



National Park Service

**In Cooperation with
Federal Highway Administration and
National Capital Planning Commission**

Revised
Environmental Assessment
June 2003

**Lincoln Memorial Circle
Rehabilitation and Security Project**
Washington, DC



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

**ENVIRONMENTAL ASSESSMENT
for the
LINCOLN MEMORIAL CIRCLE REHABILITATION AND
SECURITY PROJECT**

**LINCOLN MEMORIAL
WASHINGTON, DC**

Summary

The National Park Service proposes to rehabilitate Lincoln Circle, construct a vehicular barrier system, and improve visitor services at the Lincoln Memorial in Washington, DC. As part of this project, rehabilitation of Lincoln Circle to improve traffic conditions would occur. In addition, a vehicular barrier wall would be constructed from Daniel French Drive along the west side to Henry Bacon Drive and bollards would be constructed along the outer ring of the Memorial. A secure access gate would be constructed on the west side of the Memorial and two visitor services areas would be constructed on the north and south sides of the Memorial. These actions would improve traffic flow, parking for tour buses, safety to visitors, improve the cultural integrity of the Lincoln Memorial, and improving the overall visitor experience.

This Environmental Assessment analyzes the impacts of three alternatives (a No-Action Alternative, and two action alternatives) on the human environment in accordance with the National Environmental Policy Act of 1969. The Preferred Alternative would either have no or negligible impacts on soils, geology, and topography; land use; agricultural lands, prime and unique farmlands soils; wildlife; vegetation and land cover; rare, threatened, endangered, candidate species and species of concern; air quality; water resources; soundscape management; lightscape management; socioeconomic resources; archeology resources; Indian trust resources; ethnographic resources; environmental justice; community facilities and services; infrastructure; and floodplains.

The transportation improvements are anticipated to have negligible, long-term, adverse impacts to aesthetic and visual resources, historic resources, and cultural landscapes from new bus queuing areas. Negligible, long-term, beneficial impacts to park operations would occur. Minor, long-term beneficial impacts to aesthetic and visual resources, historic resources, and cultural landscapes would occur by improving traffic and removing existing security measures. Moderate, long-term, beneficial impacts would occur to transportation and traffic, safety and security, and visitor use and experience.

The security improvements are anticipated to have minor, long-term, adverse impacts to aesthetic and visual resources. Major, long-term, adverse impacts would occur to historic resources, and cultural landscapes. However, minor, long-term, beneficial impacts would occur from the removal of existing security measures to aesthetic and visual resources, historic resources, and cultural landscapes. Park operations would also be impacted beneficially and long-term. Moderate, long-term, beneficial impacts would occur to safety and security and visitor use and experience.

Visitor services improvements would negatively, long-term, and adversely impact aesthetic and visual resources. Historic resources and cultural landscapes would also be adversely impacted. This impact would be minor and long-term. Minor, long-term, beneficial impacts would occur to park operations. Moderate, long-term, beneficial impacts would occur to safety and security and visitor use and experience.

All improvements would have the potential for short-term impacts from construction.

Note to Reviewers and Respondents

This Environmental Assessment has been revised as a result of the National Park Service's consideration of public comments made during the public comment period that ended December 4, 2002. If you wish to comment on the revised Environmental Assessment, you may mail or e-mail comments to the name and address below by July 18, 2003. Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home address from the record, which we will honor to the extent allowable by law. If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment. We will make all submissions from organizations or businesses and from individuals identifying themselves as representatives or officials of organizations or businesses available for public inspection in their entirety.

Please address all comments to:
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1.0 PURPOSE OF AND NEED FOR ACTION

The National Park Service proposes to rehabilitate Lincoln Circle, construct a vehicle barrier system at the Lincoln Memorial, and construct new visitor services areas. The Lincoln Memorial, a unit of the National Park System, is administered by the National Capital Parks – Central, the administrator of the National Park Service units of the Monumental Core of our Nation's Capital. This Environmental Assessment analyzes the potential environmental impacts that would result from the implementation of these actions. This Environmental Assessment has been prepared in accordance with the National Environmental Policy Act of 1969, the regulations of the Council on Environmental Quality for implementing NEPA (40 Code of Federal Regulation 1500-1508), and the National Park Service Director's Order # 12, *Conservation Planning, Environmental Impact Analysis, and Decision-making*.

1.1 PURPOSE OF THE ACTION

The National Park Service is proposing to construct roadway improvements, a vehicular barrier system, and new visitor services areas at the Lincoln Memorial in Washington, DC (see Figure 1). The purpose of the proposed action is to:

- Improve traffic flow,
- Improve security to the Memorial and its visitors to prevent possible terrorist attack from a vehicular bomb, and
- Improve the visitor experience.

