short-term, minor adverse impacts and long-term negligible adverse impacts on water resources..

This page is intentionally left blank

APPENDIX B

COORDINATION AND CONSULTATION

This page is intentionally left blank

United States Department of the Interior
NATIONAL PARK SERVICE
National Mall & Memorial Parks
900 Ohio Drive, S.W.
Washington, D.C. 20024-2000

D66 (NCR-NAMA)

April 12, 2010

Mr. Reid Nelson
Director
Office of Federal Agency Programs
Advisory Council on Historic Preservation
1100 Pennsylvania Avenue, N.W., Suite 803
Washington, D.C, 20004

Dear Mr. Nelson:

The National Park Service (NPS) has initiated consultation with the District of Columbia State Historic Preservation Officer (DCSHPO) regarding the establishment of a national memorial to Dwight D. Eisenhower, an undertaking which will have an effect upon historic properties under Section 106 of the National Historic Preservation Act.

The NPS and the Eisenhower Memorial Commission (the Commission) propose to establish the memorial on a site located at Maryland and Independence Avenues, and 4th and 6th Streets in southwest Washington, DC. The site includes portions of Reservation 5 adjacent to the National Mall and affords views of the U.S. Capitol Building. Congress authorized the proposed memorial to be "an appropriate permanent memorial to Dwight D. Eisenhower to perpetuate his memory and his contributions to the United States," The National Memorial to Dwight D. Eisenhower is an undertaking, in accordance with 36 CFR 800.3 of the regulations of the Advisory Council on Historic Preservation (ACHP).

The Commission, created in October 1999 by Public Law 106-79, is charged with memorializing Dwight D. Eisenhower's military achievements, presidential accomplishments, and lifetime of public service. Congress directed the Commission to consider and formulate plans for a permanent memorial, "including its nature, design, construction and location."

The establishment of the Eisenhower Memorial was the subject of Section 106 consultation and an environmental assessment (EA) in 2006. The EA resulted in the selection and approval of the site for the memorial. The site is located on land administered by the NPS, the lead federal agency for this project, and on land administered by the General Services Administration (GSA), as well as the District of Columbia.

In accordance with the National Environmental Policy Act (NEPA), the NPS and the Commission are currently preparing an EA on the development of the preferred memorial design. The GSA is a cooperating agency in this process. The NPS and the Commission intend to coordinate Section 106 consultation and review with NEPA per ACHP regulations (36 CFR 800.8).(NEPA). The NPS plans to consult the public per 800.3(e) in public meetings and through our Planning, Environment, and Public Comment (PEPC) website – www.parkplanning/nps.gov. It is anticipated that these outreach efforts will

accommodate both NEPA and the 106 process. The first meeting open to the public will be a public scoping meeting to be held from 6:00 to 8:00 p.m. on Thursday, April 22, 2010 in Room M09, of the Old Post Office Building, 1100 Pennsylvania Avenue N.W., Washington, DC 20004.

Conceptual design for the memorial are in the early stages of development. The Commission's design team, lead by Gehry Partners, intend to explore various concept alternatives, including the potential for closure of a segment of Maryland Avenue to vehicular traffic and the removal of limited structures on the site. The alternative designs will also address the constraints of the site, including adjacent building heights, setbacks from the perimeter streets and the Lyndon Baines Johnson Department of Education Building, and the preservation of the Maryland Avenue view corridor alignment with the U.S. Capitol Building.

The NPS and the Commission acknowledge that construction and operation of the memorial could adversely affect historic resources. Key issues include the alignment of Maryland Avenue as envisioned in the L'Enfant Plan, the Maryland Avenue vista and historic cartway, the historic building lines on Independence Avenue, 4th Street, and 6th Street, the west elevation of the Department of Education Building, and the historic character of the Independence Avenue side of the National Mall.

We have enclosed a working list of consulting parties and a copy of the Area of Potential Effect information prepared in 2006 for your information. Both items are intended as a basis of discussion, subject to modification, so as to expedite the consultation process. We also anticipate that a Phase 1a and, if necessary, a Phase 1b archeological review of the site will be undertaken by the Commission to determine if archeological resources might be impacted by the design and construction of a the proposed alternatives.

