



MARTIN LUTHER KING, JR. MEMORIAL

Environmental Assessment

September 2009

**NATIONAL PARK SERVICE
U.S. DEPARTMENT OF THE INTERIOR**

National Mall and Memorial Parks
Washington, D.C.



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PROJECT SUMMARY

Public Law 104-333, Section 508, as passed by the Congress, and signed into law by President William J. Clinton on November 12, 1996, established the procedures for establishing the Memorial to honor Martin Luther King, Jr. As such, the National Park Service (NPS) and the Washington, D.C. Martin Luther King, Jr. National Memorial Project Foundation, Inc. (Foundation) propose to establish and operate a national memorial to Dr. Martin Luther King, Jr. on an approved site in Washington, D.C. The proposed Martin Luther King, Jr. Memorial (Memorial) is conceived as a space that is quiet and contemplative; but also uses powerful and evocative symbolism to convey Dr. King's message of justice, democracy, and hope.

The approved site for the Memorial is a four-acre parcel of land located on the northwestern side of the Tidal Basin within West Potomac Park (the project area). The triangular-shaped site is located across the Tidal Basin from the Jefferson Memorial and approximately 750 feet north of the Franklin Delano Roosevelt Memorial. The site is generally bounded by Independence Avenue S.W. on the north, the pedestrian walkway of the Tidal Basin on the east, the Franklin Delano Roosevelt Memorial on the south, and recreational open space on the west. The site also includes a portion of West Basin Drive S.W. The site is within the Southwest Quadrant of Washington, DC.

This environmental assessment (EA) evaluates two alternatives, the preferred alternative and the no action alternative, and also describes those alternatives considered but dismissed. The preferred alternative, the establishment of a Memorial to Martin Luther King, Jr., includes the construction and operation of the Memorial itself, the re-alignment of West Basin Drive S.W., and the construction and operation of a visitor services facility. In 2005, the NPS and the Foundation released an EA that documented and described the proposed action and analyzed the potential impacts and recommended mitigation measures related to its implementation. The Memorial program elements and the impacts of the proposed concept design were the subject of the 2005 EA. Subsequently, after the 2005 EA went through the public comment process, design revisions associated with the Memorial and the placement and footprint of the visitor services facility were developed, the design of the realignment of West Basin Road was determined, and required security measures were added. This new EA will add to, and expand upon the information and impact analysis presented in the original 2005 Martin Luther King, Jr. National Memorial EA. The NPS will issue a decision on this revised EA.

The EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, and implementing regulations, 40 CFR Parts 1500-1508, and NPS Director's Order #12 and Handbook, *Conservation Planning, Environmental Impact Analysis, and Decision-making* (DO-12). Compliance with NHPA Section 106 of the National Historic Preservation Act of 1966 been completed separately from this NEPA process. Compliance with NPS's, Director's Order 77-2: Floodplain Management is being completed in conjunction with this EA (Appendix B).

Note to Reviewers and Respondents:

If you wish to comment on the EA, you may mail comments directly or submit them electronically. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Comments can also be submitted on-line by following the appropriate links at:

<http://parkplanning.nps.gov/NAMA>

Mailed comments can be sent to:

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Appendix D - Martin Luther King, Jr. Memorial Legislation
Appendix E - Martin Luther King, Jr. Memorial Design Competition
Appendix F - National Historic Preservation Act Section 106 – Signed Memorandum of Agreement

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PURPOSE AND NEED

The purpose of the proposed action is to establish a memorial to Dr. Martin Luther King, Jr. on an approved site in Washington, DC as authorized by Federal law, and in compliance with the Commemorative Works Act, 40 USC Ch. 89 and other applicable requirements. The Washington, DC Martin Luther King, Jr. National Memorial Project Foundation, Inc. (Foundation) is establishing this memorial which will be located on parkland administered by the National Park Service (NPS). The Martin Luther King, Jr. Memorial would commemorate the life and work of Dr. King and would be the first memorial in the Monumental Core to honor an individual African-American. Dr. King

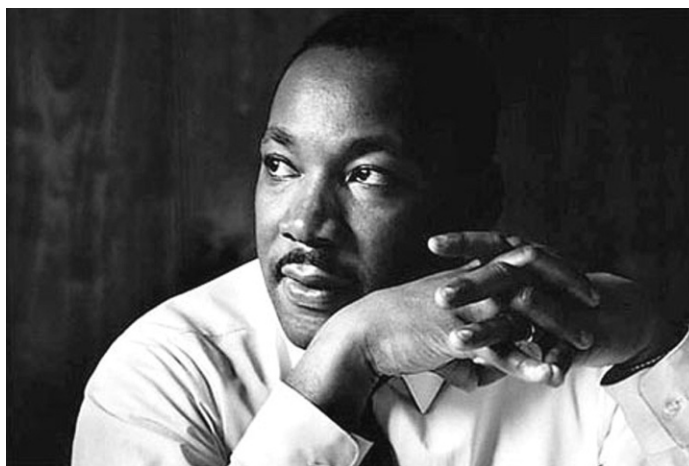


Figure 1 - Dr. Martin Luther King, Jr.

was a dominant force in the Civil Rights Movement in the United States and made immeasurable contributions to world peace through non-violent social change. Although he was a leader in a number of historic moments in the Civil Rights Movement, such as the Montgomery Bus Boycott in 1956 and the March on Washington in 1963, Dr. King's lifelong dedication to the advancement of human rights is his enduring legacy to the world. He became a symbol of human rights and of a free America, where people of all races, creeds, and nationalities could live together in harmony. In 1964, Dr. King became the youngest person to receive the Nobel Peace Prize.

On November 12, 1996, President William J. Clinton signed Public Law 104-333, Section 508, which authorized the Alpha Phi Alpha Fraternity (Fraternity) to establish a memorial to Martin Luther King, Jr. Since that time there has been additional legislation primarily to extend the time to satisfy the requirements of the Commemorative Works Act for obtaining design approvals and adequate funds to complete the Memorial. The Fraternity is the first intercollegiate Greek-letter fraternity established for African-Americans. The Fraternity initially served as a study and support group for minority students who faced racial prejudice, both educationally and socially, at Cornell University. The Fraternity has established within its organization the Foundation to operate on behalf of the Fraternity in the development of the location, design, and construction of the Memorial. The Foundation intends the Memorial to serve as a life-affirming beacon; a guiding wellspring for a living reminder to each of us of our own inherent capacity for self-transformation and our everlasting human capacity to overcome. On behalf of the Secretary of the Interior, the NPS is working with the Foundation as it completes the requisite processes to establishment the Memorial. Upon completion and acceptance of the work necessary to construct the Memorial, the Memorial will be owned, maintained, and operated by the NPS as a unit of the National Park System.

This is the second Environmental Assessment (EA) for this proposal. The first EA was issued in 2005, with NPS reaching a Finding of No Significant Action (FONSI) in August 2008 (Appendix A), selecting the alternative "Proposed Memorial." In the revised EA it is labeled Alternative B – Martin Luther King, Jr. Memorial (NPS Preferred). This 2009 EA is being issued to incorporate and address changes that were made in the proposal after the first EA was issued and to otherwise update the EA. NPS NEPA policy, consistent with CEQ, requires EA's to be rewritten rather than supplemented if, among other things, new substantive issues arise, and then issued for public review. (NPS Director's Order #12 and Handbook, *Conservation Planning, Environmental Impact Analysis, and Decision Making*, 5.5 E.) The document is rewritten to add onto and expand the information and impact analyses presented in the 2005 EA and as a result information and sections are reorganized. The NPS will make a decision on this new EA.

The Memorial program elements and the impacts of the proposed concept design on the site and the site itself were analyzed in the 2005 EA. The 2005 EA also chronicled the results of the review and approval process for this Memorial to that point as provided by the Commemorative Works Act. This process involves the National Capital Memorial Commission (NCMC), the National Capital Planning Commission (NCPC), and the U.S. Commission of Fine Arts (CFA), among others. After the 2005 EA went through the public review and comment, design revisions associated with the Memorial and the placement and footprint of the visitor services facility were developed. The realignment of West Basin Drive S.W. was refined to support safer pedestrian access points. Required security measures were also added to the final design of the Memorial. These design elements are more fully analyzed in this updated EA.

This EA has been prepared in compliance with the National Environmental Policy Act of 1969, as amended (NEPA), the Council on Environmental Quality (CEQ) regulations implementing NEPA, 40 CFR 1500-1508, and CEQ guidance, the Department of the Interior's recently issued NEPA regulations at 43 CFR Part 46, (October 15, 2008 Federal Register, pages 61314-61323), the NPS Director's Order-12 (as reflected in the DO-12 Handbook) and other applicable policies. Compliance with NHPA Section 106 of the National Historic Preservation Act of 1966 as amended (NHPA) has been completed, and compliance with Director's Order 77-2: Floodplain Management is being completed (Appendix B).

PROJECT BACKGROUND

This Memorial is being established pursuant to the Commemorative Works Act. Compliance with this law shapes the process and also the Memorial itself. This Act prescribes a series of reviews such as for the site of the Memorial and Memorial design that must result in approvals in order for a Memorial to go forward. There are other requirements such as the sponsor, in this instance the Foundation for the Fraternity, having adequate funds (not pledges) to complete the project and for future maintenance, as well as all of the approvals before the NPS can issue a construction permit for the Memorial. This process takes years.

In the 1990's the Foundation contracted for a study of alternative sites for the Memorial, (Appendix D) and in November 1998 formally proposed a site at the east end of Constitution Gardens Lake, near the intersection of 17th Street N.W. and Constitution Avenue N.W. adjacent to the site of the World War II Memorial. This site was within what was then Area I under the Commemorative Works Act and earlier that year the Foundation was authorized by Federal law to site the Memorial there (Public Law 105-201, 112 Stat. 675, July 16, 1998) (Appendix D). Following the Foundation's proposal to locate the Memorial at this site there was a series of meetings with the Federal commissions and others, and as a result the Foundation investigated additional sites. (See Alternatives Considered but Not Carried Forward, page 19) The site ultimately approved Memorial is a four-acre parcel of land located on the northwestern side of the Tidal Basin within West Potomac Park (the project area). The triangular-shaped site is located across the Tidal Basin from the Jefferson Memorial and approximately 750 feet north of the Franklin Delano Roosevelt Memorial. The site is generally bounded by Independence Avenue S.W., on the north, the pedestrian walkway of the Tidal Basin on the east, the Franklin Delano Roosevelt Memorial on the south, and recreational open space on the west. The site also includes a portion of West Basin Drive S.W. The site is within the Southwest Quadrant of Washington, DC. It is also within what was then Area I for the Commemorative Works Act.

The site is a prominent and symbolic location that is relevant to the subject of the Memorial. The site is in the line of sight between the Lincoln Memorial and the Jefferson Memorial. This alignment creates a 'line of leadership' from the Memorial to President Abraham Lincoln, where Dr. King gave his famous "I Have a Dream" speech, to the Memorial to President Thomas Jefferson, an author and participant in the Declaration of Independence and the Constitution, two documents to which Dr. King referred as promissory notes in his famous speech. The site is an advantageous location for the Memorial because it occupies a symbolic position with respect to Dr. King's life, and it is a relatively quiet place with stunning views to nearby memorials.



Figure 2 - Approved Memorial Site Vicinity

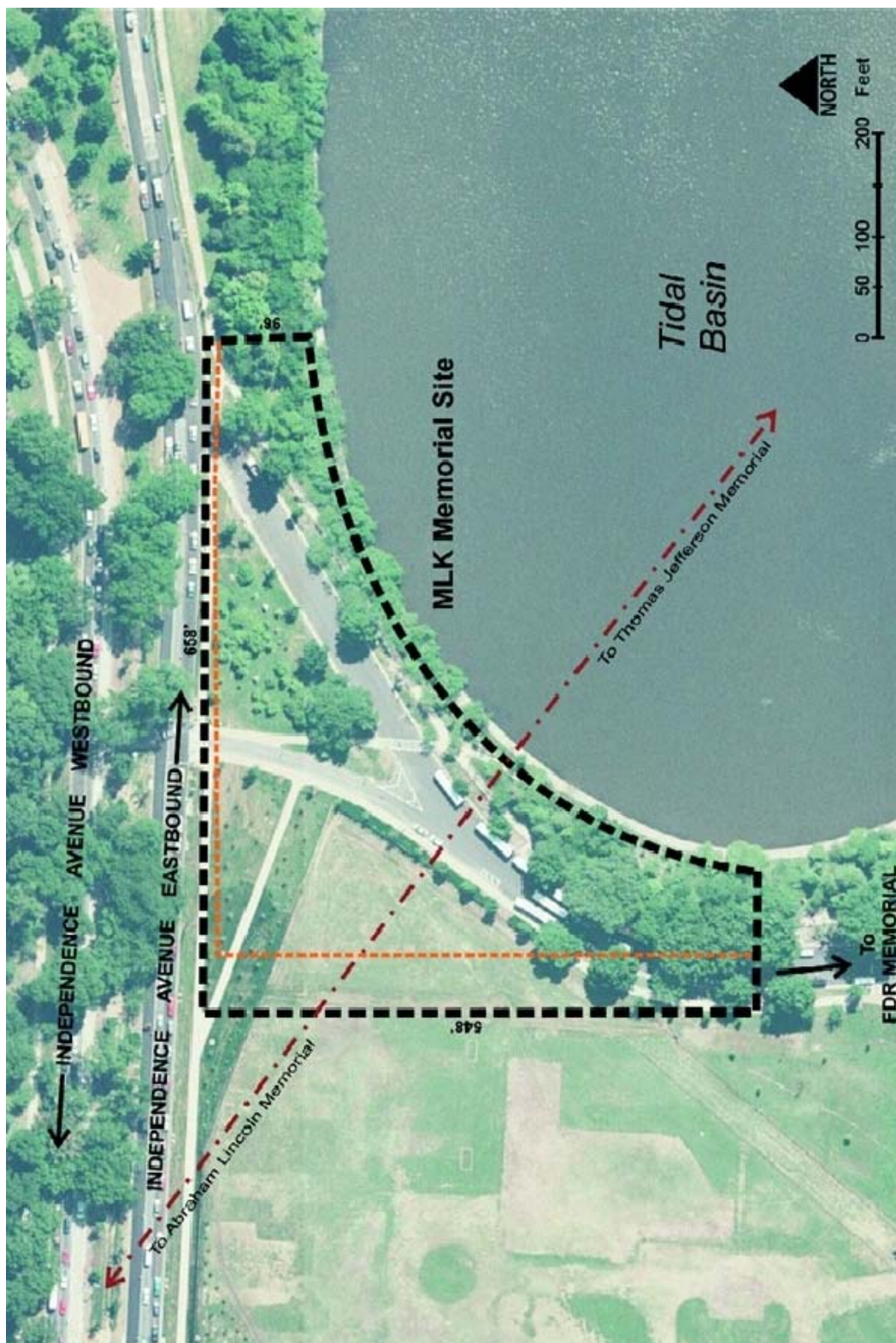


Figure 3 - The Approved Site of the Martin Luther King, Jr. Memorial

In March 1998 the Foundation formed a committee of architects, planners, artists, and landscape architects in to coordinate the design and architectural process for the Memorial. An international design competition for the Memorial was launched in December 1999. In the competition package, entrants were asked to propose memorial designs that exemplify the mission, vision, and values of Dr. King. (Appendix E). In September, 2000, the winning design was selected. It was submitted by ROMA Design Group of San Francisco, California (Appendix E). On December 4, 2000, the site was dedicated. The competition winning design was presented for informational purposes to the U.S. Commissions of Fine Arts and the National Capital Planning Commission in May and June 2001. The Commissions and NPS advised the Foundation that it needed to carefully consider and potentially revise the elements of the winning design to meet the requirements for conceptual and other approvals, and that there could be further departures from that design and the design parameters. Description of the winning design is provided in Alternatives chapter.

This EA includes the design revisions associated with the Memorial and the placement and footprint of the visitor services facility, the realignment of West Basin Drive S.W., and security measures in the form of physical improvements. A factor in the decision to make these changes is the comfort and safety of the large number of visitors that are expected at the Memorial. Annual visitation estimates to the Memorial range from between 2.3 to 4.9 million, based on visitation statistics of several nearby memorials. Visitors to the Memorial would be comprised of individuals, families with young children, the elderly, and those with special needs. These changes and the need for them are summarized here.

Visitor Service Facility - Over the course of design and planning, it was determined that a small facility containing restrooms, a ranger contact station and a bookstore was warranted. A facility like this is consistent with the facilities at other memorials and contains the features NPS advised Congress were appropriate at memorials, and stops short of becoming an NPS visitor center. Restrooms were proposed because the nearest ones are otherwise located more than 750 and 1,200 feet away, at the Franklin Delano Roosevelt and World War II Memorials, respectively. A ranger contact station and small bookstore would aid visitors and enhance interpretation about the Memorial. Infrastructure for the Memorial itself is also contained in this facility.

West Basin Drive S.W. – Realignment of this roadway will improve the buildable area and the symmetry of the site, and is expected to improve pedestrian safety by adding safer access points (crossing areas). Many visitors are expected to arrive on foot.

Increased Security Measures – The safety of park visitors is a very high priority of the NPS, as is the protection of the memorials administered by the NPS. In recent years security at the existing memorials has been enhanced. The proposed Memorial is designed to be a powerful symbol of the life and legacy of Martin Luther King, Jr., and it may attract both proponents and opponents of civil rights and racial equality. The NPS consulted the Department of Interior's Office of Law Enforcement, Security, and Emergency Management (OLESEM), which determined that increased security measures were required after a review the plans for the Memorial and other factors in light of the current Departmental security policy. This was confirmed by the FBI (Federal Bureau of Investigation). As a result, in addition to the security measures such as lighting and special technology, the presence of NPS Park Rangers and United States Park Police (USPP), the Memorial also required physical barriers in the final design. The physical barriers are to prevent unauthorized vehicles, which may or may not be carrying explosives (vehicle borne improvised explosive devices or VBIED), from gaining access to the Memorial.

THE NATIONAL MALL AND MEMORIAL PARKS

The parks of the Nation's Capital are the oldest elements of today's National Park System, dating from the creation of the District of Columbia in 1790-91. These parks were managed by a succession of administrators, beginning with commissioners appointed by President Washington to establish the federal city, then variously under the auspices of the Department of the Interior and the Army. In 1933-1934, federal parkland in the District of Columbia was consolidated under the management of the NPS. The

NPS unit that administers West Potomac Park, which is where the Memorial will be sited, is called National Mall and Memorial Parks.

Much of the area managed by the National Mall and Memorial Parks reflects the physical expression of the historic L'Enfant Plan and the McMillan Plan, resulting in essentially a City Beautiful plan containing a coordinated system of radiating avenues, parks, and vistas laid over an orthogonal grid, which was both symbolic and innovative for the new nation. At the same time the iconography, architecture, and open spaces within the National Mall and Memorial Parks commemorate individuals and events that symbolize the principal symbols of America's heritage. National Mall and Memorial Parks has served as the stage upon which historic events of national significance occurred-- Marian Anderson's concert at the Lincoln Memorial, John F. Kennedy's funeral procession, the 1963 March on Washington, Dr. Martin Luther King Jr.'s "I Have a Dream" speech also at the Lincoln Memorial, and Presidential Inaugurations and state funerals. Constitution Avenue is part of the planned ceremonial route to Arlington National Cemetery which begins at the U.S. Capitol building and runs westward along Constitution Avenue, south along Henry Bacon Drive, across Memorial Bridge to the cemetery gates.

In addition to historical events, National Mall and Memorial Parks provides a globally recognized platform to exercise democratic First Amendment rights and has served as the setting for national celebrations, parades, festivals, ceremonies, and rallies as well as local and regional events.

DR. MARTIN LUTHER KING, JR.