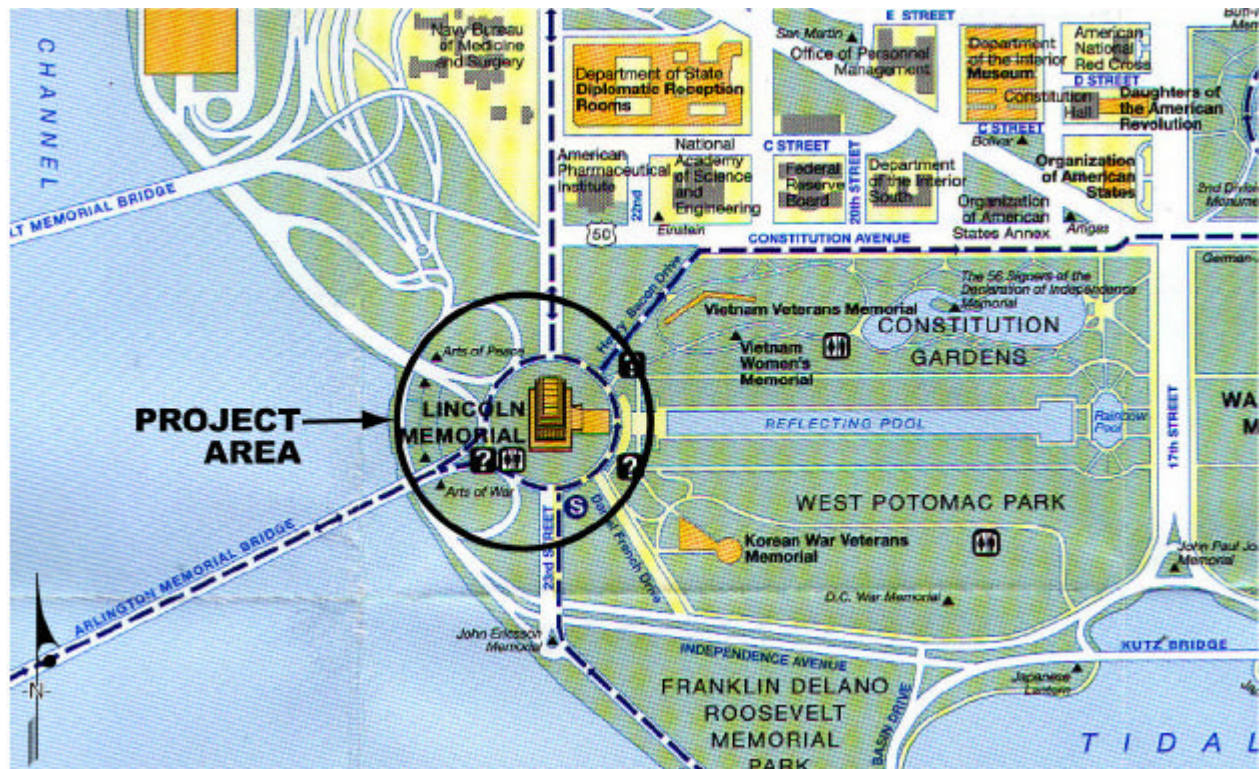


Figure 1: Project Area: Lincoln Memorial, West Potomac Park, Washington, DC.

1.2 NEED FOR THE ACTION

Rehabilitation of Lincoln Circle: The road system around the Lincoln Memorial provides access to the Memorial and serves as part of the urban street network of Washington, DC. In addition, on-street parking is provided for tour buses and taxis. A Draft Transportation Study was prepared to assess transportation needs in the Monumental Core, including East and West Potomac Parks, as well as the areas around the Lincoln Memorial, Jefferson Memorial, and Washington Monument (NPS, 1997d). According to this study, traffic around the Monumental Core has increased 20 to 30 percent since 1970. In addition to the normal traffic volume, a large number of tour buses and taxis operate in the traffic stream. During summer weekday traffic conditions, five of eight intersections in the Monumental Core operated at a Level of Service "F."¹ Also, a high volume of pedestrian and bicycle traffic was noted around the Lincoln Memorial. In addition to problems with traffic flow, parking for tour buses is inadequate. Currently, tour bus parking is limited to a bus pad along Daniel French Drive, and buses often impede traffic flow by double-parking in this area. Improvements to the roadway system will improve traffic flow, parking for tour buses, and provide safety to pedestrians crossing Lincoln Circle.

Security Improvements: Security improvements are needed to address potential terrorist threats to the United States and its symbols. For many years, makeshift security fences and concrete jersey barriers have been in place at a number of national landmarks in Washington, DC. After the Bicentennial Celebrations in 1976, the circular drive on the east side of the Lincoln Memorial was closed to all traffic except tourmobiles and taxis. Following the April 1995 bombing of the Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma, temporary security barriers were erected around the Lincoln Memorial. After the September 11, 2001 attacks on the World Trade Center and the Pentagon, additional concrete jersey barriers and planters were erected around the Memorial ring, and the circular drive was completely closed on the east side to all traffic. However, the temporary measures would not prevent a terrorist from maneuvering a large vehicle with explosives close enough to the Memorial to do extensive harm. In addition, these temporary barriers negatively affect the historic landscape of the Lincoln Memorial. A long-term solution is needed to provide adequate protection of the Memorial and its visitors, while preserving the cultural integrity of the Memorial.

Visitor Services Improvements: A gift shop currently operates out of a kiosk located between 23rd Street (south) and Daniel French Drive. A food vendor operates a concession stand out of a temporary trailer at the same location. This is the only visitor services area serving the Lincoln Memorial, Korean War Veterans Memorial, and the Vietnam Veterans Memorial. Additional combined visitor and gift kiosk and concession stands are needed to improve visitor services, serve the high amount of visitors, spread out the visitor load, and improve the overall visitor experience. Providing for two visitor services areas will disperse the amount of visitors between the Korean War Veterans Memorial, the Vietnam Veterans Memorial, and the Lincoln Memorial. In addition, the current gift shop and concession stand do not contribute to the

¹ Level of Service F: Levels of service range from A (best) to F (worst). Level of Service F describes operations with average delays in excess of 80.0 seconds per vehicle. This is considered unacceptable to most drivers. (Transportation Research Board, 1997).

historical landscape and they have reached the end of their useful life. Enhancing visitor services will improve the visitor experience and reduce visual impacts on the historical landscape of the Lincoln Memorial.

This Environmental Assessment analyzes the potential environmental impacts that result from the implementation of these proposed actions. The Environmental Assessment has been prepared in accordance with the National Environmental Policy Act of 1969, regulations of the Council on Environmental Quality for implementing NEPA (40 Code of Federal Regulation (CFR) 1500-1508), and the National Park Service's Director's Order #12, *Conservation Planning, Environmental Impact Analysis, and Decision-making*.

1.3 HISTORY AND SIGNIFICANCE OF THE PARK



Figure 2: Lincoln Memorial.

The Lincoln Memorial, the most profound symbol of American democracy and freedom in the world, was dedicated on May 30, 1922, and honors Abraham Lincoln, the 16th President of the United States. Located at the west end of West Potomac Park, the Lincoln Memorial was designed by Henry Bacon based on the style of ancient Greek temples (Figure 2). It stands 100 feet high, 190 feet long, and 119 feet wide.