At this conceptual design stage, the NPS is not prepared to make a formal determination of effect for the Dwight D. Eisenhower Memorial project, but looks forward to consultation with the (DCSHPO) on this and other steps in the process.

Because of the sensitive nature of the project site, and the potential for adverse effects, we are happy to invite the active participation of the Council in the Section 106 process. Please indicate whether you wish to do so or have any other questions about the undertaking by contacting me or Mark Isaksen, Chief, Resource Management, National Mall and Memorial Parks at (202) 245-4711.

Sincerely,

Superintendent, National Mall and Memorial Parks

Enclosure

cc:
Mr. Reid Nelson
Advisory Council on Historic Preservation

Ms. Nancy Witherell
National Capital Planning Commission

Bcc:
NAMA-Files
NAMA-Chrono
NAMA-Talken-Spaulding
NAMA-Lorenzetti
NAMA-Piltzecker

PWheelock:sab:04-12-10:Dwight D. Eisenhower_SHPO_Nelson

United States Department of the Interior
NATIONAL PARK SERVICE
National Mall & Memorial Parks
900 Ohio Drive, S.W.
Washington, D.C. 20024-2000

D66 (NCR-NAMA)

April 12, 2010

Mr. David Maloney
State Historic Preservation Officer
District of Columbia Office of Planning
2000 14th Street N.W., 4th floor
Washington, DC 20009

Dear Mr. Maloney:

Subject: Section 106 Consultation – National Memorial to Dwight D. Eisenhower

The National Park Service (NPS) wishes to formally initiate consultation with the District of Columbia Historic Preservation Office under Section 106 of the National Historic Preservation Act regarding the establishment of a national memorial to Dwight D. Eisenhower. The NPS and the Eisenhower Memorial Commission (the Commission) propose to establish the memorial on a site located at Maryland and Independence Avenues, and 4th and 6th Streets in southwest Washington, DC. The site includes portions of Reservation 5 adjacent to the National Mall and affords views of the U.S. Capitol Building. Congress authorized the proposed memorial to be "an appropriate permanent memorial to Dwight D. Eisenhower to perpetuate his memory and his contributions to the United States," The National Memorial to Dwight D. Eisenhower is an undertaking, in accordance with 36 CFR 800.3 of the regulations of the Advisory Council on Historic Preservation (ACHP). The NPS is aware of and appreciates your participation in the earlier Section 106 consultation that occurred in 2006 and in concept design reviews already held on the project.

The Commission, created in October 1999 by Public Law 106-79, is charged with memorializing Dwight D. Eisenhower's military achievements, presidential accomplishments, and lifetime of public service. Congress directed the Commission to consider and formulate plans for a permanent memorial, "including its nature, design, construction and location."

The establishment of the Eisenhower Memorial was the subject of Section 106 consultation and an Environmental Assessment (EA) in 2006. The EA resulted in the selection and approval of the site for the memorial. The site is located on land administered by the NPS, the lead federal agency for this project, and on land administered by the General Services Administration (GSA), as well as the District of Columbia.

In accordance with the National Environmental Policy Act (NEPA), the NPS and the Commission are currently preparing an EA on the development of the preferred memorial design. The GSA is a cooperating agency in this process. The NPS and the Commission intend to coordinate Section 106 consultation and review with NEPA per ACHP regulations (36 CFR 800.8).(NEPA). The NPS plans to

consult the public per 800.3(e) in public meetings and through our Planning, Environment, and Public Comment (PEPC) website – www.parkplanning/nps.gov. It is anticipated that these outreach efforts will accommodate both NEPA and the 106 process. The first meeting open to the public will be a public scoping meeting to be held from 6:00 to 8:00 p.m. on Thursday, April 22, 2010 in Room M09, of the Old Post Office Building, 1100 Pennsylvania Avenue N.W., Washington, DC 20004.

Conceptual design for the memorial are in the early stages of development. The Commission's design team, lead by Gehry Partners, intend to explore various concept alternatives, including the potential for closure of a segment of Maryland Avenue to vehicular traffic and the removal of limited structures on the site. The alternative designs will also address the constraints of the site, including adjacent building heights, setbacks from the perimeter streets and the Lyndon Baines Johnson Department of Education Building, and the preservation of the Maryland Avenue view corridor alignment with the U.S. Capitol Building.