Much is written about Dr. King. No discussion of Dr. King in an EA can amount to more than a summary of dates and places and facts. Dr. King was born in Atlanta, Georgia in 1929, named Michael King, renamed Martin Luther King Jr., the son of a pastor and schoolteacher. After graduating from Morehouse College, he completed his doctorate in Theology at Boston University. In 1956, Dr. King made his first mark on the Civil Rights movement by mobilizing the black community to participate in a successful year-long boycott of the bus system in Montgomery, Alabama to protest its segregated seating policies. In 1957, Dr. King formed, and was elected president of, the Southern Christian Leadership Conference, which assisted local communities working for full equality of black people in all aspects of American life.

Dr. King's nonviolent tactics were put to their test in Birmingham, Alabama in 1963 during a mass protest against segregation that included lunch counter sit-ins and marches. Police brutality against the marchers dramatized the plight of blacks to the rest of the nation. Although Dr. King was arrested, he wrote his famous "Letter from a Birmingham Jail" to refute his critics and emphasize his position.

In August 1963, Dr. King spoke at the historic March on Washington, where he delivered his "I Have a Dream" speech. His powerful message to the nation and its institutions at the seat of the Federal government movingly expressed the plight of black people and their struggle for freedom, greatly empowering the Civil Rights Movement, and establishing him as an American leader. After this pivotal moment, Dr. King continued with his advocacy work on issues including the War on Poverty and voter registration in Selma, Alabama, which culminated in the Selma-to-Montgomery Freedom March. Intellectuals, clergymen, and Americans of every background were drawn to Dr. King's message and to the Movement. In 1964, Dr. King became the youngest person to receive the Nobel Peace Prize.

Dr. King's work led him to Memphis, Tennessee to support striking sanitation workers. While standing on the balcony of the Lorraine Motel in Memphis, Tennessee, Dr. King was shot and killed on April 4, 1968. The violent death of a man who had been so dedicated to nonviolence caused grief and anger in communities across America. Dr. King's birthday, January 15, is recognized as a national holiday.

APPLICABLE LEGAL AND POLICY REQUIREMENTS

The NPS complies with all the laws, regulations, policies and other requirements that are applicable to its administration of parkland within the National Park System and to West Potomac Park specifically, and to those for NPS operations as a federal agency. Those requirements that are most pertinent to the

proposal are generally identified within this EA at the places where they are most relevant, as are the NEPA requirements.

In addition, since this proposal is for a memorial being established pursuant to the Commemorative Works Act, 40 USCA Ch. 89, this Act along with other requirements for memorials on parkland in Washington, DC are followed. Specific aspects of this law and those policies that warrant explanation, in order to understand the process that has been followed in shaping this proposal and the proposal itself, are described here.

The *Commemorative Works Act* (CWA) provides standards and requirements for the location, design and construction of new memorials on federal lands administered by the NPS and GSA in the District of Columbia and a portion of northern Virginia near the District. Compliance with the CWA is informed by memorials guidance plans developed by NCPC, CFA, NPS and others. Some of the 2003 amendments to the CWA stemmed from recommendations in these plans that were also presented to Congress in hearings. These plans include the 1997 plan *Extending the Legacy Planning America's Capital for the 21st Century* (the *Legacy Plan*) which led, in part, to the 2001 *Memorials and Museums Master Plan* (NCPC 1998).

Approvals. In addition to compliance with laws such as the National Historic Preservation Act, the CWA calls for memorial proposals to obtain a sequence of approvals from the NCMC, NCPC, CFA, and the Secretary of the Interior or the Administrator of the General Services Administration, depending on the proposed location for a memorial. Some of these reviews and approvals precede completion of the NEPA process, and others follow. These review and approval sessions result in changes to the earlier versions so that the design continues to evolve until the final approvals are granted. Many if not most of these reviews are conducted in meetings open to the public following public notice. All told, during the course of its development the average memorial is considered in over a dozen commission meetings before the public. These public sessions before these Federal commissions are in addition to those held by the memorial sponsor and NPS as part of the NEPA process, and moreover are in addition to the meetings conducted to comply with NHPA Section 106.

The Site. The Memorial site is in a location now known as the Reserve, which is no longer available as a place for additional memorials. The 2003 amendments to the CWA included redrawing those places designated Areas I and II in the 1986 enactment of the CWA, and creating the Reserve within a portion of what had previously been Area I. The 2003 amendments did not apply this restriction to those memorials like the one to Martin Luther King, Jr., that had already obtained sites in this no longer available location that had been in Area I. These memorials can still be placed there if they successfully complete the process in the Act.

Memorial features. In addition to the CWA requirements for the types and quality of materials used for memorials, and that these new memorials not encroach on existing memorials, in 2003 Congress prohibited the placement of visitor centers within the Reserve other than the Vietnam Veterans Memorial Visitor Center (VVMC) which Congress authorized in that same law. The planning for the visitor facilities for the Martin Luther King, Jr. Memorial was guided by what Congress envisioned as a visitor center for the Vietnam Visitor Center, the 2001 *Memorials and Museums Master Plan*, and what NPS has long held to be appropriate facilities for memorials which are smaller and contain fewer features than the facilities that usually comprise an NPS visitor center.

The primary focus and grand scale of the VVMC are quite different from the facility planned for the Martin Luther King, Jr. Memorial, quite different from what the *Memorials and Museums Master Plan* directs, and quite different from what NPS has long held to be appropriate facilities for memorials. What Congress intended for the visitor center it authorized while proscribing, in the same law, additional visitor centers, was described in the legislative history. It was to be a place to “provide an educational experience for visitors by facilitating self-guided tours, collecting and displaying remembrances of those whose names are inscribed on the Memorial, and displaying exhibits discussing the history of the Memorial and the Vietnam War.” (VVMC Site Selection EA, page 1-6, Legislative Framework). The Visitor Center for

the Vietnam Veterans Memorial is proposed to be “approximately 25,000 square feet of exhibit and exhibit support space, maintenance and mechanical space, public entry and visitor services spaces, educational programming space, and administrative space. Exhibit areas would include display and interpretive features.” (VVMC Site Selection EA, page 2-7, Design Assumptions).

The VVMC visitor center as authorized by Congress is in contrast from the proposed 3,000 square foot facility for the Martin Luther King, Jr., Memorial, which just contains restrooms, a ranger contact station, bookstore, and infrastructure. These are the same features that are found at many memorials on the Mall and features that the NPS informed Congress were appropriate for memorials as long ago as 1994, when NPS appeared before Congress requesting an amendment to limit facilities at memorials to these, and again in 2003 when testifying about the VVMC. (cite to leg history). Finally, this 3,000 square foot facility conforms to *Memorials and Museums Master Plan* design policy for visitor facilities at memorials in Area I. It directs that these visitor facilities “be limited to only small information kiosks and restroom facilities and should not contain buildings or interior spaces housing exhibits, displays, collections or other interpretive products and programs normally found in museums, visitor centers, or education centers.” (*Memorials and Museums Master Plan*, Design Policy 7, page 32.)

IMPACT TOPICS

The following impact topics are either discussed in the “Affected Environment” chapter and analyzed in the “Environmental Consequences” chapter, or dismissed from further consideration for the reasons provided. The topics are resources of concern that could be beneficially or adversely affected by the actions proposed under each alternative and were developed to ensure that the alternatives are evaluated and compared based on the most relevant resource topics. These impact topics were identified based on the following: issues raised during scoping, federal laws, regulations, executive orders, NPS 2006 *Management Policies*, and NPS knowledge of limited or easily impacted resources. A brief rationale for the selection of each impact topic is given.

Soils

Activities associated with the construction of the proposed memorial and realignment of West Basin Drive S.W. under either action alternative would disturb approximately four acres, resulting in the loss of soil productivity, and increasing the potential for soil erosion and loss of topsoil. As a result, soil resources are addressed as an impact topic in this EA.

Vegetation

Vegetation in the project area would be affected by the proposed MLK Memorial. These include shrubs and trees, including some larger mature trees and cherry trees. The construction of the proposed memorial would require the removal of some vegetation. As a result, vegetation is considered in this EA.

Floodplains

Director’s Order 77-2: Floodplain Management was issued in response to *Executive Order 11988, Floodplain Management*. *Director’s Order 77-2* applies to all proposed NPS actions that could adversely affect the natural resources and functions of floodplains or increase flood risks. This includes those proposed actions that are functionally dependent upon locations in proximity to the water and for which non-floodplain sites are not practicable alternatives. For all proposed actions determined to be within a regulatory floodplain, a Statement of Findings (SOF) must be prepared. The action defines the applicable regulatory floodplain. An SOF is prepared if the action falls within the defined regulatory floodplain as follows:

Class I includes the location or construction of administrative, residential, warehouse, and maintenance buildings, non-excepted parking lots, or other human-made features, which by their nature entice or require individuals to occupy the site, are prone to flood damage, or result in impacts on natural floodplain values. Actions in this class are subject to the floodplain policies and procedures if they lie within the 100-year regulatory floodplain (the Base Floodplain).

Class II includes “critical actions” – those activities for which even a slight chance of flooding would be too great. Examples of critical actions include schools, hospitals, fuel storage facilities,

irreplaceable records, museums, and storage of archeological artifacts. Actions in this class are subject to the floodplain policies and procedures if they lie within the 500-year regulatory floodplain.

Class III includes all Class I or Class II actions that are located in High Hazard areas, including coastal High Hazard areas and areas subject to flash flooding. Actions in this class are subject to floodplain policies and procedures if they lie within the Extreme Flood regulatory floodplain.

The alternatives considered in this EA would require construction within the 100-year floodplain of the Potomac River. Consequently, a SOF was prepared (Appendix B) and the impacts of the proposed actions on the floodplain are considered in this EA.

Visitor Use and Experience

The project area is one of the most visited sites in the country. In the immediate vicinity to the project area are numerous other memorials including the D.C. World War I Memorial, Franklin Delano Roosevelt Memorial, Lincoln Memorial, Vietnam Veterans Memorial, Korean War Veterans Memorial, Washington Monument, and World War II (WWII) Memorial. Construction of this new memorial impacts would temporarily impact traffic, create noise, and have a visual impact, which would have an impact on visitor experience. After the proposed new memorial is constructed, there would be new opportunities for visitors to learn about and celebrate the life of Dr. Martin Luther King Jr. and his accomplishments. Because of the impacts the proposed memorial would have on visitor use and experience, this topic was analyzed in this EA.

Traffic and Transportation

Activities associated with the construction of the proposed memorial and realignment of West Basin Drive S.W. under the proposed alternative would temporarily impact local traffic by introducing construction vehicles hauling materials to and from the site, closing West Basin Drive S.W. for realignment, and partially closing lanes on Independence Avenue S.W., resulting in the introduction of new traffic patterns. After construction, there would likely be short-term localized increases in traffic from people wishing to visit the new memorial. In addition, there would be an overall decrease in available parking as a result of the proposed new memorial. As a result, traffic and transportation were analyzed as an impact topic in this EA.

Aesthetics and Visual Quality

The introduction of a new memorial, realignment of West Basin Drive, the provision of a visitor services facility and the construction of additional security elements would result in changes to the overall viewshed of the project area. As such, there would be impacts on visual resources and spatial qualities and relationships. There would also be visual impacts associated with construction of the Memorial itself. As a result, aesthetic and visual qualities were analyzed as an impact topic.

Cultural Resources

The National Historic Preservation Act (NHPA; 16 USC 470 et seq.), NEPA, NPS 1916 Organic Act, the NPS 2006 Management Policies (NPS 2006), DO-12 (Conservation Planning, Environmental Impact Analysis and Decision-making), and NPS-28 (Cultural Resources Management Guideline) require the consideration of impacts on any cultural resources that might be affected, and NHPA, in particular, on cultural resources either listed in, or eligible to be listed in, the National Register of Historic Places (NRHP). Cultural resources include archeological resources; cultural landscapes; historic structures and districts; ethnographic resources; and museum objects, collections, and archives. Archeological resources; cultural landscapes; ethnographic resources; and museum objects, collections, and archives were all dismissed from further analysis due to the low level of impact or absence of a particular resources.

Impacts on Historic Districts and Structures: The construction of the memorial and realignment of West Basin Road improvements would impact several historic resources in West Potomac Park, which can be considered part of the setting for the site; as a result, this topic was analyzed as an impact topic.

In an effort to minimize these impacts, and as part of the NHPA Section 106 process, the NPS, the District of Columbia State Historic Preservation Office (DC-SHPO), the Advisory Council on Historic Preservation (ACHP), and the Foundation developed a Memorandum of Agreement (MOA). The MOA stipulates, to the extent possible, the final design of the Memorial will be compatible with the historic and architectural qualities of West Potomac Park in terms of scale, massing, and materials, and will be accomplished with the least possible disruption to the features and facilities of the park. The MOA also stipulates that coordination with these agencies (listed above) will continue throughout the final design process to ensure that the undertaking meets the Secretary of the Interior's Standards. In addition, any ground surfaces and planting materials will be subject to review by these agencies and NPS would guarantee that they would be of the highest quality and appropriate to the historic precedents. The MOA was signed by the NPS, DC-SHPO, ACHP, and the Foundation in August, 2008 (Appendix F).

Park Operations and Management

Under the terms of the Commemorative Works Act, the management and maintenance of the Memorial would be the responsibility of the NPS. Shifts in the responsibilities of the park staff and in the allocation of resources could impact other park operations. As a result of impacts to park operations and management, this topic was carried forward for further analysis in this EA.

IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS AND CONSIDERATION

The following impact topics were eliminated from further analysis in this EA. With mitigation, potential impacts to these resources to the extent they would occur would be negligible and localized. A brief rationale for dismissal is provided for each.

Water Quality

The 1972 Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, is a national policy to restore and maintain the chemical, physical, and biological integrity of the nation's waters; enhance the quality of water resources; and to prevent, control, and abates water pollution. The NPS *2006 Management Policies* provides direction for the preservation, use, and quality of water originating, flowing through, or adjacent to park boundaries. The NPS seeks to restore, maintain, and enhance the water quality within the parks consistent with the 1972 Federal Water Pollution Control Act, as amended, and other applicable federal, state, and local laws and regulations.

During the construction of the proposed memorial, visitor use facilities, and the realignment of West Basin Drive S.W., soils would be exposed, creating an increased potential for erosion and/or transport of surface pollutants into adjacent water bodies and storm sewers. An erosion and sediment control plan would be developed prior to construction that would outline measures and protocols that would be implemented during construction aimed at reducing erosion of exposed soils, slowing the rate at which water leaves the site, and capturing eroded soils and concentrated nutrients before entering the downstream water flow. Proper implementation of these measures would reduce the potential for adversely impacting water quality, and the resultant adverse impacts to the water quality of the Tidal Basin and Potomac River during the construction would be negligible and of short duration and occur only during storm events.

During construction, protocols would also be developed to protect against potential groundwater contamination during construction, including implementing proper on-site refueling techniques, properly storing and handling of hazardous materials, and developing notification and containment procedures in the event of a spill. These protocols would also provide protection to the overall quality of surface waters and would help ensure that any spills that may occur are contained and cleaned up prior to entering any ground or surface waters via either overland flows or stormwater conveyance systems.

After construction, the total amount of impervious surface on the site would likely increase. Increasing the total amount of impervious surfaces can increase both the volume of stormwater runoff and the amount of sediments and pollutants transported to the Tidal Basin and Potomac River via overland flows and stormwater conveyance systems during storm events. Under the action alternative, there would be no noticeable permanent change in the volume of stormwater discharge generated on the site. Prior to

construction, a stormwater management plan would be developed for the operation of the proposed new facilities. This plan would address the increase in impervious surfaces and subsequent increases in overland runoff by incorporating stormwater control designs into the project to manage the rate at which runoff leave the site.

To meet new DDOE criteria, stormwater controls would need to be incorporated into the overall site design to prohibit stormwater discharge from the proposed new memorial from surpassing the current stormwater discharge, there would be no added burdens to the current stormwater conveyance systems, or beyond what is currently required.

Due to standard erosion and sediment control practices and protocols used to protect against potential groundwater contamination implemented during the construction phase of the proposed alternatives, and the implementation of an approved stormwater management plan, impacts to water quality to the Tidal Basin and the Potomac River during both the construction and operation of the proposed facilities would be negligible. In addition, due to the Memorial's proximity to the Tidal Basin, all treatment of water associated with the decorative fountain features would meet NPS Integrated Pest Management protocols. As a result, this impact topic was dismissed from further analysis in this EA.

Wildlife

NPS policy is to protect the natural abundance and diversity of all naturally occurring communities. The NPS *Management Policies 2006* (NPS 2005), NPS DO #77: *Natural Resources Management* and other NPS and park policies provide general direction for the protection of wildlife and wildlife habitat. The study area is located in a highly developed region. The wildlife species found in the region, including raccoons, squirrels, fish, and many bird species, have adapted to and thrive in the developed environment. Their success is due to their ability to make use of the available habitats that are interwoven with the developed areas in the city (District of Columbia 2006). The proposed action would introduce a temporary impact into this environment. The impact would be similar to many other existing impacts and would only last through the construction period. Because there would be no new impacts to wildlife from the proposed action, the impact topic of wildlife is dismissed from further analysis.

Special Status Species

In addition to NPS policies and management guidelines, the Endangered Species Act of 1973, as amended provides for the protection of rare, threatened, and endangered species (floral and faunal). As part of the ongoing coordination for the National Mall Plan EIS, the U.S. Fish and Wildlife Service acknowledged that no federally listed or proposed threatened or endangered species under their jurisdiction are known to occur within the study area (NPS 2009). As a result, the impact topic of special status species is dismissed from further analysis.

Wetlands

Wetlands include areas inundated or saturated by surface or groundwater for a sufficient length of time during the growing season to develop and support characteristic soils and vegetation. The NPS classifies wetlands based on the FWS *Classification of Wetlands and Deepwater Habitats of the United States*, also known as the Cowardin classification system (Cowardin et al. 1979).

The National Wetlands Inventory (NWI) categorizes the Tidal Basin as a lacustrine unvegetated wetland. The Lacustrine System includes wetlands and deepwater habitats that possess all of the following characteristics: (1) they are situated in a topographic depression or a dammed river channel; (2) they lack trees, shrubs, persistent emergents, emergent mosses or lichens with greater than 30% area coverage; and (3) their total area exceeds 20 acres. The Lacustrine System is bounded by upland or by wetland dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens. "Limnetic" extends outward from Littoral boundary and includes deep-water habitats within the Lacustrine System. The category of "Unconsolidated Bottom" includes wetlands with at least a 25% cover of particles less than 6-7 centimeters, and a vegetative cover of less than 30% (Cowardin, et. al pp. 103). The construction and operation of the proposed Memorial would not result in any noticeable adverse or beneficial to the wetlands associated with the Tidal Basin, therefore, this impact topic was dismissed from further analysis in this EA.

Air Quality

The 1963 Clean Air Act as amended (42 USC 7401 et seq.) requires federal land managers to follow policies that protect park air quality. The act also assigns the federal land manager (Park Superintendent) an affirmative responsibility to protect the park's air quality related values – including visibility, plants, animals, soils, water quality, cultural and historic resources and objects, and visitors – from adverse air pollution impacts. Section 118 of the Clean Air Act requires that the park meet all federal, state, and local air pollution standards.

The proposed project is located within the Metropolitan Washington Air Quality Control Region; an area the U. S. Environmental Protection Agency (EPA) has designated as in attainment for the following National Ambient Air Quality Standards (NAAQS) criteria pollutants: particulate matter less than 10 micrometers (PM₁₀), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and lead (Pb). The EPA has designated Washington, D.C. as a moderate non-attainment area for the criteria pollutant ozone (O₃) and as a non-attainment area for particulate matter less than 2.5 micrometers (PM_{2.5}). The airshed is also in maintenance for carbon monoxide (CO). Washington, D.C. was designated as in attainment for CO as of March 15, 1996.