The first commission for a monument honoring Lincoln was proposed in 1867 shortly after Lincoln's death, but it was not until 1901, when the McMillan

Commission began looking at restoring the National Mall to reflect Pierre L'Enfant's vision of a "federal city," that a Memorial to Lincoln actually began.

Congress approved a bill to construct the Memorial in 1910 and construction began in 1914. The official dedication of the Lincoln Memorial occurred on May 30, 1922; however, all of the landscape grounds surrounding the Memorial were not completed until 1933. In 1933, the responsibility for the care and maintenance of the monuments of the Nation's Capital was transferred to the National Park Service from the War Department's Office of Public Buildings and Public Parks.

Over the course of the last century, the Lincoln Memorial has become one of the most visited sites in Washington, DC. It is the site of many large public gatherings and speeches, including Dr. Martin Luther King Jr.'s 1963 "I Have a Dream" speech. It has also become a place of expression for First Amendment activists. Several First Amendment booths have been located and remain at the base of the pedestrian plaza.

1.4 PROJECT BACKGROUND & PLANNING

Since the bombing of the Alfred P. Murrah Federal Building in Oklahoma City in 1995, temporary security measures were taken at many of the United States' most treasured landmarks, including the Lincoln Memorial. After the September 11th attacks on the World Trade Center

and the Pentagon, concrete jersey barriers and planters were erected around the Memorial, sealing the Memorial off from vehicular traffic (Figure 3). These measures were taken as a first response to provide security to the Memorial and to protect its visitors from the threat of terrorist attacks.



Figure 3: Security measures at the Lincoln Memorial.

Prior to the September 11th attacks, the Federal Highway Administration, in coordination with the National Park Service, began considering ways to improve the traffic around the Lincoln Memorial. Proposed improvements included: creating a new lane for tourmobiles, installation of new signals, and better pedestrian crosswalks. In addition, the National Park Service, in coordination with Booz-Allen, Hamilton, Inc., developed a security plan that describes the type of security measures that should be taken to protect the United States' Memorials and Monuments within the purview of the National Capital Region of the National Park Service from counter terrorism attacks. This plan suggested having security protection systems in place and named what resources need to be protected.

After September 11th, the National Park Service decided to explore long-term solutions for improving security surrounding the Lincoln Memorial along with the rehabilitation of Lincoln Circle. In 2001, the National Capital Planning Commission created a Task Force to identify urban design solutions that would act as a benchmark for security design throughout the Nation's Capital. The Task Force issued *Designing for Security in the Nation's Capital*, which looked at options for security improvements around the Nation's Capital. Among the conclusions reached by the Task Force was the recommendation that the National Capital Planning Commission prepare an integrated Urban Design and Security Plan for the Monumental Core. *The National Capital Urban Design and Security Plan* was issued by the National Capital Planning Commission in October 2002. The National Park Service has used the recommendations of the Task Force plan and the Booz-Allen, Hamilton, Inc. plan in their planning of the proposed vehicle barrier system.

1.5 RELATIONSHIP TO OTHER PROJECTS AND PLANS

1.5.1 FUTURE ROAD IMPROVEMENTS

Future projects that may have the potential to cumulatively impact this project include various road improvements planned in the vicinity of the Lincoln Memorial. The planned improvements include: rehabilitation of the west side of Arlington Memorial Bridge and the Theodore Roosevelt Bridge; access improvements to the Kennedy Center; and the rehabilitation of Constitution Avenue from 15th Street to 23rd Street and Ohio Drive from 23rd Street to the Rock Creek and Potomac Parkways. Construction improvements to Arlington Memorial Bridge are anticipated to begin in late spring of 2004, approximately one year after the start of the proposed action. The Theodore Roosevelt Bridge improvements project is currently in the preliminary planning stage. Construction for this project would not begin until after the Lincoln Memorial project is complete. In addition, an Environmental Assessment is currently being completed for

road improvements at the Kennedy Center. This project would be broken up into three sectors. The southern sector, which would have the potential to impact the Lincoln Memorial project, would not begin until late 2004. All of these road improvements projects are currently in the planning stages and construction on them would not begin until after the Lincoln Memorial project is complete; therefore, there would be no short-term cumulative effects from construction. Cumulative effects are further discussed in Section 4.0, Environmental Consequences of this document.

1.5.2 SECURITY IMPROVEMENTS PROJECTS

In 1999, the National Park Service, in coordination with Booz-Allen, Hamilton, Inc., developed a security plan that describes the type of security measures that should be taken to protect the United States' Memorials and Monuments within the purview of the National Capital Region of the National Park Service. This plan suggested having security protection systems in place and what to protect, which included the visitors and the Memorials and Monuments. In 2001, the National Capital Planning Commission created a task force to identify urban design solutions that would act as a benchmark for security design throughout the Nation's Capital. The implementing plan was completed in October 2002. The National Park Service has used the recommendations of the task force and the Booz-Allen, Hamilton, Inc. plan in their planning of security improvements.

Security improvements projects are currently being considered at the Washington Monument and the Thomas Jefferson Memorial. Security improvements at the Washington Monument were studied in an Environmental Assessment dated April 2002. The Environmental Assessment assessed two alternatives for security improvements. The first alternative consists of constructing an underground screening facility and passageway to the Monument and a landscaped vehicle barrier system of walled terraces and pathways. The second alternative consists of construction of an above-ground screening facility with secured pathways to the Monument. Under this second alternative, bollards would be placed around the Monument grounds to provide a vehicular barrier system.