The NPS and the Commission acknowledge that construction and operation of the memorial could adversely affect historic resources. Key issues include the alignment of Maryland Avenue as envisioned in the L'Enfant Plan, the Maryland Avenue vista and historic cartway, the historic building lines on Independence Avenue, 4th Street, and 6th Street, the west elevation of the Department of Education Building, and the historic character of the Independence Avenue side of the National Mall.

We have enclosed a working list of consulting parties and a copy of the APE information prepared in 2006 for your consideration. Both items are intended as a basis of discussion, subject to modification, so as to expedite the consultation process. We also anticipate that a Phase 1a and, if necessary, a Phase 1b archeological review of the site will be undertaken by the Commission to determine if archeological resources might be impacted by the design and construction of a the proposed alternatives.

At this conceptual design stage, the NPS is not prepared to make a formal determination of effect for the Dwight D. Eisenhower Memorial project, but looks forward to consultation with the District of Columbia Preservation Office on this and other steps in the process.

Thank you again for your help on this important project. If you have any questions, please do not hesitate to call me or Mark Isaksen, Chief, Resource Management, National Mall and Memorial Parks at (202) 245-4711.

Sincerely,

Superintendent, National Mall and Memorial Parks

Enclosure

cc:
Mr. Reid Nelson
Advisory Council on Historic Preservation

Ms. Nancy Witherell
National Capital Planning Commission

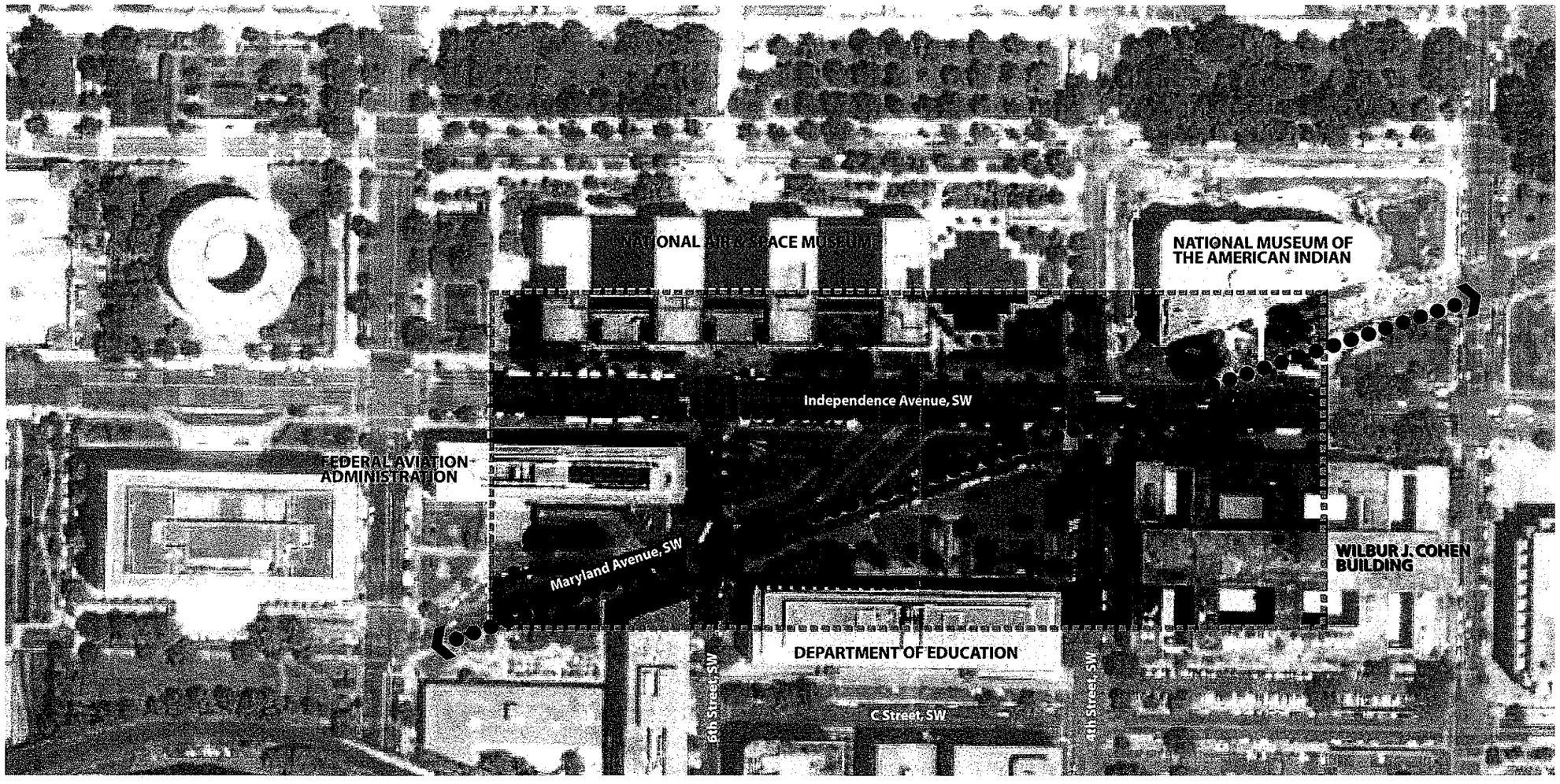
Bcc:
NAMA-Files
NAMA-Chrono
NAMA-Talken-Spaulding
NAMA-Lorenzetti
NAMA-Piltzecker