Should the action alternatives be selected, local air quality would be temporarily affected by dust and emissions from construction vehicles. Hauling materials and operating equipment would result in increased vehicle exhaust and emissions during the construction period. Hydrocarbons, nitrogen oxide, and sulfur dioxide emissions would be rapidly dissipated by air drainage since air stagnation is uncommon at the project site. In addition, fugitive dust plumes from construction equipment would occasionally increase airborne particulates in the area near the project site. Based on projects of similar scale and nature, it is expected that these temporary sources of emissions from construction vehicles and increased dust would not change regional air quality and would fall well below the minimum pollutant levels for a nonattainment PM_{2.5} and a moderate ozone non-attainment area (subject to 40 CFR Part 93 "Determining Conformity of Federal Actions to State or Federal Implementation Plans"). This would result in negligible impacts to air quality during the construction phase from the proposed action alternative (US EPA 2009).

Should the no action alternative be selected, there would be no additional impacts to air quality as this alternative represents the Park's current condition. With the action alternatives, temporary increases in air pollution would occur during construction, primarily from operation of construction equipment.

After construction is complete (operational phase), there would be no regular increase in the number of vehicles traveling within the surrounding roadway network, resulting in no new emission sources or increased vehicular emissions. Since emissions and PM levels would remain below the minimum thresholds during both the construction and operation phases of this project, this resource was not analyzed further.

Unique Ecosystems, Biosphere Reserves, World Heritage Sites

There are no known biosphere reserves, World Heritage sites, or unique ecosystems listed within or adjacent to the project area; therefore, this impact topic was dismissed from further analysis in this EA.

Socioeconomic Resources

The proposed actions would not appreciably affect either local and regional land use or local businesses or other agencies. Implementation of the proposed action could provide minimal beneficial impacts to the local economy (i.e., minimal increases in employment opportunities for the construction workforce and revenues for local businesses and government generated from increased visitorship). These increases, however, would be temporary and would not likely be noticeable over the long term. Therefore, socioeconomic resources were dismissed as an impact topic.

ALTERNATIVES

The NPS considered:

- Alternative A – No action
- Alternative B – Martin Luther King Jr. Memorial (NPS Preferred)

Alternatives considered but not carried forward are also discussed later in this chapter.

ALTERNATIVE A – NO ACTION

As part of the environmental analysis process, the consequences of a no action alternative are also considered. Under the no action alternative, all existing features of the site would remain in their existing condition and use. There would be no new development or re-configuration of the site. The existing configuration of the roadways and parking would also be maintained.

The existing trees, including cherry trees, would not be affected and no new plantings would be added to the site. West Basin Drive S.W. would remain in its current configuration, as would the surrounding recreational fields. The existing pathways, fencelines, and furniture would remain in their existing locations, without any present improvements. This area would be subject to any changes and improvements developed for West Potomac Park and the National Mall generally including those prompted by the National Mall Plan.

ALTERNATIVE B - MARTIN LUTHER KING JR. MEMORIAL (NPS PREFERRED)

The proposed action is the establishment and operation of a memorial dedicated to Dr. Martin Luther King Jr. on an approximate four acre site, located within the triangular area bounded by Independence Avenue S.W., NW, relocated West Basin Drive S.W., and the western edge of the Tidal Basin walkway in Washington DC. The overall site plan would include the components of the memorial itself, the re-alignment of West Basin Drive S.W., development of an approximately 3,000 square foot visitor services facility, and the addition of required security elements.

Memorial Design - The proposed memorial is conceptually a landscape experience, using stone, water, and trees to convey the central themes of Dr. King's legacy: justice, democracy, and hope, as well as peace, active citizenship, and moral integrity. The major components of the proposed Memorial include a central plaza partially enclosed by earthen berms, a symbolic entranceway, and a large sculptural element. The primary entrance to the Memorial would be from the intersection of Independence Avenue S.W. and West Basin Drive S.W.

The design would have visitors enter the site through the "Mountain of Despair," a rough, hewn stone portal consisting of two parted stones and a single stone pushed back into the horizon, appearing as if it were the missing piece of a single boulder.

This 15-foot wide entry portal would lead from the Entry Plaza at elevation 12 feet above mean sea level (MSL) near Independence Avenue S.W. to the Memorial Plaza, a public gathering space at elevation 8 MSL that would be defined by a crescent-shaped berm with an inscription wall on the Tidal Basin side. w. Extending approximately 500 feet in length, and peaking at eight to 12 feet in height, berm would conceal an inscription wall which will face east towards the Tidal Basin and be inscribed with prominent excerpts from Dr. King's writings.

The centerpiece of the Memorial Plaza would be a rough-hewn, 29-foot high boulder. This boulder, known as the "Stone of Hope," would be sculpted with Dr. King's image and excerpts from his speeches would be inscribed on the wall facing the Tidal Basin, along the viewshed to the Franklin Delano Roosevelt and Jefferson Memorials.

The Memorial site would be enhanced with additional tree plantings, such as cherry, oak, and evergreens, to reinforce the spatial integrity of the Memorial and ensure seasonal floral change. At the top of the wall, cherry trees would be planted in a regular arrangement to delineate the curvature of the site. Throughout the rest of the site, the trees would be planted in a more random fashion, weaving together the cherry trees and the edge of the Tidal Basin. The proposed Memorial would not alter the existing Tidal Basin walkway or water's edge.

With implementation of the proposed Memorial, approximately two acres would consist of green softscape and one acre of hardscape area, and an additional acre would be dedicated to the realignment of West Basin Drive S.W., its associated sidewalks and visitor services facility. A bus drop-off area with three bus parking spaces and six disabled parking spaces would be provided. The entire Memorial would be ADA compliant. The Memorial would be constructed as a single project from start to finish but certain activities would be phased to minimize site disruption.



Figure 4 - Martin Luther King Jr. Memorial Site Plan

Security Measures - Security Measures -

Various options for providing vehicular barriers for the Memorial were studied during the course of the design development, including the installation of a ring of bollards and reinforced street furnishings along the sidewalks on Independence Avenue S.W. and West Basin Drive S.W., on the two exposed sides of the Memorial. Other options were examined which used the berm of the Memorial itself as a form of protection and provided bollards only at the pedestrian entrances into the inner plaza; however, this option was determined not to provide enough standoff distance should there be a VBIED event.

In response, the NPS worked with the Foundation to develop a new option which continued to use the retaining walls that were already part of the Memorial design in order to provide the bulk of the perimeter security, while pushing the vehicular barriers within the walkways leading to the Memorial out further towards Independence Avenue S.W. and West Basin Drive S.W.. At the main entrance to the forecourt, a depressed planter was developed that would be located near the intersection of Independence Avenue S.W.

and West Basin Drive S.W. that greatly reduced the number of bollards needed at this entrance. The depth of the planter would allow the exposed sides to remain fairly short in height and be detailed like the retaining walls throughout the rest of the Memorial so that they integrate well into the overall design. In addition, the placement and configuration of the new planter serves to rationalize the awkward geometry of the forecourt in relation to the intersection and reintroduces an important element which had been in the original award winning concept design. Incorporating taller street trees within the planter also serves to provide shade for visitors as they enter the large forecourt, while also relating better to the historical planting in this area which includes street trees in the foreground and cherries in the background. It also serves to reduce the width of the new vista to the Mountain of Despair and Stone of Hope; overall reducing the impact on the adjacent historic landscapes.

Re-alignment of West Basin Drive S.W. – West Basin Drive S.W. SW would be re-aligned to provide buildable area and give symmetry to the site. Currently, West Basin Drive S.W. SW is a one-way, northbound road that splits into a Y-configuration approximately 225 feet south of Independence Avenue S.W. Traffic heading north on West Basin Drive S.W., wishing to turn east on Independence Avenue S.W. currently takes the right branch, while those wishing to turn west on Independence Drive take the left branch, proceed through a stoplight, and then go through a gap in the Independence Avenue S.W. median strip (Figure 4).

Under this alternative, the right branch of the Y-configuration of the road would be removed, and the left branch would be shifted west to provide additional buildable space and symmetry within the project area. The gap in the median of Independence Avenue S.W. would be shifted west to accommodate the new re-alignment, and traffic signals would be placed at the intersection. All traffic wishing to turn eastbound and westbound onto Independence Avenue S.W. would utilize the same intersection.



Figure 5 - Security Measures

The designs for these proposed changes were undertaken as part of the proposed memorial, and involved review and approval through NPS, NCPC, CFA, and the various responsible agencies of the District of Columbia. As part of the Memorial design process and the traffic signal design phase, the existing traffic volumes were used in evaluating the required lane configuration in the new West Basin Drive S.W. approach. The primary consideration of the configuration was the provision for the right-turn traffic volumes. Discussions with the District Department of Transportation (DDOT) - Transportation Policy and Planning Administration (TPPA) and Infrastructure Project Management Administration (IPMA), as well as the Memorial design team concluded that a single left-turn lane and double right-turn lanes along the new West Basin Drive S.W. would be the preferred configuration.

Development of a Visitor Services Facility- Several locations for the visitor services facility were considered with the CFA, NCPC, and through the NHPA Section 106 process, including scenarios in which the restrooms and ranger contact station were separate structures. Ultimately the location west of the realigned roadway was selected because it minimized impacts on the existing cherry trees and upon historic views. The visitor services facility would be situated on the west side of West Basin Drive S.W., approximately 40 feet south of the forecourt entrance to the Memorial. The approximately 3,000 square foot building would consist of an interpretive bookstore, ranger contact station, restrooms (including a family room), electrical room, mechanical room, and pump room (Figure 6). A 40-foot wide, distinctly paved pedestrian cross-walk would connect the building and forecourt.

The final design of the visitor services facility also involved extensive review and approval through NPS, NCPC, CFA, and the various responsible agencies of the District of Columbia including the SHPO to ensure that the placement, design and materials used in the construction of this proposed facility would be consistent and sympathetic to the general historic character of the proposed memorial and the National Mall.

Refinements to the Memorial throughout the course of the design process resulted in an overall reduction in scale. The elimination of an upper walkway dropped the center portion of the curved wall from approximately 15-feet, 6-inches to 12-feet and the changed from Oaks to Cherry trees along the front of the wall helped reduce the perceived height significantly. In addition, the length of the curved wall was shortened significantly as well, from approximately 600 to 500 feet long. The reduced footprint allowed the proposed realignment of West Basin Drive S.W. to curve slightly to the east, with the curve being more in keeping with the character of the nearby Tidal Basin. The shift of the roadway facilitated the repositioning of the visitor services building to the west side of the road while still being within the limits of the originally defined 4 acre site. Through further NHPA Section 106 review in the Spring of 2008, its positioning was further refined, sliding it to the south, so that it was less noticeable from Independence Avenue S.W. and out of important vistas. The placement and design also serve to integrate it with the southern berm and plantings of the Memorial itself so that it has no greater impact on West Potomac Park than the original Concept Design, or than the Memorial itself. The SHPO concurred with this determination as evidenced by the Memorandum of Agreement which was executed on August 25, 2008.



Figure 6 - Proposed Visitor Services Facility

MITIGATIONS MEASURES

The NPS places a strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. To help ensure the protection of natural and cultural resources and the quality of the visitor experience, the following protective measures would be implemented as part of the selected action alternative.

The NPS would implement an appropriate level of monitoring throughout the construction process to help ensure that protective measures are being properly implemented and to achieve their intended results.

GENERAL MITIGATIONS TO REDUCE IMPACTS ON SURROUNDING ENVIRONMENT

- The amount of disturbed earth area would be minimized, and the duration of soil exposure to rainfall would be limited. Disturbed soil or soil stockpiles would be covered with plastic sheeting, jute matting, erosion netting, straw, or other suitable cover material.

- Erosion containment controls such as silt fencing and sediment traps (i.e., hay bales) would be used to contain sediment on site.
- Erosion and sediment control best management practices would be inspected on a regular basis and after each measurable rainfall to ensure that they are functioning properly.
- Exposed soils would be stabilized and replanted with vegetation as soon as possible following completion of construction activities.

VEGETATION

- Prior to clearing and grading, the area to be cleared or disturbed and trees to be removed would be clearly marked to minimize the amount of vegetation loss or impacts on nearby trees.
- Only those areas necessary for construction would be cleared or disturbed and trees would be preserved wherever possible.
- Prior to clearing, vegetated areas would be assessed to determine if there are trees in the area of the proposed alignments that need protection from construction activities. Any trees selected for protection would be marked and/or fenced.
- Trees that require removal shall be replaced-in-kind with similar species in compatibly designed locations and spacing. The number of trees replanted would be equal to or greater than the number lost as a result of the proposed action.
- To the extent possible, the new trees shall be replanted as close to their original location as possible. If the number of trees that need to be replaced cannot fit within the original project area due to spatial constraints or other visual concerns, the remaining trees would be replanted in another appropriate area within the National Mall.
- Vegetation in areas replanted would be monitored following construction to ensure successful establishment. Any exotic invasive species that appear in the replanted areas would be removed.

VISUAL/AESTHETICS

- During construction, equipment would be shielded using screening to be specified in the NPS construction permit to partially obscure the view where appropriate and possible.
- The Memorial's landscape plan has been developed to restore and the overall visual character and integrity of the original cultural landscape to the greatest extent possible. Taller street trees along the perimeter of the triangular site, with smaller cherry trees nearer to the Memorial would relate to the existing landscape design on the site and would serve to reinforce the visual effects of the cherry trees around the Tidal Basin. From the north and west sides, the trees, combined with the curved, planted earthen berms with help maintain the more natural character of the site. The 12 - foot height of the berm would further integrate it into the landscape and keep it from interrupting the low horizontal plane of the Tidal Basin, with only two elements allowed to be exceptions: the sculptural "Mountain of Despair" that would rise up slightly at the center of the curved berm, punctuating the end of the entrance forecourt and framing a view of the proposed "Statue of Hope," which depicts Dr. Martin Luther King, Jr., facing the Tidal Basin. Both would rise 29' high, 9 feet higher than the original design guidelines dictated.
- The position of the Memorial in the triangular area between the Tidal Basin and Independence Avenue S.W., as well as the its scale, landscape design, and the integration of the ranger contact station into that landscape design and within the limits of the original 4 acre site, would serve to minimize the visual impact to West Potomac Park.

CULTURAL RESOURCES

- The Memorial has been designed to maintain the historic walkway around the perimeter of the Tidal Basin. Only nine historic Japanese cherry trees would be impacted to create a visual opening between the Statue of Hope and the Tidal Basin. These trees would be replaced with 30 new cherry trees which would help reinforce the historic plantings. To prevent the further loss of historic cherry trees, NPS tree protection measures, which have been developed in conjunction with the regional horticulturist, would be employed.

VISITOR USE AND EXPERIENCE

- Public information would be made available on the park website and on signs in the park to inform visitors of the need for and progress of the project. Once the Memorial is complete, a comprehensive interpretation and education media would be developed for the site.

PUBLIC SAFETY

- Construction workers and employees would follow an approved health and safety plan which incorporates all applicable regulations.
- Barriers and signs would be used around construction sites to divert the public away from potentially dangerous situations.
- Public announcements would be made on the park website and in the media to alert the public to the construction schedule and locations.
- In the event of a flood notification, U.S. Park Police would evacuate visitors from the area.
- Prior to the construction of the proposed Memorial, soil testing would occur on-site to look for the presence of materials that may be harmful to human health. In the unlikely event that harmful materials are found, no construction would begin until the level of threat to human health is determined and a remediation plan is developed and implemented.

TRANSPORTATION

- As part of the construction permitting process, the contractor would submit Traffic Control Plans to the District Department of Transportation (DDOT) for review and approval prior to the implementation of any changes (lane or sidewalk closures, temporary truck access for site excavation, etc.). The Traffic Control Plan includes measures, such as detour signs, to safely divert traffic, transit and pedestrian and bicycle traffic flows during temporary off-peak closures, or for one-way traffic during peak periods to maintain partial peak directional flow.
- NPS and DDOT would coordinate Public Advisories to notify the public of the detours, likely delays, and alternate routes including transit.
- During the closure of West Basin Drive S.W., signal timing at within the project area would be evaluated and monitored closely to determine whether timing adjustments at this intersection would need to be made to maintain current traffic flows along the Independence Avenue S.W. corridor.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD

Council of Environmental Quality (CEQ) regulations for implementing NEPA require federal agencies explore and objectively evaluate all reasonable alternatives to the preferred alternative, and to briefly discuss the rationale for eliminating any alternatives that were not considered in detail. This section describes those alternatives that were eliminated from further study and documents the rationale for their elimination.

During the course of internal scoping, a series of alternatives were considered but deemed to be unreasonable and were not carried forward for analysis in this EA. Justification for eliminating these options from further analysis was based on the following factors:

- Technical or economic feasibility.
- Inability to meet project objectives or resolve need.
- Duplication with other, less environmentally damaging or less expensive alternatives.
- Conflict with an up-to-date and valid park plan, statement of purpose and significance, or other policy, such that a major change in the plan or policy would be needed to implement.
- Too great an environmental impact.

Because the Memorial was mandated by Public Law 104-333, Section 508, and the overall design concept for the Memorial came as a result of a design competition conducted by the entity that Congress authorized to design and construct this Memorial, once the winning design was selected from the numerous entries there were no additional design alternatives. And although Congress ultimately authorized the general location for the Memorial to be within what had been Area I under the Commemorative Works Act, several locations both within Area I and elsewhere were considered but rejected. The approved Tidal Basin location for the Washington, D.C. Martin Luther King, Jr. Memorial was selected after a candidate list of five sites were investigated in a Site Selection Study, which culminated in a report dated October 1998 (Appendix C). The five selected sites were considered for the proposed Memorial but dismissed for the listed reasons.

Constitution Gardens - This site is located near the intersection of Constitution Avenue and 17th Street, within the northeast section of Constitution Gardens and the Reflecting Pool. The site consists of two buildable acres within a 27.5-acre total area. Advantages of the site include its peaceful landscaped setting, large space for public gatherings, location near public transit, and central location on the National Mall. The site has no major environmental constraints or planning restrictions.

At the NCPC's March 4, 1999 meeting, the Constitution Gardens site was approved as the site for the Washington, DC Martin Luther King, Jr. National Memorial. On March 23, 1999, the CFA disapproved the site because it is "intended as a place of refreshment and respite for the visitor" in the plan for Constitution Gardens. After these split decisions, a task force of representatives of the Foundation, NPS, NCPC, and CFA was convened to examine the issue. The west end of Constitution Gardens Lake was introduced and considered, as was a site off to the side of the Lincoln Memorial.

Recreational Fields - This site is located adjacent to the Lincoln Memorial. There are approximately 1.2 buildable acres within this 12.5-acre area. The site offers flexibility, a historical connection to the 1963 march on Washington, one of the pivotal events in Dr. King's life, and an ability to serve as a gathering place. However, a number of constraints, such as requirements to maintain access to the Reflecting Pool, preserve critical views, observe height restrictions, and maintain the ratio of built to open space, limits its development potential.

West Potomac Park - This triangular-shaped site is located south of the Independence Avenue S.W./West Basin Drive S.W. intersection, adjacent to the Tidal Basin and the Franklin Delano Roosevelt Memorial. It offers approximately 2.2 buildable acres within a 27-acre setting. While advantages of the site include its flat, open setting and views to other memorials, development of the Memorial could be adversely affected by noise, traffic, and a lack of contextual compatibility.

Tidal Basin East - This site is located on the northeastern side of the Tidal Basin, along the general axis between the White House and Jefferson Memorial. Since the site is currently bisected by a service roadway and provides approximately 200 parking spaces, the buildable space ranges from .75 acres to 1.4 acres of the total 17.5-acre site. The site is subject to a no-build area along the vista between the White House and the Jefferson Memorial, lacks a prominent location and strong connections to other memorials,

and does not offer space for public gatherings. This site was effectively disqualified as a potential site for the proposed Memorial.