An Environmental Assessment for security improvements at the Jefferson Memorial has been prepared and was available for public review. The Environmental Assessment on the Jefferson Memorial is currently being revised based upon comments received during the public review period. The revised Environmental Assessment will be issued for public comment and review. The Preferred Alternative for improvements at the Jefferson Memorial consists of a vehicular barrier system along East Basin Drive. The vehicle barrier system would consist of three sections of a vehicle barrier wall and bollards that would be approximately 2,000-feet long. This existing parking area would be raised to sidewalk level to create a pedestrian plaza. Visitor parking would be relocated to existing parking lots situated along Ohio Drive and would be within walking distance to the Memorial. Handicap accessible parking for visitors with disabilities would be relocated to the south side of East Basin Drive, directly across the street from the current tour bus access.

There would be no short-term cumulative effects from construction activities of the Washington Monument security improvements because the various projects would occur at different times. Even though the Jefferson Memorial security improvements project may occur at the same time

as the Lincoln Memorial project, no cumulative effect would occur because construction for each project would be at different locations and neither project would impact the other. Cumulative effects are further discussed in Section 4.0, Environmental Consequences.

1.5.3 OTHER PROJECTS

A memorial to honor our veterans of World War II is currently being constructed at the site of the Rainbow Pool at the east end of the Reflecting Pool between the Lincoln Memorial and the Washington Monument. An Environmental Assessment was completed for this project and a Finding of No Significant Impact was signed on July 2, 1998. The Environmental Assessment analyzed pertinent environmental impacts of establishment and construction of the memorial and any necessary mitigation measures. In addition, the Environmental Assessment also considered the affects of visitor use, vehicular and pedestrian circulation, and existing periodic uses of the site for various activities. Heavy construction on this project is anticipated to be completed by Winter 2004 and dedication of the World War II Memorial is anticipated to take place on Memorial Day 2004 (May 31, 2004). Cumulative effects associated with this project are discussed in Section 4.0, Environmental Consequences.

Other projects, such as the Vietnam Veterans Memorial Education Center and a memorial honoring Dr. Martin Luther King, Junior have been proposed. The Vietnam Veterans Memorial Education Center has not been authorized by Congress, while the Martin Luther King, Junior Memorial has been authorized by Congress. However, no concepts for these projects have been developed. The projects are not anticipated to occur within the foreseeable future and; therefore, have not been considered when analyzing cumulative effects.

1.6 ISSUES AND IMPACT TOPICS

1.6.1 ISSUES

Issues and concerns affecting the proposed action were identified by specialists in the National Park Service, including the resource management staff of the National Capital Parks – Central, which administers National Park Service units of the Monumental Core of our Nation's Capital. The National Park Service coordinated with the National Capital Planning Commission and the Commission of Fine Arts. The National Capital Planning Commission is responsible for preserving the unique beauty and historic urban design of the Nation's Capital. It provides overall planning guidance for federal land and buildings in the National Capital Region and seek to protect and enhance the extraordinary historical, cultural, and natural resources of the Nation's Capital. The Commission of Fine Arts, an independent Federal agency, advises the Federal and District of Columbia governments on matters of art and architecture that affect the appearance of the Nation's Capital. The Commission's primary role is to advise on proposed public building projects, but it also reviews private buildings adjacent to public buildings and grounds of major importance.

The primary issue associated with the proposed action is how to design transportation improvements, a vehicular security system, and an enhanced visitor services in a manner that meets the project need while not detracting from the historic nature of the Memorial and the cultural landscape and the visitor experience. National Park Service staff worked with

consultants, the National Capital Planning Commission, and the Commission of Fine Arts to develop alternatives that were sensitive to the context of the Memorial without appearing as though they were part of the original Memorial design. Alternatives were also developed to address issues raised in the National Park Service 1999 report, *Cultural Landscape Report, West Potomac Park – Lincoln Memorial Grounds*. In addition, the safety and security of the visitors was also a major issue in meeting the need for the proposed action.

Transportation improvements and the vehicular security system also need to be designed and implemented to allow for the efficient flow of traffic, while not impeding access to the Memorial by pedestrians or persons with disabilities.

1.6.2 IMPACT TOPICS ANALYZED IN THIS DOCUMENT

Impact topics are resources of concern that could be affected, either beneficially or adversely, by the range of alternatives. Impact topics were identified on the basis of Federal laws, regulations, Executive Orders, National Park Service *Management Policies* (2001), the Environmental Screening Form from Director's Order #12, and from National Park Service knowledge of limited or easily impacted resources. The Environmental Screening Form was completed by the National Park Service staff and identifies potential issues and impact topics that required additional investigation to address the requirements of the National Environmental Policy Act of 1969 and Director's Order #12. Specific impact topics were developed, based upon the Environmental Screening Form, to ensure the alternatives were compared on the basis of the most relevant topics. As a means of evaluation, impact topics included in this document were analyzed in more detail to compare the environmental consequences of the No-Action Alternative and the two action alternatives.

The impact topics identified on the Environmental Screening form are explained below.

- Floodplains – the Lincoln Memorial lies adjacent to, but outside of, the 100-year floodplain. Alternatives to the proposed action were assessed to determine if they would affect the functions and integrity of the floodplain.
- Transportation (Traffic) – The purpose of park roads is to enhance visitor experience while providing safe and efficient accommodation of park visitors. However, urban parkways and city streets have a dual function, and not only serve park purposes, but also serve as extensions of the local transportation network and carry large volumes of non-park related traffic (NPS, 1984). The flow of vehicular and pedestrian traffic around the Lincoln Memorial is important to maintaining access and security for the Memorial. Therefore, the alternatives were analyzed to determine their effect on traffic.
- Aesthetics and Visual Resources – The aesthetics and visual resources of the Lincoln Memorial and the vistas to and from the Memorial help to define the historic nature of the Memorial and the visitor experience. Therefore, the alternatives to the proposed action were analyzed to determine their effect on this topic.
- Historic Resources and Cultural Landscapes – The Lincoln Memorial, which consists of the structure and Lincoln Circle, is listed on the National Register of Historic Places. The Lincoln Memorial Grounds, which is bounded by the Potomac River on the west, 17th Street on the east, Constitution Avenue on the north, and Independence Avenue on the south, is

considered a cultural landscape and is listed as a contributing element to the designation of West Potomac Park to the National Register of Historic Places as a historic designed landscape. There are several other resources in the vicinity of the Memorial that are listed on the National Register, including the Jefferson Memorial, the Washington Monument, the National Mall, the Ellipse, the L'Enfant Plan, and the McMillan Plan. The proposed alternatives were assessed to determine what, if any, impact they would have on the integrity of these resources.