PWheelock:sab:04-12-10:Dwight D. Eisenhower_SHPO_Letter

Eisenhower Memorial Site Study

7B

Historic Preservation Site Context



- Area of potential effect: visual perimeter of site and L'Enfant street corridors
- Adjoining public and cultural heritage uses
- Maryland Avenue right-of-way and view corridor
- L'Enfant Streets right-of-ways and View Corridors
- Buildings eligible for the National Register of Historic Places

Note: Preliminary area of potential effect is based upon initial recommendation of DC State Historic Preservation Office, 8/05

PREFERRED MEMORIAL SITE

PROPOSED AREA OF POTENTIAL EFFECT

MARYLAND AVENUE VIEW CORRIDOR

This page is intentionally left blank

APPENDIX C

NCPC SITE SELECTION APPROVAL

This page is intentionally left blank

COMMISSION ACTION

NCPC File No. 6694

DWIGHT D. EISENHOWER MEMORIAL
Approval of Site and Design Principles

Bound by Independence Avenue, 4th and 6th Streets, SW,
and the Department of Education Headquarters
Washington, DC

Submitted by the National Park Service

September 7, 2006

Commission Action Requested

Approval of site selection and design guidelines pursuant to Public Laws 106-79, 107-117, 109-220, and the Commemorative Works Act (40 U.S.C. 8905).

Commission Action

Approves the site for the Dwight D. Eisenhower Memorial in the area bound by Independence Avenue, 4th and 6th Streets, SW and the Department of Education Building, as shown on NCPC Map File No. 1.71(73.10)42093, provided that the applicant design the Memorial using the Section 106 consultation process to meet, to the Commission's satisfaction, the following design principles:

Design Principles:

1. Preserve reciprocal views to and from the U.S. Capitol along Maryland Avenue, SW.
2. Enhance the nature of the site as one in a sequence of public spaces embellishing the Maryland Avenue vista.
3. Create a unified memorial site that integrates the disparate parcels into a meaningful and functional public gathering place that also unifies the surrounding precinct.
4. Reflect L'Enfant Plan principles by shaping the Memorial site as a separate and distinct public space that complements the Department of Education Headquarters and other surrounding buildings.
5. Respect and complement the architecture of the surrounding precinct.
6. Respect the building lines of the surrounding rights-of-way and the alignment of trees along Maryland Avenue.
7. Incorporate significant green space into the design of the memorial.

Does not adopt the applicant's draft design guidelines as submitted, and notes that additional or more detailed design guidelines may be developed and be incorporated in a Section 106 Memorandum of Agreement as consultation continues.

Finds that potential effects to the historic Maryland Avenue right-of-way and associated views and vistas merit special attention, and therefore underscores the requirement that the applicant obtain prior to and during design development the views of the District of Columbia Historic Preservation Officer (DC SHPO) and consulting parties through the Section 106 consultation process.

Notes that the Executive Director has issued a Finding of No Significant Impact (FONSI) for the site selection subject to the development and implementation of appropriate mitigation through adherence to the Design Principles and the Section 106 consultation process.