RFK Stadium Plaza-This site is a 3.2-acre planting island located on the east-west axis with the Capitol. The site offers convenient access to public transportation, has no height restrictions, allows for viewing from all sides, and corresponds with future redevelopment plans for the city. However, the site's size would limit the Memorial's landscape setting, visual detractors surround the site, and there is little tourist activity in the vicinity.

THE ENVIRONMENTALLY PREFERRED ALTERNATIVE

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

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

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

After completing the environmental analysis, the NPS identified alternative A, the no action alternative, as the environmentally preferred alternative in this EA. While the no action alternative would not satisfy the purpose and need of the proposed action to establish a national memorial as specified in the authorizing legislation, this alternative would not result in any physical changes or current uses of the project area.

Alternative B, the proposed Memorial alternative, would potentially result in adverse, but mitigated effects, on the historic resources in the area and would alter the roadway network near the site. Alternative B would also re-organize the spatial relationships of the existing separated asphalt roadways and concrete sidewalks with a distinct landscaped commemorative space in a manner similar to the FDR Memorial where roadway pavement were adapted to create the majority of the commemorative space in lieu of converting open space areas of West Potomac Park.

A summary of the environmental consequences follows in Table 1.

Table 1 – Summary of Environmental Consequences

Impacted Resource	Alternative A - No Action	Alternative B – Martin Luther King Jr. Memorial (NPS Preferred)
Soil Resources	Implementation of the no action alternative would result in no new impacts to soils, topography, or geology within the project area. There would be no adverse or beneficial cumulative impacts related to these physiographic resources. There would be no impairment of these physiographic resources under the no action alternative.	Implementation of alternative B would result in short-term and long-term minor adverse impacts to soils from the increased potential for erosion, compaction, disturbance, and loss of productivity of soils resulting from the construction and operation of the proposed Memorial. In addition, implementation of this alternative would result in long-term negligible adverse impacts to geologic resources. There would be long-term negligible adverse cumulative impacts on physiographic resources associated with this alternative. There would be no impairment of physiographic resources under alternative B.
Vegetation	Implementation of the no action alternative would result in no beneficial or adverse impacts to vegetation within the project area. There would be no beneficial or adverse cumulative impacts to existing vegetation in the study area. There would be no impairment of vegetation associated with the no action alternative.	Implementation of the alternative B would result in long-term moderate adverse impacts on vegetation as a result of construction of the proposed Memorial, visitor services facility, and the realignment of West Basin Drive S.W. There would be long-term negligible to minor adverse cumulative impacts on existing vegetation found within the study area. Alternative B would not result in impairment of vegetation.
Floodplains	Implementation of the no action alternative would result in no adverse or beneficial direct, indirect, or cumulative impacts on the functions or values of the currently existing floodplains found within the project area. The no action alternative would not result in impairment of floodplain functions or values.	Overall, implementation of alternative B would result in long-term negligible adverse impacts on the currently existing floodplains found within the study area. There would be long-term negligible adverse cumulative impacts under this alternative. Based on these findings, there would be no impairment of floodplain functions or values as a result of alternative B.
Visitor Use and Experience	Implementation of the no action alternative would result in no adverse or beneficial direct, indirect, or cumulative impacts on visitor use and experience.	Implementation of Alternative B would have short-term minor to moderate adverse impacts upon visitor use and experience because of the effects of construction activities and street closures that would occur. Once completed, the proposed Memorial, visitor services facility, and the realignment of West Basin Drive S.W. would have a long-term beneficial impacts on visitor use and experience. There would also be long-term beneficial cumulative impacts to visitor use and experience associated with this alternative.
Traffic and Transportation	Under the no action alternative there would be no adverse or beneficial direct, indirect, or cumulative impacts to traffic and transportation.	Implementation of alternative B would result in short-term minor and long-term term negligible adverse impacts to traffic and transportation within the project area. Long-term minor adverse cumulative impacts would also occur.
Aesthetics and Viewsheds	The no action alternative would have no beneficial or adverse direct or cumulative impacts to aesthetic and visual resources associated the project area.	Implementation of alternative B would result in short-term moderate impact during construction and a long-term term minor adverse impact upon completion due to its intrusion into a culturally sensitive landscape. The quality of its design, however would serve to mitigate such impact and would provide a long-term beneficial impact to the overall aesthetic and visual resources of the project area and with the creation of new vistas to and from the west side of the Tidal Basin. Though designed as well as possible to blend into the selected site, the proposed Martin Luther King Jr. Memorial, its visitor services facility, and the realignment of West Basin Drive S.W. Alternative B would be new elements in an existing and celebrated landscape, resulting in long-term minor adverse cumulative impacts.
Historic Districts and Structures	The no action alternative would result in no adverse or beneficial direct, indirect, or cumulative impacts to historic districts and structures. There would be no impairment of cultural resources as a result of this alternative.	The proposed action would have moderate adverse impacts on the West Potomac Park Historic District and minor adverse impacts on the adjacent historic districts. The West Potomac Park Historic District would suffer a loss of integrity with respect to its original setting and design, while viewsheds originating from the adjacent historic districts would be altered. Consultation with the DC-SHPO, the Advisory Council on Historic Preservation, NCPC, and CFA r as well as public comment from the NHPA Section 106 process has helped refine the design of the Memorial and associated facilities as sympathetically to the surrounding historic landscape as practicable while still conveying the importance of Martin Luther King Jr. The design has been carefully considered to make sure that it meets the Secretary of the Interior's Standards and is designed to a scale and with materials that do not detract or impact views of the proposed Memorial's adjacent historic properties. Cumulative impacts on historic districts and structures would be

Impacted Resource	Alternative A - No Action	Alternative B – Martin Luther King Jr. Memorial (NPS Preferred)
		negligible to moderate long-term adverse. Based on this impact analysis, alternative B would not result in any impacts that would constitute impairment of historic districts and structures.
Park Operations and Management	Implementation of the no action alternative would result in no adverse or beneficial direct, indirect, or cumulative impacts on visitor use and experience.	Implementation of alternative B would result in short-term minor adverse impacts to NPS operations and management. Long-term minor adverse cumulative impacts to NPS operations and management would occur as future maintenance and operational resources increase and as future projects within the National Mall and Memorial Parks get implemented.

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AFFECTED ENVIRONMENT

This chapter of the EA describes existing environmental conditions in the areas potentially affected by the alternatives evaluated. This section describes the following resource areas: soils, vegetation, floodplains, visitor use and experience, traffic and transportation, cultural resources, and park management and operations. Potential impacts are discussed in the “Environmental Consequences” section following the same order.

SOIL RESOURCES

The proposed site sits on reclaimed land consisting of artificial fill that is of a heterogeneous composition and texture. Bedrock is approximately 45 to 50 feet below grade in this area (Schnabel Engineering 2003). The site has a relatively flat terrain surface, which slopes gently toward the Tidal Basin. At the water’s edge, however, there is a four-foot drop in elevation. This area, which is mostly comprised of cherry trees, is a restricted zone for development.

In terms of soils, the site is composed of Lindside type loam immediately adjacent to the Tidal Basin; with Udorthents heterogeneous fill material on the remainder of the site (USGS 1965). Lindside, which occur on nearly level floodplains, consists of very deep, moderately well-drained soils formed in alluvium washed mainly from lime-influenced soils on uplands. They offer moderate permeability. Udorthents are found on excessively drained to poorly drained soils on floodplains, terraces, and uplands. Uncovered and nearly level areas of Udorthents are usually high in fertility and available water capacity, thereby offering high potential for trees, lawns, and ornamental shrubs (SCS 1976). Both the Lindside and the Udorthents soils have general tendencies to be used for man-deposited dredged material or cuts, fills, or otherwise disturbed land (USGS 1965). In general, the soils at the site require construction of significant loads to be erected on friction piles that extend to bedrock. Drainage characteristics range from poor to moderate, with a variable pH.

The Potomac River is in close proximity to the proposed site, and a water surface level at mean sea level (0.0 MSL) creates high potential for abundant groundwater recharge from the Potomac at the Memorial site.

VEGETATION

The general vegetative character of the National Mall is that of designed landscape composed of lawn and shade trees typical of the greater National Capital Region. Prevalent features in the region include a complex of upland, floodplain forest, tidal marsh communities, frequently flooded river shores, and areas of open park-like habitat with maintained ornamental vegetation (NPS 2006a). The vegetation found within the National Mall includes more than 2,000 American elm trees (*Ulmus americana*) that line the streets. Several varieties of cherry trees (*Prunus spp.*) ring the Tidal Basin. West Potomac Park, which includes the parkland that extends south of the Reflecting Pool from the Lincoln Memorial to the Washington Monument Grounds (Monument Grounds) to the Potomac River, contains landscaped lawns with trees and shrubs. Elm trees are especially significant in West Potomac Park, the Monument Grounds, and other prominent locations in downtown Washington, D.C. The use of elms to line major streets and walkways in this area is specified in historic plans for the area.

There are approximately 85 existing deciduous and evergreen trees within the boundaries of the Memorial site, the majority of which are immature and small. The trees include American holly (*Ilex opaca*), slippery elm (*Ulmus rubra*), American elm (*Ulmus americana cultivar*), red mulberry (*Morus rubra*), London planetree (*Platanus x acerifolia*), flowering dogwood (*Cornus florida*), Kousa dogwood (*Cornus kousa*), and Amur cork tree (*Phellodendron amurense*). Of all the species found at the site, the American holly is the only evergreen. The elm trees (slippery and American) present on the site are abundant in Washington, DC. The elm tree is fast-growing and an excellent “street tree”; it has been growing in urban settings for more than a century.

FLOODPLAINS

Federal projects are guided by *Executive Order 11988, Flood Plain Management*, which states that “each agency shall provide leadership and shall take action to reduce the risk of flood loss; to minimize the impact of floods on human safety, health, and welfare; and to restore and preserve the natural and beneficial values served by floodplains.” Under *Executive Order 11988*, the NPS is responsible for evaluating the potential effects of any actions proposed within a floodplain and proposing mitigation to avoid adverse effects resulting from development within a floodplain.

According to Federal Emergency Management Agency (FEMA) mapping, the areas to the north and east of the 17th Street levee are currently designated as Zone C, which has minimal flood potential and is outside of the 100-year floodplain. The 100-year floodplain is the area adjoining a river, stream, or watercourse covered by water in the event of a 100-year flood. The area immediately south is designated as Zone B—between the limits of the 100-year flood and 500-year flood—while the area further south, in the vicinity of the Independence Avenue S.W. and 17th Street intersection, is designated as being within the 100-year flood zone (FEMA 1985).

The site is located within the 100-year flood plain of the Potomac River and, therefore, is subject to flooding. In addition to the flooding, the water surface elevation of the Tidal Basin is also influenced by the Potomac River tides. The high tide in this area may be as high as 3 feet above mean sea level. The 100-year flood plain elevation based on FEMA studies is approximately 16.5 feet above mean sea level. At 8 to 12 feet above sea level, the site is below this flood elevation.

VISITOR USE AND EXPERIENCE

Washington, D.C. is one of the most popular tourist destinations in the country. The study area for this EA is located both within and adjacent to the unit of the NPS known as the National Mall and Memorial Parks (NAMA). NAMA preserves and interprets more than a dozen sites, including the Lincoln and Jefferson Memorials, the Washington Monument, the Vietnam Veterans Memorial, the Franklin Delano Roosevelt Memorial, the Korean War Veterans Memorial, World War II Memorial, and the Pennsylvania Avenue National Historical Park. The average annual visitation to the memorials that are in close proximity to the project area are listed in Table 2 below.

Table 2 – Summary of Environmental Consequences

Memorial	Average Annual Visitation 2004-2008 (in millions)
Franklin Delano Roosevelt Memorial	2.8
Jefferson Memorial	2.3
Lincoln Memorial	4.1
Vietnam Veterans Memorial	3.8
World War II Memorial	4.9
Korean War Memorial	3.4
National Park Service Public Use Statistics Office (2009)	

On average, visitation to the NACC sites is highest between the months of March and August. Visitation peaks during the late afternoon and evening hours during these months, rising after 5:00 pm, and continuing until 9:30 pm or 10:00 pm. This is the time at which most high school groups and other sources of visitors come to the National Mall. In August, daytime visitation drops due to the often intense summer heat of the area; most visitors begin their trips by attending the air-conditioned Smithsonian Institution Museums during the day, and then visiting the National Mall and its attractions after 5:00 pm. However, in the fall, winter, and spring months, visitation is highest during the day.

The National Mall hosts a variety of special events each year, some of which attract hundreds of thousands of visitors. One of the largest of these is the National Cherry Blossom Festival. The National

Cherry Blossom Festival takes place every year at the end of March and during the first part of April and is timed to coincide with the annual blooming of the Japanese cherry trees.

Another important event that takes place on the National Mall area is the annual 4th of July celebration. Large crowds congregate on the Monument Grounds on July 4th of each year for viewing a pyrotechnics display and a celebration of the American national anniversary. The NPS launches pyrotechnics from areas around the Reflecting Pool. The epicenter is adjacent to the pyrotechnics display is the National WWII Memorial, which is partially closed after mid-afternoon on July 4.

The project area is located within the northeast section of the West Potomac Park, which includes several popular visitor attractions including nearby monuments, memorials, and the Japanese Cherry Trees along the Tidal Basin. A continuous pedestrian promenade forms a rim along the Tidal Basin and borders the site on the south and east, offering pedestrians access to the Franklin Delano Roosevelt Memorial and the Jefferson Memorial. The existing site also incorporates extensive segments of concrete walkways with handicap access ramps. These sidewalks connect to sidewalks located along Independence Avenue S.W. and into West Potomac Park. In terms of bicycle circulation, the area of the site is served by a number of trails within the West Potomac Park area.

The Supreme Court recognizes the importance of parks in the Nation's Capital as venues for special events and First Amendment demonstrations, but has stated that special events and demonstrations are subject to reasonable time, manner, and place restrictions. NPS is charged with the responsibility for managing and maintaining the National Parks and is authorized to regulate use of the parks. To this end, NPS has procedures for allowing informal use of open space and permitting of special events or demonstrations.

TRAFFIC AND TRANSPORTATION

The project area abuts two NPS roadways: Independence Avenue S.W. and West Basin Drive S.W. Independence Avenue S.W., S.W., runs east-west and is a six-lane divided roadway. It is designated as an "Other Freeway/Expressway" facility on the District of Columbia transportation network. This roadway provides service to commuter and through-traffic, as well as to local visitor traffic accessing the Monumental Core, and has stopping and standing restrictions at all times. West Basin Drive S.W. is a one-way roadway northbound roadway and is not accessible from Independence Avenue S.W. Traffic volume data provided by the District of Columbia Department of Transportation (DDOT) shows that the adjacent section of Independence Avenue S.W. currently carries approximately 35,000 vehicles per day as measured by Annual Average Daily Traffic (AADT). Review of data from earlier years shows that there has been an appreciable reduction in traffic volumes from 1996 to 2000.

West Basin Drive S.W. is an NPS roadway that borders the site to the west and is a local connector roadway between Independence Avenue S.W. and Ohio Drive S.W. The roadway, which was reconfigured in association with the Franklin Delano Roosevelt Memorial's construction, provides movement from Ohio Drive S.W. to Independence Avenue S.W. West Basin Drive S.W. is required for access to the Franklin Delano Roosevelt Memorial and to relieve Ohio Drive S.W. of traffic exiting West Potomac Park to Independence Avenue S.W.. However, West Basin Drive S.W. only serves one-way, northbound traffic flow.

Ohio Drive S.W., which is also a roadway under NPS jurisdiction, it is an important access route to the many of the memorials. Ohio Drive S.W. provides vehicular connection to the Thomas Jefferson Memorial and East Potomac Park via the Inlet Bridge, as well as somewhat indirect access to the I-395. Because of the circuitous connection, Ohio Drive S.W. and West Basin Drive S.W. do not attract significant levels of through-traffic.

Mechanical (ATR) traffic counts were conducted at the intersection of West Basin Drive S.W. and Independence Avenue S.W. over the period Friday March 28 – Thursday April 4, 2003. This period coincided with the annual National Cherry Blossom Festival. This timeframe enabled collection of typical

weekday morning and afternoon traffic volumes, as well as volumes during peak visitor demand within the off-peak hours. The traffic counts collected during these field observations showed no excessive queuing, delays, or other situations indicating significant capacity and safety deficiencies for either pedestrian or vehicular traffic (Table 3).

Table 3 - Traffic Counts (03/28/2003 – 04/04/2003)

Intersection – Independence Avenue S.W. at West Basin Drive S.W., SW	AM Peak Hour		PM Peak Hour	
	Level of Service*	Average Delay (Secs./Veh.)	Level of Service	Average Delay (Secs./Veh.)
Typical Weekday Traffic Volumes (7:15 – 8:15 AM/5:45 – 6:45 PM)	C	21.1	A	5.8
Peak Visitor Activity Traffic Volumes (10:45 – 11:45 AM/1:30 – 2:30 PM)	A	8.4	B	10.2
Description*				
LOS A describes operations with low control delay, up to 10 seconds/vehicle. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.				
LOS B describes operations with control delay greater than 10 and up to 20 seconds/vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur.				
LOS C describes operations with control delay greater than 20 and up to 35 seconds/vehicle. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level though many still pass through the intersection without stopping.				
LOS D describes operations with control delay greater than 35 and up to 55 seconds/vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high vehicle per cycle (v/c) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.				
LOS E describes operations with control delay greater than 55 and up to 80 seconds/vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.				
LOS F describes operations with control delay in excess of 80 seconds/vehicle. This level, considered unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.				
Derived from the Highway Capacity Manual LOS for Signalized Intersections				

The site is traversed by a spur connection to Independence Avenue S.W. from West Basin Drive S.W. There are 16 parking spaces within the site, five of which are restricted to permit holders. There is also a designated Bus Zone. Parking is prohibited between 1:00 AM and 9:00 AM. There are an additional 2,000 parking spaces within West Potomac Park to the south, mostly along Ohio Drive S.W. These spaces are located approximately 500-1,000 feet from the center of the project area. Use of the parking spaces is moderate during the fall and winter and higher during peak tourist seasons (spring and summer).

The Monumental Core is served by mass transit and bus transit, principally by the WMATA system. The closest Metrorail station is the Smithsonian Station on the Orange and Blue lines, which is located adjacent to the Department of Agriculture approximately eight-tenths of a mile to the east. While this distance is significant, it is noted that the site is linked by pedestrian facilities that also serve intermediate visitor attractions, such as the Washington Monument and the Bureau of Printing and Engraving. The general area is also served by WMATA bus routes along the 14th Street/I-395 corridors, Constitution Avenue and the Arlington Memorial Bridge, as well as along 23rd Street, 19th Street, 18th Street, and Virginia Avenue. These bus routes serve the Monumental Core and the site with stops in the vicinity of 14th Street at Independence Avenue S.W., Constitution Avenue at 17th Street, and Constitution Avenue near the Lincoln Memorial Circle.

The site area is also close to the current Tourmobile route, an NPS concession operation. The Tourmobile also serves the Franklin Delano Roosevelt and Thomas Jefferson Memorials, with stops along Ohio Drive S.W. in the vicinity of the Franklin Delano Roosevelt Memorial. The locations of transit stops constitute an important link between the public transportation and that pedestrian network.

HISTORIC STRUCTURES AND DISTRICTS

NHPA Section 106 of the *National Historic Preservation Act* (NHPA) of 1966, as amended, and as implemented in 36 CFR 800, requires federal agencies to consider the effects of federally funded, regulated, or licensed undertakings on cultural resources listed on or eligible for inclusion in the National

Register of Historic Places (NRHP); moreover, the federal agency must afford the Advisory Council on Historic Preservation (ACHP) the opportunity to comment in the event that an undertaking will have an adverse effect on a cultural resource that is eligible for or listed in the NRHP.

Eligibility for the NRHP is established according to the official Criteria of Evaluation (36 CFR 60.4) issued by the Department of the Interior. The criteria relate to the following:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.