- **Safety (Security)** – Safety and security are part of the need for the proposed action. The alternatives to the proposed action were assessed to determine their effect on safety and security of both the Memorial and its visitors.
- **Visitor Use and Experience** – Maintaining and improving the quality of the visitor experience at the Lincoln Memorial is very important to the National Park Service. Therefore, the alternatives were assessed to determine their effect on this topic.
- **Park Operations** – Uninterrupted and efficient park operations at the Lincoln Memorial are vital to meeting the National Park Service mission. Therefore, the alternatives to the proposed action were assessed to determine their affect on this topic.

1.6.3 IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS

The non-controversial topics listed below would either not be affected or would be affected negligibly by the alternatives evaluated in this document. Therefore, these topics have been briefly discussed in this section of the Environmental Assessment and then dismissed from further consideration or evaluation. Negligible effects are effects that are localized and immeasurable at the lowest level of detection.

1.6.3.1 SOILS, GEOLOGY, AND TOPOGRAPHY

The project area is located in Washington, DC, and is situated along the eastern banks of the Potomac River. The surrounding project area is relatively flat and is at approximately 10 feet mean sea level (USGS, 1971). The Lincoln Memorial resides on a graded hilltop, approximately at 20 feet mean sea level. Historically, the area was flat marshland with parent material consisting of gravel, sand, silt, and clay Quaternary lowland deposits (MGS, 1968). The thickness of the deposits varied from 0 to 150 feet, commonly containing reworked Eocene glauconite, varicolored silts and clays, and brown to dark grey lignitic silty clay (MGS, 1968).

Soils within the site have been substantially altered by the placement of fill material. In 1882, a project to improve navigation of the Potomac River transformed the marshes and tidal flats into 600 acres of riverside recreational areas (USDA, 1976). Included within this 600 acres is the current location of the Lincoln Memorial. Dredged sediments from the Potomac River and fill hauled from off site were used in this transformation. Today, mapped soils within the project area are classified as udorthents (U1) (USDA, 1976). (See Figure 4).

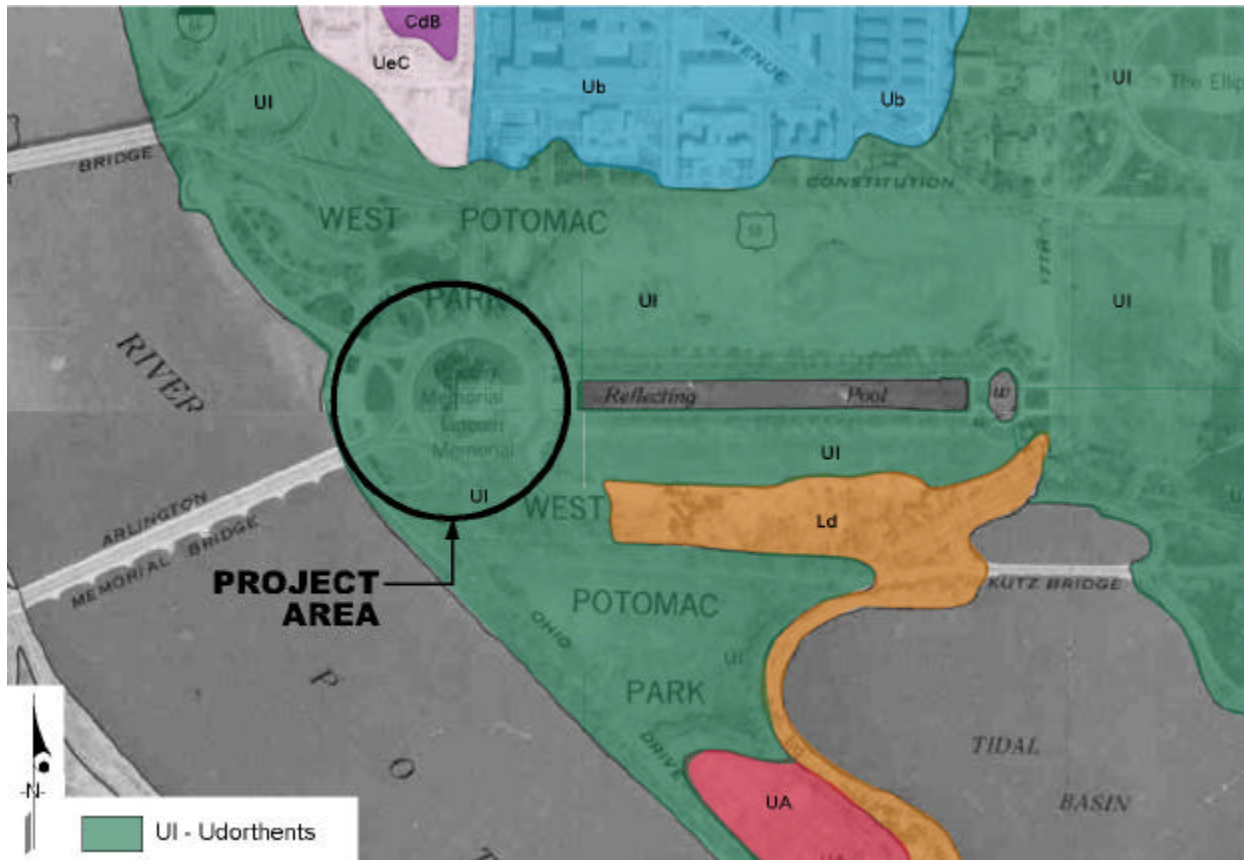


Figure 4: Soil resources in the project area.