_____

Deborah B. Young
Secretary to the National Capital Planning Commission

APPENDIX D

NCPC COMMENTS ON CONCEPT DESIGN ALTNERNATIVES

This page is intentionally left blank

COMMISSION ACTION

NCPC File No. 6694

DWIGHT D. EISENHOWER MEMORIAL

BOUNDED BY INDEPENDENCE AVENUE, 4TH STREET, AND 6TH STREETS, SW, AND BY THE
LYNDON B. JOHNSON - DEPARTMENT OF EDUCATION HEADQUARTERS BUILDING

Southwest Washington, DC

Submitted by United States Department of the Interior – National Park Service

February 3, 2011

Commission Action Requested

Approval of comments on concept design alternatives, pursuant to Public Law 107-117, 109-220 and the Commemorative Works Act, as amended (40 U.S.C. 8905).

Commission Action

The Commission:

Supports the applicant's efforts to develop a memorial that utilizes modern and innovative ways to commemorate President Dwight D. Eisenhower in a manner that is unlike any other Presidential memorial in Washington, DC, including the possible use of the woven stainless steel tapestries as a memorial element with modifications.

Finds that the proposed concept designs are not yet consistent with the Commission's 2006 site approval action that requires the applicant to use the Section 106 process to design the Memorial to meet, to the Commission's satisfaction, the established design principles.

Finds that relative to the design principles the Maryland Roadway (Alternative #1) concept design satisfies the following principles:

- Enhance the nature of the site as one in a sequence of public spaces embellishing the Maryland Avenue vista.
- Reflect L'Enfant Plan principles by shaping the Memorial site as a separate and distinct public space that complements the Department of Education Headquarters and other surrounding buildings.
- Respect and complement the architecture of the surrounding precinct.
- Respect the building lines of the surrounding rights-of-way and the alignment of trees along Maryland Avenue.

And does not satisfy:

- Preserve reciprocal views to and from the U.S. Capitol along Maryland Avenue, SW.
- Create a unified memorial site that integrates the disparate parcels into a meaningful and functional public gathering place that also unifies the surrounding precinct.
- Incorporate significant green space into the design of the memorial.

Finds that relative to the design principles the Maryland Promenade (Alternative #2) concept design satisfies the following principles:

- Enhance the nature of the site as one in a sequence of public spaces embellishing the Maryland Avenue vista.
- Create a unified memorial site that integrates the disparate parcels into a meaningful and functional public gathering place that also unifies the surrounding precinct.
- Reflect L'Enfant Plan principles by shaping the Memorial site as a separate and distinct public space that complements the Department of Education Headquarters and other surrounding buildings.
- Respect and complement the architecture of the surrounding precinct.
- Respect the building lines of the surrounding rights-of-way and the alignment of trees along Maryland Avenue.
- Incorporate significant green space into the design of the memorial.

And does not satisfy:

- Preserve reciprocal views to and from the U.S. Capitol along Maryland Avenue, SW.

Finds that relative to the design principles the Maryland Park (Alternative #3) concept design satisfies the following principles:

- Enhance the nature of the site as one in a sequence of public spaces embellishing the Maryland Avenue vista.
- Incorporate significant green space into the design of the memorial.

And does not satisfy:

- Preserve reciprocal views to and from the U.S. Capitol along Maryland Avenue, SW.
- Create a unified memorial site that integrates the disparate parcels into a meaningful and functional public gathering place that also unifies the surrounding precinct.
- Reflect L'Enfant Plan principles by shaping the Memorial site as a separate and distinct public space that complements the Department of Education Headquarters and other surrounding buildings.
- Respect and complement the architecture of the surrounding precinct.
- Respect the building lines of the surrounding rights-of-way and the alignment of trees along Maryland Avenue.

Notes that the design principles are included as required mitigation in the Executive Director's Finding of No Significant Impact (FONSI) for site selection and must be met to mitigate otherwise potentially significant environmental impacts.

Notes that the applicant is required to develop the design through the Section 106 consultation process to fully meet the design principles to better relate the Memorial to the surrounding context, and to avoid, minimize, or mitigate any identified adverse effects as required by the National Historic Preservation Act.

_____

Deborah B. Young
Secretary to the National Capital Planning Commission