For the purposes of this EA, cultural resources impact topics include either recorded or potential historic standing architectural structures, historic districts, and memorials. The Area of Potential Effects (APE) is defined as the boundaries of the site, as well as West Potomac Park and the National Mall. Although not all memorials within the APE have been listed on the National Register either individually or as contributing resources to historic districts, they are treated similarly by the NPS.

This section details the, historic, cultural, and visual designated historic resources present on the site and in the study area. The information was derived from the National Register of Historic Places, the Historic American Buildings Survey (HABS), historical narratives from manuscripts and internet sites, and field reconnaissance.

There are historic resources located within the APE for the proposed Memorial site. The most relevant of these resources to the project are described below.

The Mall - Officially bounded by Constitution Avenue on the north, the Capitol Grounds on the east, Independence Avenue S.W. on the south, and 14th Street on the west, the Mall consists of central grass panels, flanked north and south by panels planted with four rows each of American elm trees. From Pierre L'Enfant's first conception of the Mall as a grand, open promenade in 1791, to the 1901 McMillan Commission's plan, the Mall was comprised of many separate individual parks and grounds. Today, the unified Mall is emblematic of the nation's democratic government, contains monuments to milestones in the country's history, and serves as a forum within which citizens exercise their constitutional and political rights of freedom of expression.

Washington Monument and Grounds - The Washington Monument, as the nation's foremost memorial to George Washington, is one of the most recognizable structures in the United States. It is also a premier example of Egyptian Revival architecture and a notable accomplishment of 19th-century engineering. The Washington Monument Grounds have served, and continue to serve, as a vital public space in the Nation's Capital for celebrations, demonstrations, and recreation. Plans for a national monument to George Washington began as early as 1783. The Washington National Monument Society initiated a design competition in 1836, which prominent architect Robert Mills won with a plan to "harmoniously lend durability, simplicity, and grandeur." As Assistant Architect of the Capitol, Robert Mills designed landscapes featuring the Washington Monument as the focus of picturesque gardens and winding pathways. Construction began in 1848, stagnated during the Civil War, and resumed in 1878 with an alteration to Mills' original design: it proposed an unadorned Egyptian obelisk with a pointed pyramidion. The Monument opened in 1888, 40 years after the cornerstone was laid. Although not historic, the new

curvilinear paths follow the elliptical layout of a retaining wall system that encircles the Washington Monument and leads to the Monument plaza. These new paths maintain the curvilinear configuration characteristic of previous pathways for the grounds. The Washington Monument was one of the first historic properties to be listed on the National Register of Historic Places in 1966 and documented in 1981.

East Potomac Park - East Potomac Park, which is located to the south and east of West Potomac Park, occupies a peninsula between the Washington Channel and the Potomac River. East and West Potomac Parks are part of what was originally called “Potomac Flats,” a marshland formed from silt deposits along the Potomac River. By the second half of the 19th century, the Potomac Flats had become a sewage dump and a breeding ground for malaria. After a disastrous flood in 1881, Congress appropriated funds to the US Army Corps of Engineers for a 30-year “Land Reclamation Project,” which consisted of dredging of the Potomac River to create East and West Potomac Parks. In 1897, Congress designated 723 acres of this new land as Potomac Park, “to be forever held and used as a public park for the recreation and scenic pleasure of the people.” Today East Potomac Park is used primarily for recreation and offers a variety of facilities including a golf course, driving range, swimming pool, tennis courts, and picnic area. Together with West Potomac Park, East Potomac Park was placed in the National Register of Historic Places as a Historic District in 1973; its nomination was revised in 2001.

West Potomac Park - The Memorial site is located with West Potomac Park and is technically located within the boundaries of Franklin Delano Roosevelt Memorial Park (Defined by Independence Avenue S.W. on the north, the Tidal Basin on the east, the Inlet Bridge on the south, and the Potomac River on the west. Franklin Delano Roosevelt Memorial Park, which was named by Congress in 1959, is located within West Potomac Park.) Together with East Potomac Park, West Potomac Park was placed on the National Register of Historic Places as a Historic District in 1973; its nomination was revised in 2001. According to its nomination form, the 394-acre West Potomac Park is a historic landscape “characterized by broad expanses of open space framed by mature landscape plantings, and by views of major memorials that have become part of the American collective memory” (Section 7-2). Its area of significance is for landscape architecture and architecture, and its periods of significance are from 1825-1849, from 1875-1899, and from 1900-1924.

Successive historic development plans have shaped West Potomac Park:

- ***L’Enfant Plan of Washington*** - The sole American example of a comprehensive Baroque city plan; the L’Enfant Plan is characterized by a coordinated system of radiating avenues, vistas, and parks overlain upon an orthogonal grid of streets. Major elements in the project study area include the Mall and the Washington Monument Grounds, L’Enfant Plan streets including Independence Avenue S.W., and L’Enfant Plan vistas including the cross-axial vista from the Capitol along the Mall toward the west and from the White House across President’s Park toward the south. The L’Enfant Plan of 1791 established the urban design concept that was later applied to the creation of West Potomac Park.
- ***McMillan Plan of 1901***- The Senate Park Commission of 1901, known as the McMillan Commission, expanded the L’Enfant Plan to create the most elegant example of City Beautiful tenets in the nation. The McMillan Plan is significant because it represents the first effort to conduct systematic, comprehensive urban planning for a major city. The Plan reclaimed land west of the Washington Monument, which “extended the grand axis of the Mall as a formal greensward within West Potomac Park, which terminated at the Neoclassical memorial to Abraham Lincoln,” added the Reflecting Pool as a “formal element connecting the Lincoln Memorial and the Washington Monument,” and extended the vista south from the White House “across reclaimed land to the site for another notable monument (now the Jefferson Memorial).” The features implemented from the 1901 McMillan Plan are National Register-designated resources included in the 1997 nomination of the L’Enfant Plan.

Several historic resources in West Potomac Park can be considered part of the setting for the site. As a result, these resources are most relevant to the proposed Memorial including:

Tidal Basin - Nearly a quarter of the total acreage of West Potomac Park is occupied by the six foot deep Tidal Basin. The Tidal Basin is a constructed body of water shaped like an asymmetrical quatrefoil. The 110-acre Tidal Basin was designed by US Army Major Peter C. Hains in 1882, was dredged in 1885, and was re-dredged in 1907. The basin is a significant feature of the reclamation and improvement of the Potomac Flats, which is one of the most important projects undertaken by the US Army Corps of Engineers in the late 19th century. In addition to providing the Park with a picturesque focal point and recreation amenities, it serves a practical function of preventing stagnation by flushing waters into the Washington Channel. Hundreds of cherry trees line the banks of the Tidal Basin, which is a contributing site to the Historic District.

Stone Seawalls - The Tidal Basin is rimmed with stone retaining walls, which prevent the earth fill from eroding back into the Potomac River. The seawalls in West and East Potomac Park were constructed by the US Army Corps of Engineers in the 1880s and 1890s; the Tidal Basin seawall was completed in 1896. The Tidal Basin seawalls are capped by an eight-foot-wide concrete walk, which was intended to provide safe access to the water for passive recreation, such as sightseeing, strolling, and fishing.

Japanese Cherry Trees - The cherry trees along the Tidal Basin are considered a major character-defining component of West Potomac Park and are a protected feature. Twelve species of flowering cherry trees (or ‘Sakura’) were presented as a gift from the Japanese government to the United States. In 1912, First Lady Helen Herron Taft and the Viscountess Chinda, wife of the Japanese ambassador, planted two Yoshino cherry trees on the northern bank of the Tidal Basin just east of the project site. Some of the oldest cherry trees at the Tidal Basin are located within the Memorial site. Today, an estimated 150 to 200 of the original trees survive; however, only two species, the white Yoshino and pink Kwanzan are present. Since replacement records have only been kept since the 1970s, the precise location of many of the original trees is not known.

The annual Cherry Blossom Festival commemorates the renewed friendship between Japan and the United States, Japanese culture, and the arrival of spring. The Festival is held for two weeks, from the end of March until the beginning of April. On average, the date of the trees’ peak bloom is in early April, which coincides with the anniversary date of the assassination of Dr. King.

West Potomac Park Recreation Fields - Although these grounds have been used intermittently for polo and other sports for years, they do not contribute to the East and West Potomac Parks Historic District. They do not have any recognizable structures, the grounds were not planned or planted according to any known plan, and they have been extensively altered over time.

West Basin Drive S.W. – Although a road has been located in this area since 1908, the current alignment of the drive does not contribute to East and West Potomac Parks Historic District. The drive has undergone several re-alignments when the area was used for temporary buildings and parking lot from 1942 until their removal in 1965.

Additional contributing resources to West Potomac Park include the following:

- **Lincoln Memorial** - This memorial to the nation’s 16th president functions as the formal terminus to the McMillan Commission’s extended Mall. The memorial’s monumental stairs have served as the site of many pivotal events in the Civil Rights movement, including Dr. King’s “I Have a Dream” address during the March on Washington for Jobs and Freedom.
- **Lincoln Memorial Grounds** - The grounds are comprised of several landscapes, including Lincoln Memorial Circle, which was implemented in 1932, and the Watergate Steps, which was designed in 1929 by the architecture firm of McKim, Mead and White. The first formal design for this area was a collaboration between Henry Bacon and Frederick Law Olmsted, Jr.

- **Reflecting Pool** - The McMillan Plan called for this formal water element, located between the Washington Monument and Lincoln Memorial. It is 0.3 miles long and lined with shade trees.
- **Elm Trees** - The double rows of Dutch Elms that line the asphalt walkways along the north and south sides of the Reflecting Pool are a defining feature within the McMillan Plan landscape. The original Elms were imported from England and planted in 1915.
- **Arlington Memorial Bridge** - This 2,163-foot Neoclassical bridge was designed by the architectural firm of McKim, Mean and White and constructed between 1926 and 1932. It physically and symbolically connects the Lincoln Memorial to Arlington Cemetery and features nine arches and two pairs of statues, flanking the ends of the bridge.
- **Constitution Gardens** - This 52-acre designed park features a six-acre curvilinear constructed lake, with a kidney-shaped island on which the Memorial to the Signers of the Declaration of Independence stands. The Vietnam Veterans Memorial is also within the park's boundaries.
- **Vietnam Veterans Memorial** - Known as "The Wall," the memorial was designed by Maya Lin, and was dedicated in 1982. Its V-shaped black granite panels are inscribed with the names of the deceased and missing. After extensive debate, a flagstaff and figurative sculpture entitled "Three Servicemen" were incorporated into the permitted design in a granite-paved plaza situated at a distance from the memorial.
- **Vietnam Women's Memorial** - This memorial, which honors the women who served in Vietnam, was designed by George Dickie. Glenna Goodacre sculpted the central artwork. The memorial was dedicated in 1993.
- **The 56 Signers of the Declaration of Independence Memorial** - This memorial, located on the lake within Constitution Gardens, consists of 56 large granite blocks featuring the signatures of the signers of the 1776 document.
- **Tidal Reservoir Outlet Bridge** - The US Army Corps of Engineers built the Outlet Bridge, located where East Basin Drive crosses the Washington Channel, in 1888-89 as the primary tidal gate for the Tidal Basin. Today, the bridge functions primarily as a pedestrian crossing.
- **Tidal Reservoir Inlet Bridge** - The Inlet Bridge, which is located on Ohio Drive S.W., was constructed in 1908-09 after it was determined that the primary tidal gate was insufficient for regulating the basin's flow. The bridge was designed by noted Washington, DC architect Nathan C. Wyeth and features ornamental gargoyles.
- **Independence Avenue S.W. Extension** - This road project was initiated in the 1940s to facilitate access from Washington, DC to the Pentagon in Arlington, Virginia. Philadelphia architect Paul Philippe Cret designed a narrow dual-highway system (including the Kutz Bridge) that connected to the 14th Street Bridges and the Memorial Bridge.
- **Kutz Memorial Bridge** - This bridge is named in honor of Charles W. Kutz, who authored the District of Columbia's first zoning law. Several components of the landscape surrounding the bridge can be attributed to Frederick Law Olmsted, Jr.
- **John Paul Jones Statue** - Located at 17th Street and Independence Avenue S.W., SW, this memorial to the Revolutionary War naval hero consists of a bronze portrait statue in front of a marble pylon. The memorial was dedicated in 1912.
- **Japanese Lantern** - In 1954, the Japanese Ambassador presented a 300-year-old Japanese stone lantern to Washington, DC. This lantern commemorates the 100th anniversary of the first Treaty of Peace between the United States and Japan, signed by Commodore Matthew Perry. The lighting of the lantern officially opens the National Cherry Blossom Festival.

- **Japanese Pagoda** - In 1958, the Mayor of Yokohama presented the Japanese Pagoda to symbolize the spirit of friendship between the United States and Japan. The nine-tiered Pagoda is located on the west bank of the Tidal Basin near the Franklin Delano Roosevelt Memorial.
- **Franklin Delano Roosevelt Memorial** - This memorial, designed by Lawrence Halprin, depicts Roosevelt's four terms of office with a procession of four interpretive outdoor rooms. From the Great Depression through World War II, his accomplishments, programs, and life are commemorated with sculpture, water, engraved quotations, and landscape plantings. The memorial was dedicated in 1997 and occupies the last of four ceremonial spaces reserved by the 1901 McMillan Plan.
- **Jefferson Memorial** - This neoclassical rotunda with a bronze statue of Thomas Jefferson, the nation's third president, was designed by John Russell Pope and Frederick Law Olmstead. It was dedicated in 1938.
- **Jefferson Memorial Grounds** - Although much of what is planted today was not in Frederick Law Olmsted, Jr.'s original design, the grassy terrace and circular roadway are extant. Furthermore, the grounds' design, age, tradition, and symbolism invest the landscape with its own significance.
- **John Ericsson Monument** - This memorial, located in a traffic circle at 23rd Street, Independence Avenue S.W. and Ohio Drive S.W., honors the Swede who revolutionized maritime engineering and designed the "Monitor," whose successful Civil War battle made Ericsson a hero. The Monument and its landscape, for which Frederick Law Olmsted, Jr. was the consultant, was completed by 1932.
- **District of Columbia World War I Memorial** - This 1931 memorial honors the 26,000 D.C. residents who served in the US armed forces during World War I. The memorial is a marble, Doric column temple within a grove of tall hardwood trees. Frederick H. Brooke designed it in collaboration with noted architects Nathan C. Wyeth and Horace W. Peaslee.
- **Korean War Veterans Memorial** - This memorial, located south of the Reflecting Pool on a direct axis with the Vietnam Veterans Memorial was dedicated in 1995. It depicts nineteen soldiers passing through a battlefield, a wall of etched photographic images taken during the conflict, a fountain, and a flag.

The National Mall - This is a larger area that stretches from the grounds of the Capitol Grounds west to the Potomac River, and from the Jefferson Memorial north to Constitution Avenue. The history and culture associated with the National Mall is a reflection of American History. The National Mall serves as a setting for four major presidential memorials (the Washington Monument, Lincoln Memorial, Jefferson Memorial, and Franklin Delano Roosevelt Memorial), and several war memorials (the Vietnam Veterans Memorial, Korean War Veterans Memorial, DC World War I Memorial, and the National World War II Memorial).

Such First Amendment activities include demonstrations, marches, rallies, and vigils. Major historic events have included: Dr. King's "I Have a Dream" speech from the steps of the Lincoln Memorial in 1963 as part of the March on Washington for Jobs and Freedom, anti-Vietnam War demonstrations, the first major Earth Day celebration in 1971, and the Million Man March in 1995.

PARK OPERATIONS AND MANAGEMENT

The NPS oversees approximately 1,100 acres making up the National Mall and Memorial Parks. Park management structure is divided into the Office of the Superintendent and six divisions including: the Administration, Maintenance, Interpretation and Education, Park Programs, and Resource Management. Budgets are not assigned to specific memorials or areas of the park but rather come as one appropriation.

The annual operating budget for the National Mall and Memorial Parks for fiscal years 2007 and 2008 was \$30,160,530 and \$31,421,740 respectively.

National Mall and Memorial Parks staff is responsible for all operations and maintenance associated with of West Potomac Park (i.e., upkeep, staffing, and maintenance of grounds, memorials, and facilities; security; litter clean-up; interpretation; snow removal; and upkeep of NPS roads). Refreshment stands are located near the Lincoln Memorial and in Constitution Gardens. The closest restroom to the project area is located at the Franklin Delano Roosevelt Memorial. Restrooms are also located near the Lincoln Memorial, Constitution Gardens, the Washington Monument Grounds, and the Ellipse. Additionally, as part of the new World War II Memorial, a new comfort station/restroom facility has been constructed.

In the Monumental Core area, the US Park Police is responsible for law enforcement. The Park Police is divided into three Districts - Central, East, and West. Central District (D-1) is headquartered at Hains Point and patrols West Potomac Park, the National Mall, and downtown Washington. The U.S. Park Police also have facilities within the National Mall and Memorial Parks. The Central District personnel have jurisdiction over the Memorial site. The District of Columbia provides fire protection and emergency medical services for the site and the study area.

ENVIRONMENTAL CONSEQUENCES

GENERAL METHODOLOGY FOR ESTABLISHING IMPACT THRESHOLDS AND MEASURING EFFECTS

This chapter addresses the potential impacts to each of the impact topics discussed under the “Affected Environment” chapter for each of the alternatives. The action alternatives are compared to the no action alternative, or baseline condition of the project area, to determine impacts to resource topics. In the absence of quantitative data, best professional judgment was used. In general, effects were determined through consultation and collaboration with a multidisciplinary team of NPS, the District, and other professional staff. Regulatory agency consultation with the U.S. Fish and Wildlife Service, the District of Columbia Historic Preservation Office (DC HPO), and other existing data sources such as park planning documents and the NCP-East website were also used to assess the potential impact of each alternative.

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

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

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

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

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

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

CUMULATIVE IMPACTS

The Council on Environmental Quality (CEQ) regulations to implement NEPA require the assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions” (40 CFR Part 1508.7).

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 impacts of other past, present, or reasonably foreseeable future projects or plans in the study area. Table 4 summarizes the actions that could affect the various resources that are evaluated in this Environmental Assessment (EA).

The analysis of cumulative effects was accomplished using four steps:

Step 1—Resources Affected. Fully identify resources affected by any of the alternatives (i.e., the impact topics).

Step 2—Boundaries. Identify an appropriate spatial boundary for each resource (i.e., the study area for each topic).

Step 3—Cumulative Action Scenario. Determine which actions may affect the resources identified.

Step 4—Cumulative Impact Analysis. Summarize the cumulative impact, which are the effects of the proposed action plus other actions affecting the resource.

Table 4 - Cumulative Impact Projects

Impact Topic	Study Area	Past Actions	Present Actions	Future Actions
Physiographic Resources	Area within and immediately adjacent to Project Area	Fill and development	Landscaping, maintenance, and recreation	None
Vegetation	National Mall and Memorial Parks in the vicinity of the project area.	Landscaping and maintenance; Public events and visitor use	SAME AS PAST	SAME AS PRESENT, plus the construction of: National Museum for African American History and Culture (NMAAHC); and Vietnam Veterans Memorial Visitor Center (VVMC); and The construction of the Potomac Park Levee
Floodplains	National Mall and Memorial Parks in the vicinity of the project area.	Fill and development; Construction in floodplain; Road improvements; Levee construction; Construction of FDR Memorial & WWII Memorial in floodplain	SAME AS PAST	Construction of the Potomac Park Levee
Visitor Use and Experience	National Mall and Memorial Parks within the general vicinity of the project area.	Lincoln Memorial Circle rehabilitation Security improvements including at Washington and Lincoln Memorials Landscape; Public events and visitor services, including food service and book sales offered by park; concessionaires, Tourmobile, boat rental on the Tidal Basin, stand alone restroom facilities, etc.	SAME AS PAST, plus: Increased traffic and development	SAME AS PRESENT, plus the construction of: NMAAHC; VVMC; and the Potomac Park Levee
Aesthetics and Visual Quality	National Mall and Memorial Parks in the viewshed of the project area	Development of the National Mall and Memorials; Lincoln Memorial Circle rehabilitation; Road improvements Landscape and maintenance; Public events and visitor use; Security improvements	SAME AS PAST	SAME AS PRESENT
Historic Structures and Districts	Area of Potential Effect (APE) for cultural resources	SAME AS AESTHETICS	SAME AS AESTHETICS	SAME AS AESTHETICS
Park Operations	National Mall and Memorial Parks	Public events and visitor use; Increased security actions and projects; and Maintenance	SAME AS PAST	SAME AS PRESENT plus expected increased visitation; possible additional security concerns; and construction of the NMAAHC; VVMC; and the Potomac Park Levee

POTENTIAL CUMULATIVE IMPACTS ACTIONS

The following provides additional discussion on how the list of potential cumulative impact actions listed above could contribute to the cumulative impacts. Pursuant to guidance from the CEQ, the past actions listed above are reflected in the description of each resource as part of the affected environment.