The udorthents mapping unit is characterized by earthy fill material that has been placed in poorly drained to somewhat excessively drained soils on uplands, terraces, and floodplains of the Coastal Plain and Piedmont. The thickness of the fill is variable, but typically is more than 20 inches. Permeability, runoff, and internal drainage tend to be quite variable (USDA, 1976).

None of the alternatives will affect the soils, geology, and topography due to the limited amount of earth disturbance under the proposed action and the existing highly disturbed nature of the project area. Therefore, Soils, Geology, and Topography were dismissed as impact topics.

1.6.3.2 LAND USE

Of the approximately 94 acres of the Lincoln Memorial Grounds, the project area is approximately 30 acres. It is located in West Potomac Park, within the city limits of Washington, DC. The project area consists of a maintained landscaped lawn on which the Lincoln Memorial is situated. The project area is bounded by Constitution Avenue to the north, the Vietnam Veterans Memorial to the northeast, the Reflecting Pool and Washington Monument to the east, the Korean War Veterans Memorial to the southeast, Independence Avenue to the south, and the Potomac River and Ohio Drive to the west. The entire site and surrounding areas are designated as the Lincoln Memorial Grounds. The Lincoln Memorial Grounds is a National Park Service unit of the Monumental Core of our Nation's Capital. Due to the Federal land use designation, the City of Washington, DC, has no land use zoning jurisdiction over the land. The

existing use of the land will not change as a result of the proposed security, traffic, and visitor services improvements; therefore, Land Use was dismissed as an impact topic.

1.6.3.3 AGRICULTURAL LANDS, PRIME AND UNIQUE FARMLANDS SOILS

None of the soils mapped on the project site are regulated under the Federal Farmland Protection Policy Act (7 CFR Part 658 of July 5, 1984, as superseded by the Farmland Protection Policy Act Final Rule of June 17, 1994) (USGS, 1971). Additionally, none of the soils are prime farmland soils, unique farmland soils, farmland soils of statewide importance, or identified as hydric soils by the Natural Resource Conservation Service offices of the District of Columbia. Soils in the project area are not identified as having any Federal designation. None of the alternatives would affect agricultural lands, or prime or unique farmlands soils as defined by the Natural Resource Conservation Service; therefore, these resources were dismissed as an impact topic.

1.6.3.4 WILDLIFE

Wildlife at the Lincoln Memorial is characteristic of the urban environment, and consists primarily of avian species. Birds commonly observed are those associated with human activity and include house sparrows, European starlings, common grackles, and rock doves (pigeons). Other species present are those associated with edge habitats created by plantings of trees and shrubs and include gray catbirds, northern mockingbirds, eastern phoebes, blue jays, and northern cardinals. Canada geese and mallards have adapted to human presence and are common along the water edges of the Reflecting Pool and the Tidal Basin. Mammals present include Eastern chipmunks, gray squirrels, and occasional Norway rats, house mice, and beavers. Trees and shrubs planted for landscaping purposes provide nesting sites, food, and cover for many of the wildlife species present.

Should the proposed action be implemented, only a negligible disruption would occur to wildlife during construction because the project area is located within an urban and human dominated landscape surrounded by major access roads and buildings. Therefore, Wildlife was dismissed as an impact topic.

1.6.3.5 VEGETATION AND LAND COVER

The marshland vegetation that naturally occurred in the vicinity of the Lincoln Memorial has been eliminated by fill from 1882 to 1901 by the Army Corps of Engineers, and replaced with seeded and transplanted species as the site was developed. The selection of species used for landscaping has been based primarily on aesthetics and growth characteristics and includes native species as well as non-native species that have been introduced from other regions of the United States and other continents. This project will have no cumulative effect on the past action.

The vegetated areas around the Memorial comprise a maintained park-like area planted with grasses and various trees and shrubs. Poor soil conditions and diseases have contributed to the loss of many of the trees. The trees in the area around the Lincoln Memorial are predominately large American elms (*Ulmus americana*). Other vegetation present includes red oak (*Quercus*

rubrum), flowering dogwood (*Cornu florida*), sugar maple (*Acer saccharum*), southern magnolia (*Magnolia grandiflora*), and azaleas (*Rhododendron spp*).

The proposed action will not require the removal of trees, shrubs, or other vegetation. The proposed security improvements would require placement of a vehicular barrier wall along grassed areas and placement of metal bollards on grassed areas along the steps leading to the east side of the Memorial. Neither the wall nor the bollards would affect any landscaped plant beds, trees, or shrubs. In addition, construction staging areas would have negligible, short-term adverse impacts on vegetation due to fugitive dust.

Because the proposed action would negligibly impact the existing vegetation, Vegetation and Land Cover were dismissed as impact topics.

1.6.3.6 RARE, THREATENED, ENDANGERED, CANDIDATE SPECIES AND SPECIES OF CONCERN

The United States Fish and Wildlife Service and the National Park Service were contacted to determine whether any known critical habitats or listed rare, threatened, or endangered species have been documented in the project area.

The U.S. Fish and Wildlife Service stated that, except for occasional transient individuals, no proposed or federally listed endangered or threatened species are known to exist within the project area (USFWS, 2002). The National Park Service indicated that there are no records of any threatened or endangered species or rare species near the Lincoln Memorial (NPS, 2002q).

The consultation letters from the U.S. Fish and Wildlife Service and the National Park Service are provided in Appendix A. Based upon the current site conditions and consultation, no known critical habitats or listed rare, threatened, or endangered species or species of concern exist in the project area. Therefore, this impact topic was dismissed from further consideration.

1.6.3.7 AIR QUALITY

Air quality became a national concern in the mid-1960s, leading to the passage of the Air Quality Act in 1967. The Act (now referred to as the Clean Air Act) and subsequent amendments have established procedures for improving conditions, including a set of National Ambient Air Quality Standards (NAAQS).