Therefore, only impacts related to present and reasonably foreseeable future actions are discussed further. In addition to those actions identified below, other current and future plans, including the National Mall Plan (NMP), are described in chapter 1.

- *Landscape and maintenance:* The NPS actively manages and maintains the landscape on the National Mall, resulting in impacts, primarily beneficial, to vegetation, aesthetics, and visitor experience and use. Some adverse impacts may be associated with visitor experience and aesthetics while landscape and maintenance operations are taking place.
- *Public events and visitor use:* The National Mall attracts visitors from all over the world, approximately 26 million people per year for a variety of recreational and educational opportunities and also to commemorate historic events and people. Most visitations to the Monumental Core occur in spring and summer. In addition, the National Mall also hosts special events each year, including demonstrations, festivals, and holiday celebrations, including the 4th of July Independence Day celebration. These special events can draw hundreds of thousands of people to the area. Special events have the potential to add to the impacts related to levee construction in terms of additional resource damage to vegetation, aesthetics, public safety, and cultural resources as well as park management and operations. The proposed timing of construction will play a role in the level of impacts.
- *Increased security and security improvements:* Since the bombing of the Alfred P. Murrah Federal Building in 1995 and the September 11, 2001 attacks on the Pentagon and World Trade Centers, and several recent embassy attacks, security improvements have been implemented or will likely be implemented in the future throughout the Washington, D.C. area, including the National Mall and Memorial Parks. These have included using concrete barriers and other devices meant to limit access, especially to vehicles. The measures, although important for public safety, have resulted in impacts on the vegetation, aesthetics, and cultural resources of the area. In addition, these improvements have impacts on traffic patterns and congestion. In order to address potential security issues, law enforcement has also been increased, causing impacts on park management and operation. There are planned security improvements at the Jefferson Memorial that will involve the construction of a permanent vehicle barrier.
- *Increased traffic and development:* Like most major metropolitan areas along the east coast of the United States, Washington, D.C. has experienced growth. This has resulted in increases in local development and corresponding traffic. Proposals for improved public transportation could alleviate some of these impacts. However, increased traffic and development could cause impacts on land use, aesthetics, cultural resources, utilities and infrastructure, and visitor use and experience.
- *Road improvements (including Constitution Avenue repaving):* In order to address an aging transportation infrastructure and increases in population and security concerns, a number of road improvements have been and will be proposed in the area. These projects have the potential to impact traffic and transportation, land use, utilities and infrastructure, public safety, visitor use and experience, aesthetics, and cultural resources.

- *Construction of other buildings on the National Mall:* This development can contribute to impacts concerning vegetation, floodplains, aesthetics, cultural resources, visitor use and experience, utilities and infrastructure, public safety, socioeconomics, and park management and operations. These buildings include:
 - National Museum for African American History and Culture (NMAAHC): This building will provide a place for all Americans to learn about the history and culture of African Americans and their contributions to and relationship with every aspect of our nations' life. It will be located on a five-acre parcel that is part of the Washington Monument grounds on the National Mall, bounded by Constitution Avenue on the north, Madison Drive on the south, 14th Street NW on the east, and 15th Street NW on the west.
 - Vietnam Veterans Memorial Visitor Center (VVMC): This center will educate students and visitors about the Vietnam War and the Memorial itself. The VVMC will be an essentially underground facility of approximately 25,000 square feet that 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.
 - Potomac Park Levee Project: The NPS, in cooperation with the District of Columbia and the U.S. Army Corps of Engineers (USACE) and NCPC are designing and constructing improvements to the Potomac Park levee system located in Washington, D.C. to improve its reliability for river flood protection in a manner that respects the resources and values of the National Mall. Primary construction of this project will occur on 17th Street N.W., between Independence Avenue S.W. and Constitution Avenue N.W., north of the World War II Memorial.
 - World War II Memorial: This Memorial is located across Independence Avenue S.W. from the proposed Martin Luther King, Jr. Memorial site and will be considered in the discussion of visitation patterns.

IMPAIRMENT ANALYSIS

The NPS 2006 Management Policies (NPS 2006) require an analysis of potential effects to determine whether or not actions would impact park resources, but also to determine whether those actions would impair park resources. The fundamental purpose of the NPS as established by the NPS Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. These laws give the NPS the management discretion to allow impacts to park resources and values (when necessary and appropriate) to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. NPS managers must always seek ways to avoid or minimize to the greatest degree practicable, adversely impacting park resources and values.

The impairment prohibited by the NPS Organic Act and the General Authorities Act is an impact, in the professional judgment of the responsible NPS manager, that harms the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. Whether an impact meets this definition depends on the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. An impact to any park resource or value may constitute impairment, but an impact would be more likely to constitute an impairment to the extent that it has a major or severe adverse effect upon a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or

- identified as a goal in the park's general management plan or other relevant NPS planning documents.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by contractors, and others operating in the park. An impairment determination is included in the conclusion statement for all impact topics related to all of West Potomac Park's natural and cultural resources. Impairment determinations are not made for visitor use and enjoyment, health and safety, socioeconomics, or park operations and management, because impairment findings relate back to park resources and values and these impact areas are not generally considered to be park resources or values. Impairment determinations are not made for visitor use and experience because, according to the Organic Act, enjoyment cannot be impaired in the same way an action can impair park resources and values.

PHYSIOGRAPHIC RESOURCES

METHODOLOGY AND ASSUMPTIONS

Potential impacts to physiographic resources (i.e., soils, geology, and topography) are assessed based on the extent of disturbance to natural undisturbed soils, the potential for soil erosion resulting from disturbance, and limitations associated with the soils. Analysis of possible impacts to geologic resources was based on on-site inspection of the resource within the project area, review of existing literature and maps, and information provided by the NPS and other agencies.

STUDY AREA

The geographic study area for soil resources is contained within the boundaries of the Project Area. It is expected that construction/expansion activities would not occur outside this area.

IMPACT THRESHOLDS

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

Negligible – Physiographic resources would not be impacted or the impact would be below or at the lower levels of detection.

Minor – Impacts to physiographic resources 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 to physiographic resources would be readily apparent and result in a change to the soil, topographic, and geologic character over a relatively wide area. Mitigation measures would be necessary to offset adverse impacts and would likely be successful.

Major – Impacts to physiographic resources would be readily apparent and substantially change the character of the geology, topography, and soils over a large area both in and out of the Park. Mitigation measures necessary to offset adverse impacts would be needed, extensive, and their success would not be guaranteed.

Duration – Short-term impacts occur during the implementation of the alternative; long-term impacts extend beyond implementation of the alternative.

ALTERNATIVE A – NO ACTION ALTERNATIVE

Analysis. Under the no action alternative, within the project area there would be no new construction, changes in use, or any other ground-disturbing activities that would have adverse or beneficial impacts to the physiographic resources (i.e., soils, topography, geology) of the site.

Cumulative Impacts. Since there are no beneficial or adverse impacts to soils, topography, or geology associated with the no action alternative there would be no adverse or beneficial cumulative impacts.

Conclusion. Implementation of the no action alternative would result in no new impacts to soils, topography, or geology within the project area. There would be no adverse or beneficial cumulative impacts related to these physiographic resources. There would be no impairment of these physiographic resources under the no action alternative.

ALTERNATIVE B – MARTIN LUTHER KING JR. MEMORIAL (NPS PREFERRED)

Analysis. Alternative B would include the construction of the new Memorial and the visitor services facility, and the realignment of West Basin Drive S.W. In preparing the roughly four-acre site, heavy machinery would be used to prepare the site for construction (i.e., grading and leveling), remove the existing West Basin Drive road bed, and to prepare a new road bed for the new realignment. Some cut-and-fill operations would be conducted particularly at the semicircular inscription wall, the Mountain of Despair, and the Stone of Hope. The entry slope would be altered starting at the Independence Avenue S.W. and traveling down through the Memorial Plaza (elevation eight feet) and ending just short of the existing cherry trees to avoid the Tidal Basin edge (elevation four feet'). The Memorial Plaza would consist of hardscape and softscape altering the current road and grass.

Surface soils would be reworked and re-compacted under pile support structures, paving, and fill. The soils that would be disturbed by the development are likely fill soils that were previously added on the site when the retaining wall for the Tidal Basin was created. Cut-and-fill amounts would be balanced to the extent possible to minimize the need to import or export soils during construction at the site, and no storage of soil would be allowed on site. Ground settlement that may occur due to cut, fill, and loading would be controlled to an acceptable level by making several adjustments. For example, the proposed new berm might use light-weight fill, or air voids can be created within the berm. During all construction activities associated with alternative B, impacts to soils would be minimized by implementing erosion and sediment control measures as outlined in a Washington, D.C. Department of the Environment approved erosion and sediment control plan. These measures could include but are not be limited to the following:

- Armoring ditches on a site-by-site basis to prevent scouring and erosion.
- Tilling the soil and replanting the surrounding areas impacted, as needed.
- Using silt fencing and sediment traps (i.e., hay bales) to contain sediment on site.

Erosion and sediment control best management practices would be inspected on a regular basis and after each measurable rainfall to ensure that they are functioning properly.

The Memorial site is located adjacent to the cherry trees and walkway along the Tidal Basin of the Potomac River. Based on tidal fluctuations of the groundwater, the site groundwater is connected hydrostatically to the Potomac. Engineers have estimated that the relationship equates to potentially unlimited recharge of the water table by the Potomac River (Mueser Rutledge 2002). The groundwater table is estimated for the site to be approximately three-to five-feet below the surface. Construction of the Memorial would involve driving piles 45 feet below the surface. Dewatering, should it be necessary as part of the construction of the Memorial, would follow all guidelines set by the EPA and other governing groups. If needed to limit groundwater disturbance to the Tidal Basin Seawall, a slurry wall would be constructed around the perimeter of the site.

As a result of these construction activities, soils would be compacted, soil layer structure would be disturbed and modified, and soils would be exposed, increasing the overall potential for erosion. Soil productivity would decline in disturbed areas and be completely eliminated for those areas where actual construction has taken place. After construction is complete, approximately two acres (50 percent) of the Memorial would remain green space.

Overall, because of the fact that the entire area is made up of fill material, and the fact that mitigation measures would be put into place to protect and restore damaged soils during and after construction, impacts to soils associated with the construction of the new Memorial and visitor services facility, and the realignment of West Basin Drive S.W. lot would be short-term and minor. There would, however, also be

long-term minor adverse impacts as soil productivity is lost as a result of the hardening of approximately two acres of the project area.

Geologic resources would be altered by the proposed Memorial. Piles would be driven 45 to 50 feet to reach bedrock and strengthen the stability of the site. The piles and grade beams would be located to provide a sound and sufficient foundation for the Memorial, particularly with respect to the Inscription Wall, Mountain of Despair, and Stone of Hope. The use of piles and grade beams would also avoid settlement of the berm and eliminate a shear condition for any utilities that may be routed within the berm and pass into the retaining wall. Pre-construction loading of the site may also be incorporated to avoid settlement. This technique was used at the FDR and Korean War Veterans Memorials. Due to the relatively small area of bedrock being affected, and the fact that no excavation of this material would be necessary, the overall adverse impacts to the geologic resources of the project area would be negligible and permanent.

Cumulative Impacts. Impacts to physiographic resources are site specific and are not affected by cumulative development outside the study area. Cumulative impacts would only occur if development immediately within or adjacent to the site directly or indirectly affected the geology, topography, and/or soils of the site. There are no present or future actions that would result in any impacts to the physiographic resources within or adjacent to the site. Past actions that have impacted the physiographic resources of the area include the fact that the entire project area and a good portion of the National Mall and Memorial Parks are built upon fill material, which created land suitable to build structures and grow vegetation. The beneficial impacts of this action, in combination with the short- and long-term minor adverse impacts to soils and long-term negligible adverse impacts on geologic resources that would result from alternative B would result in long-term negligible adverse cumulative impacts on physiographic resources.

Conclusion. Implementation of alternative B would result in short-term and long-term minor adverse impacts to soils from the increased potential for erosion, compaction, disturbance, and loss of productivity of soils resulting from the construction and operation of the proposed Memorial. In addition, implementation of this alternative would result in long-term negligible adverse impacts to geologic resources. There would be long-term negligible adverse cumulative impacts on physiographic resources associated with this alternative. There would be no impairment of physiographic resources under alternative B.

VEGETATION

METHODOLOGY AND ASSUMPTIONS

Available information on the vegetation occurring at the proposed sites, especially mature trees and landscape, was compiled and reviewed. Impacts on vegetation were based on general characteristics of the site and vicinity, available aerial photos, site observations, proposed encroachment into vegetated areas associated with construction, and removal of vegetation.

STUDY AREA

The study area for vegetation is contained within the boundaries of the Project Area.

IMPACT THRESHOLDS

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

Negligible – Very few individual trees or mature landscape plantings would be affected, and no older mature trees would be impacted.

Minor – A few individual trees or mature landscape plantings would be affected; however, mitigation measures such as replanting to avoid or offset impacts on trees could be implemented

which would be effective in replacing or reducing losses of vegetation in a short time. No older mature trees would be impacted.

Moderate – A relatively large number of individual trees or mature landscape plantings would be affected, including older mature trees. Mitigation measures such as replanting to avoid or offset impacts on trees and other landscaping of greater concern could be implemented and would be effective in replacing or reducing losses of vegetation, but extended time may be needed for the regeneration of mature vegetation that is lost.

Major – A substantial number of individual trees or mature landscape plantings would be affected, and numerous older mature trees would also be impacted, either directly or indirectly. Actions would substantially change the vegetation over a large area in the study area. Extensive mitigation would be needed to offset adverse impacts, and its success would not be assured.

Duration – Short-term impacts lasting less than one year; long-term impacts lasting longer than one year.

ALTERNATIVE A – NO ACTION ALTERNATIVE

Analysis. Alternative A would call for the continued use of the site without any new construction or ground-disturbing activities or changes in visitor use. Under the no action alternative, there would be no change to existing vegetation, except for routine grounds keeping maintenance. As a result, there would be no beneficial or adverse impacts to vegetation associated with this alternative.

Cumulative Impacts. Since there are no beneficial or adverse impacts to vegetation associated with the no action alternative there would be no adverse or beneficial cumulative impacts.

Conclusion. Implementation of the no action alternative would result in no beneficial or adverse impacts to vegetation within the project area. There would be no beneficial or adverse cumulative impacts to existing vegetation in the study area. There would be no impairment of vegetation associated with the no action alternative.

ALTERNATIVE B – MARTIN LUTHER KING JR. MEMORIAL (NPS PREFERRED)

Analysis. Construction of the proposed Memorial would involve the disturbance of trees, grasses, and soils on the site, including approximately 85 existing deciduous trees. However, except for one specimen tree, the on-site trees are immature and small, and no habitat of rare, threatened, or endangered species would be disturbed.

The existing cherry trees next to the site would be protected during construction. However, depending on slope and alignment, up to nine cherry trees would be relocated, primarily to allow for a handicapped ramp connecting the Memorial to the Tidal Basin walkway. During construction of the Memorial, extraordinary attempts would be made to maintain clearance around trees using fences and other resources including structural platforms around the base of trees to minimize soil compaction. Upon completion of construction, grassed areas would be revegetated with sod, and substantial trees would be planted, resulting in a net gain in trees and shrubs on the site. As planned, the Memorial landscaping would include approximately 45 canopy shade trees, 20 flowering trees, and 30 new cherry trees.

Impacts on trees and other vegetation on-site would be minimized to the maximum extent possible by implementing mitigation measures that avoid impacts to cherry trees by:

- Maintaining all construction activities within the boundaries of the site so they would not disrupt cherry trees. Cherry trees would be protected by fencing during construction;
- Providing special irrigation measures, as needed, for cherry trees in the vicinity;
- Taking precautionary measures to protect trees such as, but not limited, to root pruning and mulching; and

- Predrilling piles and confining heavy equipment to areas of proposed development to limit disturbance of vegetation to the minimum extent necessary.

While it would take several years for the newly planted trees to grow to the heights of trees removed, replanting would be effective in replacing the initial loss of vegetation. As a result of the actions proposed under this alternative, there would be long-term moderate adverse impacts on the vegetation found within the project area. These adverse impacts, however, would subside over time as the vegetation on the site is re-established.

Cumulative Impacts. Activities in the project area that have or could affect vegetation include ongoing landscape and facility maintenance, security improvements, public events and visitor use, and several future projects that would directly affect the National Mall. Ongoing landscape and maintenance activities throughout the National Mall and Memorial Parks would likely result in long-term beneficial cumulative impacts. Future projects within the project area that could affect vegetation include construction of other buildings on the National Mall, including the NMAAHC and VVMC; and the Potomac Park Levee project. These projects would contribute cumulatively to impacts on vegetation in the study area, potentially resulting in long-term minor adverse cumulative impacts on vegetation. However, each project would be subject to specific requirements to reduce the individual impact on vegetation. Consequently, any long-term impacts associated with earth-disturbing activities within the study area would remain minor. The impacts of all these actions, in combination with the long-term moderate adverse impacts on vegetation from the propose action would result in long-term negligible to minor adverse cumulative impacts on vegetation.

Conclusion. Implementation of the alternative B would result in long-term moderate adverse impacts on vegetation as a result of construction of the proposed Memorial, visitor services facility, and the realignment of West Basin Drive S.W. There would be long-term negligible to minor adverse cumulative impacts on existing vegetation found within the study area. Alternative B would not result in impairment of vegetation.

FLOODPLAINS

METHODOLOGY AND ASSUMPTIONS

Floodplains are defined by the NPS Floodplain Management Guideline (NPS 1993) as “the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, and including, at a minimum, that area subject to temporary inundation by a regulatory flood.” Executive Order 11988: “Floodplain Management” requires an examination of impacts on floodplains and of the potential risk involved in placing facilities within floodplains as well as the protection of floodplain values. The NPS has adopted the policy of preserving floodplain values and minimizing potentially hazardous conditions associated with flooding (NPS Floodplain Management Guideline July 1, 1993). The proposed project would be constructed within an existing regulatory floodplain. As such, impacts on floodplain functions and values were assessed. These assessments were based on the known and potential 100-year floodplains within the study area, review of existing literature and studies, information provided by experts in the NPS and other agencies, and professional judgment.

STUDY AREA

The geographic study area for floodplain resources is the project area, which is in the 100-year and 500-year floodplain.

IMPACT THRESHOLDS

The thresholds of change for the intensity of an impact on floodplains are as follows:

Negligible - Impacts would result in a change to floodplain functions and values, but the change would be so slight that it would not be of any measurable or perceptible consequence.

Minor - Impacts would result in a detectable change to floodplain functions and values, but the change would be expected to be small, of little consequence, and localized. Mitigation measures, if needed to offset adverse effects, would be simple and successful.

Moderate - Impacts would result in a change to floodplain functions and values that would be readily detectable, measurable, and consequential, but relatively localized. Mitigation measures, if needed to offset adverse effects, could be extensive, but would likely be successful.

Major - Impacts would result in a change to floodplain functions and values that would have substantial consequences on a regional scale. Extensive mitigation measures would be needed to offset any adverse effects, and their success would not be guaranteed.

Duration - Short-term impacts would occur sporadically throughout the course of a year. Long term impacts would last more than one year.

ALTERNATIVE A – NO ACTION ALTERNATIVE

Analysis. Under the no action alternative, there would be no modification or physical disturbance to the current layout of the project area. As a result, there would be no beneficial or adverse impacts associated with the natural functions or values of the floodplain under the no action alternative.

Cumulative Impacts. Because there would be no impacts on floodplain functions or values under the no action alternative, no cumulative impacts would occur.

Conclusion. Implementation of the no action alternative would result in no adverse or beneficial direct, indirect, or cumulative impacts on the functions or values of the currently existing floodplains found within the project area. The no action alternative would not result in impairment of floodplain functions or values.

ALTERNATIVE B – MARTIN LUTHER KING JR. MEMORIAL (NPS PREFERRED)

Analysis. While the addition of the Memorial and the visitor services facility would marginally alter the way flood water flows within the area, these alterations would not be measurable nor would they noticeably alter the ability to convey flood waters. The existing floodplain designations would remain unchanged. As a result, the actions associated with this alternative would have long-term negligible adverse impacts on the current floodplain.

Given that West Potomac Park is located within a floodplain and is subject to periodic flooding, applicable policies in the Environmental Elements state:

- The site should be returned as close as possible to its natural contours. Floodplain fill and grading requirements should be minimized. The overall design of the Memorial would allow flood water to flow with few new obstructions.
- The proposed Memorial would not adversely impact the floodplain. Due to the lowering of the plaza from the existing level, there would be a negligible net gain in flood storage area.

Measures to minimize the impacts of flooding on the Memorial and visitors services facility would be incorporated in the final design. As a result, the Memorial shall be developed to withstand the impacts of flooding, consistent with Executive Order 11988, Flood Plain Management. A floodplain Statement of Findings (SOF) was prepared for this project, as required by the NPS's, Director's Order 77-2: Floodplain Management (Appendix B).

Cumulative Impacts. Projects in the project area that could have effects on floodplain functions or values have involved previous development, including construction and fill, within the floodplain. These past projects have involved road improvements, levee construction, and the construction of the Franklin Delano Roosevelt (FDR) Memorial. The World War II Memorial removed soil from the floodplain, but it had no effect. The ongoing maintenance of these memorials, in combination with anticipated future

actions (the VVMC, which is not within the current 100-year floodplain) would occur alongside the Memorial and visitor services facility proposed under this alternative. In addition, the Potomac Park Levee project would be constructed very near to its original footprint along 17th Street and would have no noticeable effects on the floodplain. The effects on floodplain functions or values in the area of analysis from these anticipated future cumulative projects in the vicinity are not anticipated to result in any measurable or perceptible change to floodplain functions and values. Therefore, these impacts, in combination with the long-term negligible adverse impacts on floodplains from alternative B, would result in long-term negligible adverse cumulative impacts on floodplain functions or values.

Conclusion. Overall, implementation of alternative B would result in long-term negligible adverse impacts on the currently existing floodplains found within the study area. There would be long-term negligible adverse cumulative impacts under this alternative. Based on these findings, there would be no impairment of floodplain functions or values as a result of alternative B.

VISITOR USE AND EXPERIENCE

METHODOLOGY AND ASSUMPTIONS

To determine impacts, the current uses of the area were considered and the potential effects of constructing a new Memorial on visitor experience and use were analyzed. Activities and the type of visitor experience and use/visitation that occur in the park that might be affected by the proposed actions, as well as the visual character of the area and noises experienced by the visitors, were also considered.

STUDY AREA

The study area for visitor use and experience is the site of the proposed Memorial and surrounding areas.

IMPACT THRESHOLDS

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.

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

IMPACTS OF NO ACTION ALTERNATIVE

Analysis. Under the no action alternative, the park would continue to maintain the site to its current standards. Visitors would continue to experience the site in its present state as they circulate around the Tidal Basin and visit the nearby memorials and there would be no changes in the manner that the Cherry Blossom Festival or other ceremonies are carried forward. As a result, there would be no adverse or beneficial impacts to visitor use and experience.

Cumulative Impacts. Because there would be no adverse or beneficial impacts associated with the no action alternative, there would be no adverse or beneficial cumulative impacts.

Conclusion. The no action alternative would have no beneficial or adverse direct or cumulative impacts to visitor use and experience.

ALTERNATIVE B – MARTIN LUTHER KING JR. MEMORIAL (NPS PREFERRED)

Analysis. Alternative B would consist of the construction and operation of the proposed Martin Luther King Jr. Memorial and visitor services facility, and the realignment of West Basin Drive S.W. During the construction of the proposed Memorial, pedestrian access would be restricted from the section of the Tidal Basin within the project area. Construction barriers would be placed around the area in order to ensure public and employee safety. Pedestrian walking around the Tidal Basin would be detoured around the project area, and West Basin Drive S.W. would be closed to traffic. Additionally, the presence of construction workers and their equipment and associated noise would disrupt the aesthetic character of the immediate area, affecting visitor experience. Construction would likely occur during a relatively high visitation period of early spring and summer. Although the immediately affected area is not a primary visitor destination itself, there would be disruption to visitor use and experience from the noise and restricted access, particularly on and around the Tidal Basin and FDR Memorial during the Cherry Blossom Festival. These impacts could be minimized by relocating activities elsewhere along the Tidal Basin or temporarily stopping construction to accommodate a ceremony or event.

The siting of the proposed Memorial would require slight modifications to the existing polo field located on the western boundary of the site. This would result in a minor inconvenience and cause shifts in use. However, the remaining open space would still be available for organized recreational activities. Overall, there would be long-term minor adverse impacts to those visitors who use these fields for recreation.

Mitigations would be employed during the construction of the Memorial and associated facilities to minimize impact to visitor use and experience. These mitigations could include, but are not limited to:

- Providing routes through or around the construction area for pedestrians.
- Reducing construction related noise by implementing noise reducing best management practices (BMPs), complying with District noise regulations.
- Installing visual screening as appropriate and where practicable.
- Providing public interpretive materials explaining what the construction is, what the site would look like after completion, and providing a tentative project schedule.
- Temporarily halting construction activities during ceremonies or special events in the area.
- Relocating activities elsewhere along the Tidal Basin, where appropriate.

Overall, as a result of the noise, visual degradation, potential interruptions to organized ceremonies and festivals, and the loss of a portion of the polo field, adverse impacts to visitor use and experience from proposed construction activities would be minor to moderate and of short duration.

After the construction of the proposed Memorial is complete, the landscaped character of the proposed Memorial would generate a positive impact by enhancing and continuing the commemorative aspect of West Potomac Park and by expanding the character of the adjacent National Mall. The proposed Memorial would also enhance the area through the relocation of West Basin Drive S.W. Currently, West Basin Drive S.W. divides the site with wide swaths of asphalt; under the proposed Memorial, the amount of roadway would be consolidated and moved to the periphery of the site, thereby minimizing the visual intrusion and enhancing the visitors' experience of the site. The section of roadway that is being eliminated is the last component of West Basin Drive S.W. that was constructed to follow the outline of the Tidal Basin. The remainder of West Basin Drive S.W. was either eliminated or relocated by the construction of the Jefferson Memorial and the FDR Memorial, both of which replaced asphalt roadway surfaces with landscaped commemorative areas.

The proposed Memorial would also improve approaches to the site. The approach from the east, such as from the Holocaust Museum and the Bureau of Printing and Engraving building, is currently characterized by a pleasant walk along the shores of the Tidal Basin or a landscaped drive across the Kutz Bridge. The approach from the west along the Tidal Basin is similarly pleasant. The proposed Memorial, would maintain the canopy of trees, punctuated by views to the nearby memorials. Due to the proposed Memorial's curving footprint and landscaped berm, the visitor would see sporadic glimpses of it between the trees, and the Memorial would gradually be revealed the closer one got to the site. The approach from the north would offer a more dramatic experience as the visitor crossed over Independence Avenue S.W. and the space opens up to reveal the entry plaza. The Memorial would enhance the visitor experience of the Monumental Core by reinforcing the sequential movement of visitors from the Jefferson and Franklin Delano Roosevelt Memorials toward the other memorials on the Mall.

Based on the experience of other recent memorials in the Monumental Core, the addition of the proposed Memorial would not likely increase overall long-term visitation in the Monumental Core. As a destination, the Memorial would likely experience higher than average visitation during the first few years of its existence. In the long-term, however, visitation would likely stabilize at a level similar to other memorials. In comparison to the visitation experienced by the other memorials within the general vicinity of the proposed Martin Luther King, Jr. Memorial, annual visitation could range between 2.3 to 4.9 million visitors annually.

Aside from the dedication of the Memorial and annual celebrations of Dr. King's birth and death, it is not anticipated that the Memorial would be the site of numerous special events. However, the size of the site, as well as the arrangement of the Memorial's elements, would accommodate larger groups. Depending on the context and subject matters of other special events or demonstrations in West Potomac Park or on the Mall, the site may experience some spill-over effect. The proposed Memorial would be subject to NPS regulations governing the use of memorials for special events or First Amendment demonstrations.

The visitor services facility would provide visitors to the Memorial with many useful amenities (i.e., comfort station, small bookstore, and contact station) and would enhance visitor comfort and interpretation of the Memorial. This facility would be located in the southwest corner of the site, on the opposite side of West Basin Drive S.W., and unobtrusive in design and scale, with a height similar to the Memorial berm. Overall, the construction of the Martin Luther King Jr. Memorial, the visitor services facility, and the realignment of West Basin Drive S.W. would provide long-term beneficial impacts to visitor use and experience.

Cumulative Impacts. Many activities in the project area could affect visitor use and experience including ongoing landscape and facility maintenance, security improvements, public events, and future projects that would directly affect the Mall. Ongoing grounds and building maintenance activities would likely result in beneficial long-term cumulative impacts on visitor use and experience since they would maintain and enhance the areas used by visitors. However, they would also present short-term minor adverse effects from noise and disturbance in limited areas where visitors may be restricted. Future construction within the project area that could affect visitor use and experience includes the construction of the NMAAHC and the VVMC, and the Potomac Park Levee project. These projects would contribute cumulatively to visitor experience by adding new visual elements and new visitor destinations, mostly a beneficial impact, although additional visitors drawn to these new developments may increase traffic and crowding in the study area at certain times, a minor adverse effect. The Lincoln Memorial Circle Rehabilitation and Security Improvements introduce transportation and security improvements to the area south of 23rd Street N.W. Security measures are designed and placed around the circle on the east side of the Memorial, a secure access gate would be constructed on the west side, and two visitor services areas would be constructed on the north and south sides. Pedestrian improvements provide enhanced access to the Memorial. The long-term adverse visitor experience impacts associated with this project would be minor since the design and materials are intended to preserve the aesthetic qualities of the area. Security improvements at the Jefferson Monument are also planned and would have similar effects on visitor use/experience as long as the design preserves the aesthetic qualities of the area, and access is maintained.

The impacts from other actions and plans on the visitor use and experience in the study area, combined with the short-term minor to moderate adverse impacts associated with alternative B, would result in long-term beneficial cumulative impacts in the study area.

Conclusion. Implementation of Alternative B would have short-term minor to moderate adverse impacts upon visitor use and experience because of the effects of construction activities and street closures that would occur. Once completed, the proposed Memorial, visitor services facility, and the realignment of West Basin Drive S.W. would have a long-term beneficial impacts on visitor use and experience. There would also be long-term beneficial cumulative impacts to visitor use and experience associated with this alternative.

TRAFFIC AND TRANSPORTATION

METHODOLOGY AND ASSUMPTIONS

The primary purpose of this environmental consequences analysis is to determine the potential traffic and transportation impacts of the alternatives considered, with a focus on impacts from construction and the realignment of West Basin Drive S.W., and possible improvements needed (if any) to mitigate any identified impacts.

Sources of information for this environmental consequences description include personal conversations and emails with project engineers, analysis of traffic in the study area based on the District of Columbia Department of Transportation (DDOT) Average Daily Traffic (ADT) reports and a traffic analysis.

STUDY AREA

The study area for traffic impacts for construction includes West Basin Drive S.W., Independence Avenue S.W., and Ohio Drive S.W.

IMPACT THRESHOLDS

The following thresholds were used to determine the magnitude of impacts on traffic.

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, below, for more detail.

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

ALTERNATIVE A: NO ACTION ALTERNATIVE

Analysis. Under the no action alternative the current configuration of West Basin Drive S.W. would remain the same and there would be no changes to the current transportation patterns.

Cumulative Impacts. Because there would be no changes in the current traffic patterns within and adjacent to the site, there would be no adverse or beneficial cumulative impacts to traffic or transportation associated with this alternative.

Conclusion. Under the no action alternative there would be no adverse or beneficial direct, indirect, or cumulative impacts to traffic and transportation.

ALTERNATIVE B – MARTIN LUTHER KING JR. MEMORIAL (NPS PREFERRED)

Analysis. The proposed Memorial would require the relocation of West Basin Drive S.W. approximately 100 feet west of its current alignment; redesign and replacement of the intersection and turning functions of West Basin Drive S.W. at Independence Avenue S.W.; and the closure of the “spur road” connection, which currently traverses the site from West Basin Drive S.W. to eastbound Independence Avenue S.W., and elimination of the on-street parking provided within the site.

Construction of the proposed Memorial and the realignment of West Basin Drive S.W. are anticipated to require 18 to 24 months total, with the construction directly impacting the traffic within the study area for up to 18 months. During the realignment of West Basin Drive S.W., the roadway would be closed to all through traffic, which would be rerouted onto Ohio Drive S.W. SW. Those wishing to access Independence Avenue S.W. and points north and west would have to travel northwest on Ohio Drive S.W. for approximately 0.3 miles or to the intersection of Ohio Drive S.W. SW and Independence Avenue S.W.. Those wishing to access Interstate 395 and points south and east could travel southeast on Ohio Drive S.W. SW to East Basin Drive. Realignment of West Basin Drive S.W. would also require the reconfiguration of its intersection with Independence Avenue S.W. The gap in the median strip that currently serves those turning west onto Independence Avenue S.W. from West Basin Drive S.W. would be shifted west to accommodate the new alignment of West Basin Drive S.W. This work would require the closure of approximately 150 feet of one lane of Independence Avenue S.W. to provide for a work zone.

In order to minimize impacts to local traffic, public information and outreach, as well as monitoring and possibly modifications to signal timing on Independence Avenue S.W., would be required in order to minimize impacts to the level of service on Independence Avenue S.W. As part of the construction permitting process, the contractor would submit Traffic Control Plans to DDOT for review and approval, prior to the implementation of any changes (lane or sidewalk closures, temporary truck access for site excavation, etc.). The Traffic Control Plans would include measures, such as detour signs, to safely divert traffic, transit, pedestrian, and bicycle traffic flows during closures, or for one-way traffic during peak periods to maintain partial peak directional flow. NPS and DDOT should coordinate Public Advisories to notify the public of the detours, likely delays, and alternate routes including transit. Overall, adverse impacts to traffic and transportation associated with the construction of the Martin Luther King Jr. Memorial and the realignment of West Basin Drive S.W. SW would be minor and of short duration (only as long as construction).

After construction of the proposed Memorial and realignment of West Basin Drive S.W. is complete, motorists would be faced with a new intersection configuration at Independence Avenue S.W. and West Basin Drive S.W. The designs for these proposed changes were undertaken as part of the proposed Memorial, and involved review, approval, and permitting through NPS, NCPC, CFA, and the various responsible agencies of the District of Columbia. As part of the Memorial design process and the traffic signal design phase, the existing traffic volumes were beneficial in evaluating the required roadway lane configuration along the West Basin Drive S.W. approach. The primary consideration of the configuration was the provision for the right-turn traffic volumes. Discussions with the District Department of Transportation (DDOT) - Transportation Policy and Planning Administration (TPPA) and Infrastructure

Project Management Administration (IPMA), as well as the Memorial design team concluded that a single left-turn lane and a double right-turn lane along West Basin Drive S.W. was the preferred configuration. Those turning right would experience no added delay in travel time from current conditions because the light would most likely be timed in the same sequence as it currently exists. Those making a left-hand turn may experience slight delays as they would be forced to wait at the intersection until the stop light cycles through. Currently, people wishing to travel eastbound on Independence Avenue S.W. from West Basin Drive S.W. would go on the spur road and enter the Independence via a stop sign. Any delays however, would not likely be noticeable to drivers, and the overall adverse impact from this new intersection configuration would be negligible and long-term.

Traffic generation for the proposed Memorial is closely linked to visitation patterns for the Monumental Core as a whole. However, somewhat higher visitation levels occur upon the initial opening of a particular monument or memorial. Visitation patterns are also influenced by current events, publications, major anniversaries, “simultaneous” commissioning of memorials, and other historical and cultural factors. Major events occurring at newly commissioned memorials would be the subject of special event planning and permitting in accordance with NPS guidelines and requirements.

As part of the preliminary environmental analysis performed for the site selection process, the NPS estimated the following:

- Visitation to the proposed Memorial and monument core during the first few years would be higher than average.
- In the long term, visitation is likely to stabilize to the level of current visitation rates to the Lincoln, Vietnam Veterans, Korean War Veterans, and Roosevelt Memorials.
- Long-term visitation to the proposed Memorial is expected to range between 2.3 to 4.9 million visitors annually.

Following construction, there would be sufficient capacity during periods of peak visitor activity, particularly for the demand from West Basin Drive S.W. to eastbound Independence Avenue S.W. While the numbers of visitors to this site would likely increase soon after the initial opening of the memorial, the intersection of West Basin Drive S.W. and Independence Avenue S.W. would likely continue to operate at Level of Service B during both the morning and afternoon peak hours. During a typical weekday, the intersection would continue to operate at Level of Service C in the morning peak hour and Level of Service A in the afternoon peak hours. Overall, any long-term adverse impacts to traffic from the reconfiguration of West Basin Drive S.W. would be negligible.

Cumulative Impacts. Cumulative actions in the project area that could affect traffic include ongoing background traffic growth plus several future plans and projects that would directly affect the Mall. Future projects within the project area that could affect traffic include construction of other buildings on and near the National Mall (NMAAHC, VVMC, and the Potomac Park Levee project) and the repaving of Constitution Avenue. These projects would contribute cumulatively to impacts on traffic in the study area. However, each project would be subject to specific requirements to reduce the individual impact on traffic, and none of the projects is anticipated to take place during the construction of the proposed memorial, so they would not contribute to cumulative impacts during construction. The number of visitors to the National Mall typically remains constant; however, their travel and circulation patterns vary in response to new projects and points of interest. Any increase in visitation that might be expected to occur from the new attractions on the National Mall, continued development, or new employment opportunities in the District could result in increased traffic. Adverse impacts within the study area from these projects would be minor and long-term. Conversely, rising fuel costs and continued or increased use of public transportation would result in decreased car traffic, with beneficial impacts on traffic in this area. Impacts of all these actions, combined with the short-term minor and long-term negligible adverse impacts of this alternative, would result in minor long-term adverse cumulative impacts on traffic in the study area.

Conclusion. Implementation of alternative B would result in short-term minor and long-term term negligible adverse impacts to traffic and transportation within the project area. Long-term minor adverse cumulative impacts would also occur.

AESTHETICS AND VISUAL RESOURCES

METHODOLOGY & ASSUMPTIONS

This visual impact assessment addresses potential changes to views and vistas that can be attributed to the proposed action. Visual simulations were created from several different vantage points to help determine impacts.

PROJECT AREA

The study area for aesthetic and visual resources includes the viewshed from proposed Memorial.