The U.S. Environmental Protection Agency is directed to set levels for pollutants in order to protect the public's health. The NAAQS have been adopted for six pollutants: carbon monoxide, nitrogen dioxide, sulfur dioxide, ozone, particulate matter, and lead. A system of monitoring stations has been established across the country to measure progress in meeting these goals. If an area is found to exceed the allowable concentrations, local officials are required to develop a plan for achieving air quality that meets the standards. Generally, the nation is making great progress toward providing good air quality.

The Washington metropolitan area, however, continues to be in non-attainment for ozone and the region is required to develop a plan to move toward attainment. Similarly, the region had been

in non-attainment of the carbon monoxide 8-hour standard, and it is required to show that appropriate air quality control measures are in place to maintain recent air quality improvements.

Impacts associated with construction of the proposed action would have negligible short-term, adverse impacts to air quality due to fugitive air dust during construction. Once complete, the transportation improvements would help alleviate vehicular emissions as result of enhanced traffic flow. Therefore, Air Quality was dismissed as an impact topic.

1.6.3.8 WATER RESOURCES (WETLANDS AND WATERWAYS)

From a review of the available mapping and site visits, wetlands or surface water were not identified in the project area. The Lincoln Memorial is located in an upland area. The closest waterway is the Potomac River, located less than one-half mile to the west of the Lincoln Memorial.

Based on the location of the retaining wall and bollards, the vehicular security barrier will not encroach on the Potomac River's riparian buffers. Although the preferred alternative is relatively close to the river, an existing roadway (Ohio Drive) exists between the Potomac River and the Lincoln Memorial.

The new vehicular barrier system would not add additional impervious surfaces. Minor improvements to water quality are expected to result from the replacement of the existing storm water drainage inlets with improved oil/grit separator inlets. In addition, erosion and sediment control measures would be utilized during construction. The new vehicular barrier system poses no to negligible impacts to groundwater resources.

None of the alternatives considered in this document would affect water resources of the project area because of the nature of the proposed action and no new wetlands or waterways are within the project area. Therefore, this has been dismissed as an impact topic.

1.6.3.9 SOUNDSCAPE MANAGEMENT

In accordance with the National Park Service *Management Policies* (2000g) and Director's Order #47, *Sound Preservation and Noise Management*, an important objective of the National Park Service's mission is the preservation of natural soundscapes associated with national park units. Natural soundscapes exist in the absence of human caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be transmitted through air, water, or solid materials. The frequencies, magnitudes, and duration of human caused sound considered acceptable varies among National Park Service units. Acceptance levels for each park unit are generally greater in developed areas and less in undeveloped areas.

The proposed action would result in no long-term differences in noise frequencies, magnitudes, and durations. Typical noise associated with commercial properties surrounding the site is currently produced in the project area. In addition, several transportation noise sources exist such as vehicular traffic, nearby railroads, and the flight path of the Ronald Reagan Washington

National Airport. As a result of the nearby land uses and background levels of noise, the proposed action would have negligible impacts on sound preservation and noise management.

Furthermore, construction activities would have negligible, short-term, adverse impacts on noise levels. The contractor would be required to comply with local noise ordinances. Because the proposed action would result in negligible, short-term adverse impacts on noise levels during construction and would have negligible, long-term impacts on sound preservation and noise management, Soundscape Management was dismissed as an impact topic.

1.6.3.10 LIGHTSCAPE MANAGEMENT

In accordance with National Park Service *Management Policies* (2000g), the National Park Service strives to preserve to the extent possible the quality of lighting associated with natural ambient landscapes and the night sky. The proposed action would require artificial outdoor lighting to the extent necessary to ensure safe conditions for visitors. Because the proposed action would negligibly impact or contribute to the natural ambient landscapes of the Lincoln Memorial, Lightscape Management was dismissed as an impact topic.

1.6.3.11 SOCIOECONOMIC RESOURCES

The social economic environment consists of local, regional, and national businesses; the Federal government; the District of Columbia government; residences; the local and regional economy; and tourism. The area surrounding the Lincoln Memorial consists of parkland and Federal buildings. The local economy and businesses include tourism and the Federal government. An additional visitor services area on the north side of the Memorial would create more job opportunities for the park concessionaire.

Since the Lincoln Memorial sits at a major gateway into Washington, DC, construction of the rehabilitation of Lincoln Circle would beneficially impact vehicular access in and out of the City. Improved traffic islands, improved intersections, and a designated tourmobile lane would all contribute to a negligible, long-term, beneficial impact on the economy as a result of improved access.

Socioeconomic impacts of the proposed action would be negligible, long-term, and beneficial. Therefore, Socioeconomic Resources was dismissed as impact topics.

1.6.3.12 ARCHEOLOGY RESOURCES

In 1870, the Army Corps of Engineers began the long project of dredging the Potomac River and disposing of dredged materials in such a way to prevent siltation. By 1901, 31 acres adjacent to the Washington Monument had been filled and subsequently turned into Potomac Park (NPS, 1999f). By 1907, the area of Potomac Park that would become the Lincoln Memorial and Reflecting Pool had been filled to a grade of 12 to 13 feet mean sea level. The base height eventually became 14 to 16 feet above mean sea level. Since all the land for the Lincoln Memorial is reclaimed land from the Potomac River, there is no archeological significance to the site. Therefore, Archeology Resources was dismissed as an impact topic.

1.6.3.13 INDIAN TRUST RESOURCES

Secretarial Order 3175 requires that any anticipated impacts to Indian trust resources from a proposed action by Department of Interior agencies be explicitly addressed in environmental documents. The Federal Indian Trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of Federal law with respect to American Indian and Alaskan native tribes.

There are no Indian Trust resources in the area of the Lincoln Memorial. The lands comprising the Memorial are not held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore, Indian Trust Resources was dismissed as an impact topic.