IMPACT THRESHOLDS

The following thresholds were used to determine the degree of impacts on visual resources in the project area:

Negligible: The proposed action would not impact the aesthetics or visual viewshed of the proposed project area during construction or operations.

Minor: The proposed action would not substantially change the scenic vista, would not substantially change scenic resources, and would not substantially change the existing visual character or quality of the site and its surroundings. The effect would be detectable, but slight, and would minimally diminish overall integrity, or affect the character defining feature(s) of the visual resources and aesthetic environment.

Moderate: The proposed action would result in a noticeable effect on a scenic vista; alter scenic resources, including but not limited to, trees and historic buildings; or alter the existing visual character or quality of the site and its surroundings. The effect would diminish overall integrity, or would alter a character defining feature(s) of the visual resources and aesthetic environment.

Major: The proposed action would result in a substantial effect on a scenic vista; substantially alter scenic resources, including but not limited to, trees and historic buildings; or substantially alter the existing visual character or quality of the site and its surroundings. The effect would significantly diminish overall integrity, or would significantly alter a character defining feature(s) of the visual resources and aesthetic environment.

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

ALTERNATIVE A - NO ACTION ALTERNATIVE

Analysis. Under the no action alternative the landscape of West Potomac Park, which currently consists of a level topography with large expanses of grass, deciduous trees, cherry and other flowering trees, and evergreens, and the several man-made elements, which are dedicated to the commemoration of our national heroes or events, would remain unchanged, resulting in no beneficial or adverse impacts to the aesthetic and visual resources associated the project area.

Cumulative Impacts. Because there would be no adverse or beneficial impacts overall aesthetics and visual resources associated with the no action alternative, there would be no adverse or beneficial cumulative impacts.

Conclusion. The no action alternative would have no beneficial or adverse direct or cumulative impacts to aesthetic and visual resources associated the project area.

ALTERNATIVE B – MARTIN LUTHER KING JR. MEMORIAL (NPS PREFERRED)

Analysis. During the construction of the proposed Memorial, visitor services facility, and the realignment of West Basin Drive S.W., visual quality of the views looking toward the project area would be adversely impacted as a result of construction equipment, attendant human activity, excavation, stockpiling, staging, and disruption of the project area. This moderate adverse effect would last only during the construction phase of the Memorial and, if applicable, be mitigated by a screening or visual barrier to obscure the equipment for the duration of construction.

After the construction of the Memorial is completed, the proposed Memorial would have long-term beneficial impacts on views from the site to other nearby memorials around the Tidal Basin. The proposed Memorial would preserve the cherry trees, which frame the views toward the Tidal Basin. The panoramic vista to the Jefferson Memorial from the walk surrounding the Tidal Basin, which is a contributing view to the West and East Potomac Parks Historic District, would be enhanced. In this designed setting of historic vistas punctuated with America's icons, a visitor has a visual sense of continuity and communion with our ideals and democratic principles. Since the existing visual permeability of the site is limited and varies according to the vegetative cover and season, the quality of existing views across the site also varies. With the proposed Memorial, current filtered views to the Tidal Basin from Independence Avenue S.W. would be screened, particularly for motorists (as shown in the existing views and visual simulations). However, views through the site would still be available to pedestrians who could experience the entry vista and other views that the Memorial would offer. The proposed Memorial would also generate beneficial impacts on this view by leading visitors to this vantage point and framing the view with a formally-designed landscape.

While the Memorial is expected to be an attractive addition to the visual character of the Tidal Basin area, it would undergo design refinements during the approval process. Three elements of particular concern from the review agencies is the proposed bridge across the Memorial entrance, the mass of the earthen berms that frames the site, and the required security features intended to protect the Memorial from an incoming vehicle. To ensure that the proposed Memorial is designed to preserve the symbolically open and expansive character and continuity of the existing historic landscape, the proposed design concept would be examined and refined through the entire design process. The design process of this alternative acknowledges and respects the larger historic design context within which it would be situated and maintains the spaciousness and grandeur of the area to the greatest extent practical. This can best be accomplished by:

- Modifying or deleting the bridge across the entry portal to avoid concerns of visual intrusion; and
- Lowering the height and reducing the length of the earthen berm/wall to allow for certain vistas through the Memorial.
- Building the required security features into the design of the Memorial so they would indistinguishable from its other elements.

Such modifications would also reinforce the prominence of the Mountain of Despair and the Stone of Hope as iconic elements of the Memorial in addition to strengthening the historic landscape.

The visitor services facility would be located in the southwest corner of the site, on the opposite side of West Basin Drive S.W. Overall, the adverse impacts associated with this facility are expected to be long-term and minor. While the facility would be visible from Independence Avenue S.W., due to the topography and the vegetation, it would not be easily seen from long sightlines. In addition, the overall design would be unobtrusive in design and scale with a height similar to the Memorial berm, shielding it from views from the northeast (i.e., the Jefferson Memorial).

Cumulative Effects. The Lincoln Memorial Circle Rehabilitation and Security Improvements would introduce transportation and security improvements to the area south of the 23rd Street site. Designed security measures would be placed around the circle on the east side of the Memorial, a secure access gate would be constructed on the west side, and two visitor services areas would be constructed on the north

and south sides. Pedestrian improvements would provide enhanced access to the Memorial. There would be minor adverse visual impacts associated with this project because the design and materials are intended to preserve the aesthetic qualities of the area and are compatible with the cultural landscape and historic setting of the Lincoln Memorial and surrounding park resources. Security improvements at the Jefferson Monument are also planned and would have similar effects on visitor use/experience as long as the design preserves the aesthetic qualities of the area and access is maintained.

These impacts on the visual resources of the National Mall and the project area, when combined with the short-term moderate adverse, long-term minor adverse, and long-term beneficial impacts associated with alternative B, would result in net long-term minor adverse cumulative impacts.

Conclusion. Implementation of alternative B would result in short-term moderate, long-term term minor adverse, and long-term beneficial impacts to the overall aesthetic and visual resources of the project area from the proposed establishment of the Martin Luther King Jr. Memorial, visitor services facility, and the realignment of West Basin Drive S.W.. Alternative B would result in long-term minor adverse cumulative impacts.

HISTORIC DISTRICTS AND STRUCTURES

STUDY AREA

The Area of Potential Effects (APE) is defined as the boundaries of the site, as well as West Potomac Park and the National Mall. The proposed activities have the potential to impact six NRHP-listed historic properties: Tidal Basin, Washington Monument, Lincoln Memorial, Franklin Delano Roosevelt Memorial, and Jefferson Memorial, and West Potomac Park.

IMPACT THRESHOLDS

For purposes of analyzing potential impacts to historic districts and structures, the thresholds of change for the intensity of an impact are defined as follows:

Negligible – The impact is at the lowest level of detection with neither adverse nor beneficial consequences. For purposes of NHPA Section 106, the determination of effect would be no adverse effect.

Minor – Adverse impact: Alteration of a pattern(s) or feature(s) of a historic district or structure listed on or eligible for the National Register of Historic Places that would not diminish the integrity of a character-defining feature(s) or the overall integrity of the historic property. For purposes of NHPA Section 106, the determination of effect would be no adverse effect.

Moderate – Adverse impact: The impact would alter a character-defining feature(s) of a historic district or structure and diminish the integrity of that feature(s) of the historic property. For purposes of NHPA Section 106, the determination of effect would be adverse effect.

Major – Adverse impact: The impact would alter a character-defining feature(s) of the historic district or structure and severely diminish the integrity of that feature(s) and the overall integrity of the historic property. For purposes of NHPA Section 106, the determination of effect would be adverse effect.

Duration – All impacts are assumed to be long-term.

ALTERNATIVE A – NO ACTION

Analysis. The no action alternative would not modify the existing conditions at the proposed site; therefore, implementation of this alternative would result in no impact to historic or cultural resources at the site.

Cumulative Impact. Because there are no adverse or beneficial impacts to historic districts associated with the no action alternative, there would be no adverse or beneficial cumulative impacts associated with this alternative.

Conclusion. The no action alternative would result in no adverse or beneficial direct, indirect, or cumulative impacts to historic districts and structures. There would be no impairment of cultural resources as a result of this alternative.

ALTERNATIVE B – MARTIN LUTHER KING JR. MEMORIAL (NPS PREFERRED)

Analysis. Alternative B calls for the Construction of a Memorial to Martin Luther King Jr. and a visitor service facility, and the realignment of West Basin Road. The actions proposed under this alternative would occur entirely within the West Potomac Park Historic District.

Under this alternative, up to nine recently planted cherry trees may be relocated to accommodate the new Memorial; no other cherry trees would be damaged or lost. In addition, the proposed Memorial would require a small modification to a portion of the recreation fields found within the West Potomac Park Historic District, the recreations fields themselves are not considered to be historic element. The proposed Memorial would also not adversely affect the Tidal Basin or the Stone Seawall, which are a contributing structure to the West Potomac Park Historic District. The Tidal Basin would continue as a landscaped waterbody surrounded by cherry trees. Construction of the Memorial would also include a sound and sufficient foundation, such as piles, to prevent pressure from being placed on the seawall, and thus avoiding any physical impacts.

Overall, however, the proposed Memorial, visitor support facility, the removal of nine cherry trees and realignment of West Basin Drive S.W. would alter the current patterns and features of the West Potomac Park Historic District by introducing new visual elements and circulation patterns into the historic property and its associated views, which would result in long-term moderate adverse impacts to the West Potomac Park Historic District, which is considered an adverse effect in terms of NHPA Section 106.

In an effort to minimize these impacts, and as part of the NHPA Section 106 process, the NPS, the District of Columbia State Historic Preservation Office (DC-SHPO), the Advisory Council on Historic Preservation (ACHP), and the Foundation developed a Memorandum of Agreement (MOA). The MOA stipulates, to the extent possible, the final design of the Memorial will be compatible with the historic and architectural qualities of West Potomac Park in terms of scale, massing, and materials, and will be accomplished with the least possible disruption to the features and facilities of the park. The MOA also stipulates that coordination with these agencies (listed above) will continue throughout the final design process to ensure that the undertaking meets the Secretary of the Interior's Standards. In addition, any ground surfaces and planting materials will be subject to review by these agencies and NPS would guarantee that they would be of the highest quality and appropriate to the historic precedents. The MOA was signed by the NPS, DC-SHPO, ACHP, and the Foundation in August, 2008 (Appendix F). Through the implementation of the MOA, adverse impacts to the West Potomac Park Historic District are expected to be long-term and minor; a determination of no adverse effect under NHPA Section 106.

Alternative B would not result in any physical impacts to the other historic properties that lie immediately adjacent to the project area, including: the Tidal Basin, Washington Monument, Lincoln Memorial, Franklin Delano Roosevelt Memorial, the DC War Memorial, and the Jefferson Memorial. The footprint of the proposed Memorial would not physically intrude upon any of these historic resources. Impacts to these resources would be limited to impacts to the historic viewsheds originating from these adjacent resources. As directed by the MOA, the scale and materials of the proposed Memorial and related structures would not exceedingly detract or impact views of the proposed Memorial's adjacent historic properties. Therefore, these impacts to District's viewsheds would be considered minor. In terms of NHPA Section 106, the impacts would be no adverse effect. While these impacts would result in no adverse effect under NHPA Section 106, the continual NHPA Section 106 process would help inform the design of the proposed Memorial and would lessen the impacts to these adjacent historic resources to an even greater extent.

Cumulative Impacts. Future projects within the project area that could affect historic districts and structures include the construction of other buildings on the National Mall, including the NMAAHC, the Vietnam Veteran’s Memorial and the VVMC; and the Potomac Park Levee project. These projects would contribute cumulatively to impacts on historic districts and structures in the study area, potentially resulting in long- term minor to moderate adverse cumulative impacts on the discussed historic districts and structures: Washington Monument and Grounds, Lincoln Memorial Grounds, Vietnam Veterans Memorial, Northwest Rectangle Historic District, West Potomac Park Historic District, and the *L’Enfant Plan*. However, each project would be subject to specific requirements to reduce the individual impact on historic districts and structures including design review, and any project with a NHPA Section 106 determination of “adverse affect” would be obliged to enter into a MOA with the DC-SHPO and the ACHP in order to avoid, minimize, or mitigate any adverse impacts to cultural resources. Consequently, any impacts associated with these projects described above would range from negligible to minor long-term.

These minor long-term adverse impacts to historic districts and buildings that would result from alternative B, in combination with the negligible to minor adverse impacts that would result from construction of the above projects, would result in negligible to minor long-term adverse cumulative impacts.

Conclusion. The proposed action would have minor adverse impacts on the West Potomac Park Historic District and minor adverse impacts on the adjacent historic districts. The West Potomac Park Historic District would suffer a loss of integrity with respect to its original setting and design, while viewsheds originating from the adjacent historic districts would be altered. On-going consultation with the DC-SHPO, the Advisory Council on Historic Preservation, NCPC, and CFA would continue in order to ensure that the ultimate design of the proposed Memorial and associated facilities is sympathetic to the surrounding historic landscape while still conveying the importance of Martin Luther King Jr.; meets the Secretary of the Interior’s Standards; and is designed to a scale and with materials that do not exceedingly detract or impact views of the proposed Memorial’s adjacent historic properties. Cumulative impacts on historic districts and structures would be negligible to moderate long-term adverse. Based on this impact analysis, alternative B would not result in any impacts that would constitute impairment of historic districts and structures.

PARK OPERATIONS AND MANAGEMENT

STUDY AREA

The study area for identifying potential environmental impacts from the proposed action is the central portion of the Monumental Core, including the National Mall, the Washington Monument Grounds, and West Potomac Park.

IMPACT THRESHOLDS

The impact intensities for health and safety were defined as follows:

Negligible — Park operations would not be impacted, or the impacts would be at low levels of detection and would not have an appreciable effect on NPS operations.

Minor — The impacts would be detectable and would be of a magnitude that would not have an appreciable effect on NPS operations. If mitigation was needed to offset adverse effects, it would be simple and likely successful.

Moderate — The impacts would be readily apparent and result in a substantial change in operations in a manner noticeable to staff and the public. Mitigation measures would be necessary to offset adverse effects and would likely be successful.

Major — The effects would be readily apparent, result in a substantial change in NPS operations in a manner noticeable to staff and the public, and be markedly different from existing operations.

Mitigation measures to offset adverse effects would be needed and extensive, and success could not be guaranteed.

Duration –Short-term impacts would occur sporadically throughout the course of a year. Long term impacts would last more than one year.

IMPACTS OF ALTERNATIVE A – NO ACTION ALTERNATIVE

Analysis. Under the no action alternative, the current management and existing layout of the project area would remain unchanged. There would be no new construction, reconfiguration, or any changes in the general or specific uses of the site. Cyclical maintenance of the grounds and vegetation would continue, and actions to mitigate damage to resources would occur as needed and as funding allows. As a result, there would be no new adverse or beneficial impacts to park operations and management associated with the no action alternative.

Cumulative Impacts. Because there would be no impacts to visitor use and experience under the no action alternative, no cumulative impacts would occur.

Conclusion. Implementation of the no action alternative would result in no adverse or beneficial direct, indirect, or cumulative impacts on visitor use and experience.

ALTERNATIVE B – MARTIN LUTHER KING JR. MEMORIAL (NPS PREFERRED)

Analysis. Under alternative B, a Memorial to Martin Luther King Jr. and a visitor services facility would be built on NPS property, and West Basin Drive S.W., an NPS roadway, would be realigned. The Foundation is responsible for the initial costs associated with the planning and construction of this proposed alternative. After construction is complete, managerial responsibilities of the Memorial and visitor services facility would be given to the NPS. The NPS would be responsible for all additional maintenance requirements associated with the new use of this area (i.e., trash pickup, snow removal, landscape maintenance, and the overall maintenance and upkeep of the built features on the site). In addition, additional park staff would be required to maintain and manage the visitor services facility (i.e., interpretive rangers, people to run the bookstore). These added NPS responsibilities would require changes in both park funding and staffing requirements, resulting in noticeable changes in staff workload, responsibilities, and available funds. These adverse impacts, however, would be considered minor and short-term. As the park incorporates the new operational needs and funding requirements of the proposed Memorial into their annual budget and park staffing is adjusted to become less of a burden on daily operations, these added responsibilities would become less noticeable and less of a burden on park operations and management.

Cumulative Impacts. The proposed construction of the VVMC; and the West Potomac Park Levee along with the expected increases overall visitor use and the possible need for increased security measures would likely place a burden on the overall on the National Mall and Memorial Parks operations and management through increased future maintenance requirements of these new facilities, and the overall demand for operational resources. These impacts, in combination with the short-term minor adverse impacts of alternative B, would result in long-term minor adverse cumulative impacts to park operations and management.

Conclusion. Implementation of alternative B would result in short-term minor adverse impacts to NPS operations and management. Long-term minor adverse cumulative impacts to NPS operations and management would occur as future maintenance and operational resources increase and as future projects within the National Mall and Memorial Parks get implemented.

ENVIRONMENTAL JUSTICE

Presidential Executive Order 12898, *General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human

health or environmental effects of their programs and policies on minorities and low-income populations and communities. According to the Environmental Protection Agency, environmental justice is the:

“...fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.”

The goal of ‘fair treatment’ is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects and identify alternatives that may mitigate these impacts.

There are no minority or low-income populations are present near the site of the proposed Memorial, in addition:

- Implementation of the proposed alternatives would not result in any identifiable adverse human health effects. Therefore, there would be no direct or indirect adverse effects on any minority or low-income population.
- The impacts associated with implementation of the proposed alternatives would not disproportionately adversely affect any minority or low-income population or community.
- Implementation of the proposed alternatives would not result in any identified effects that would be specific to any minority or low-income community.

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CONSULTATION AND COORDINATION

Proposals for memorials being established pursuant to the Commemorative Works Act take the concept of consultation and coordination to a higher level, and the Martin Luther King, Jr. Memorial has been no exception. Meetings and proceedings, most of which have been open to the public, started at the time the legislation was being considered, resumed in the years after Congress authorized the Memorial, and will continue until the last approvals are granted. As with many memorials, issues related to the project but outside the actual process, stalled progress on the development of the Memorial until these outside issues were resolved. Through the years the NPS and the Foundation have met on numerous occasions with the NCMC, the NCPC, the CFA, District of Columbia offices including the Historic Preservation Office, the Advisory Council on Historic Preservation and others. In the late 1990's the subject was possible sites, and NHPA Section 106 in particular, and then from the middle of this decade until now the focus has been on the design. In-depth information on the proceedings before the NCPC and CFA can be found on their websites, <http://www.ncpc.gov/> and <http://cfa.gov/about/index.html> respectively (search for Martin Luther King, Jr. Memorial).

The NHPA Section 106 process, which has spanned 10 years has resulted in a signed Memorandum of Understanding on August 28, 2008, between the NPS, The District of Columbia State Historic Preservation Officer, the Advisory Council on Historic Preservation, and the Foundation (Appendix F).

The NPS also consulted and coordinated with those preparing the National Mall Plan/EIS, the Potomac Park Levee EA, and other plans, and through this consultation obtained additional useful information directly and indirectly from the U.S. Army Corps of Engineers, the U.S. Fish & Wildlife Service, and others. The NPS also consulted with the NPS Water Resources Division in response to *Executive Order 11988, Floodplain Management. Director's Order 77-2*. Consequently, a SOF was prepared (Appendix B).

In addition to consultation and coordination with government entities, often before the public, there have been the traditional NEPA opportunities for public involvement, including scoping and a publicly announced scoping meeting, on January 7, 2003; and a public review and comment period on the 2005 EA in July 2005. There have been other meetings for the public to participate including a meeting on the design in September 2005. In addition, the public will also have another opportunity to review and comment on the proposal through the release of this EA.

The continued input from all the participating agencies and public interaction that has occurred throughout this planning process has shaped Alternative B, the Martin Luther King, Jr. Memorial; the NPS preferred alternative presented in this EA.

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