1.6.3.14 ETHNOGRAPHIC RESOURCES

The National Park Service defines ethnographic resources as any “site, structure, object, landscape or natural resource feature assigned traditional legendary, religious, subsistence or other significance in the cultural system of a group traditional associated with it” (Director’s Order #12, *Cultural Resources Management Guidelines*, p. 181, 2001,i). Because no ethnographic resources are known to exist in or in proximity of the project area, Ethnographic Resources was dismissed as an impact topic.

1.6.3.15 ENVIRONMENTAL JUSTICE

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations directs Federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority or low-income populations.

According to the 2000 U.S. Census (2002) figures, the minority community in Washington, DC, is approximately 70 percent and approximately 12 percent of the population is over the age of 65. The percentage of all individuals living below the poverty line in Washington, DC, is approximately 19 percent, which is slightly higher than the national average of 13 percent. Disproportionate amounts of minorities or low income populations exist in Washington, DC, but none reside within the project area nor would they be adversely impacted by the proposed action. Therefore, Environmental Justice was dismissed as an impact topic.

1.6.3.16 COMMUNITY FACILITIES AND SERVICES

Emergency Services and Fire and Rescue – The District of Columbia Fire and Emergency Medical Services Department provides emergency, fire, and rescue services for Washington, DC. The construction of a vehicular barrier system around the Lincoln Memorial would have no effect on existing fire and rescue operations. Special access would be provided for emergency vehicles to reach the Lincoln Memorial.

Police – The U.S. Park Police are the primary responders to actions occurring on park property and enforce Federal laws and regulations. The construction of a vehicular barrier system would

have no effect on the existing police services. Special access would be provided for emergency vehicles to reach the Lincoln Memorial.

Schools – Based on the review of the District of Columbia Public Schools System, there are no public schools in close vicinity to the Lincoln Memorial. The closest public school by road is located on 7th Street, SW, and is over one mile from the site. The construction of a vehicular barrier system would have no effect on schools in the area.

The construction of a vehicular barrier system at the Lincoln Memorial is not anticipated to directly affect existing community facilities. The proposed project barrier system would not impact the quality or quantity of existing emergency, medical, police, and fire and rescue services. Therefore, Community Facilities and Services were dismissed as impact topics.

1.6.3.17 INFRASTRUCTURE

Existing utilities would be identified prior to earth disturbance activities.

Water and Sewer Service – Water is supplied to the District of Columbia from the Potomac River through the Dalecarlia and McMillan Reservoirs where filtration and treatment occur. The U.S. Army Corps of Engineers operates the reservoirs. Pump stations at the reservoirs, and elsewhere in the system, deliver water through mains to the city and certain surrounding areas.

The District of Columbia is served primarily by combined storm and sanitary sewer facilities. This system collects sewage flows and conveys it to the Blue Plains Wastewater Treatment Facility for treatment. A sewer separation program has been in place since 1930, requiring more recently developed areas to have separate dedicated piping systems for storm drainage and sewage.

The existing water and sewer structure would not be impacted by the construction of a vehicular barrier system because the proposed action would not increase water and sewer service.

Electrical Power and Natural Gas – The Potomac Electric Power Company, Inc., provides electricity to the District of Columbia. The Power Company's main generation plants are located in Maryland, Virginia, and the District of Columbia. Washington Gas supplies natural gas to the District of Columbia through a network of underground conduits fed through larger high-pressure transmission lines, generally located within street rights-of-way. The proposed action would not affect service levels provided by the power or gas companies because service levels would not increase.

Communication – Verizon provides commercial and private telecommunications to the District of Columbia. The system is designed and constructed to accommodate current and future development. Communication services would not be affected in the area because no new service is anticipated.

Waste Management – The National Park Service collects the waste from the Lincoln Memorial and delivers it to the BFI Transfer Station located at 1220 W Street, NE. Waste management would not be affected in the project area because waste generated at the Memorial is not anticipated to increase.

The existing infrastructure within the project area is not anticipated to be directly affected by the construction of a vehicular security barrier around the Lincoln Memorial. The proposed project would not adversely impact water and sewer service, storm drainage, electrical power and natural gas, communication, or waste management. Therefore, Infrastructure was dismissed as an impact topic.

2.0 ALTERNATIVES

This section describes alternatives for transportation improvements, security improvements, and visitor services improvements. Two build alternatives, developed to meet the needs of the proposed action, are presented in this section. In addition, the No-Action Alternative, under which the proposed action would not be constructed, is described.

Development of Alternatives for Rehabilitation of Lincoln Circle: Alternatives for rehabilitating Lincoln Circle were developed under a traffic study conducted by the Federal Highway Administration in 2001. Development of alternatives for improvements to the Circle took into account numerous factors including traffic volumes, the historic layout of the Circle, traffic flow, pedestrian movements, tour bus parking, and handicap parking.

Development of Alternatives for Security Improvements: The National Park Service has used the framework set by two National Capital Planning Commission studies to develop alternatives for security improvements for the Lincoln Memorial.

In October 2001, the National Capital Planning Commission issued *Designing for Security in the Nation's Capital* which looked at options for security improvements around the Nation's Capital (NCPC, 2001). This document underwent several revisions, of which included the NCPC-Olin Alternative for the use of bollards and planters for security designs at the Lincoln Memorial. The final document, which underwent the National Capital Planning Commission's review process, including public review and comment, suggests the utilization of gatehouses; terraces, walls, and raised planting beds; trees and planters; walls and fencing; posts and bollards; and other site furnishings and amenities for an urban design plan that would provide adequate security to Washington, DC, while enhancing the unique character of the Nation's Capital.

Among the conclusions reached by the Task Force that prepared the 2001 study, was the recommendation that the National Capital Planning Commission prepare an integrated Urban Design and Security Plan for the Monumental Core. *The National Capital Urban Design and Security Plan* was issued by the National Capital Planning Commission in October 2002 (NCPC, 2002). This plan, prepared by nationally recognized urban designers, landscape architects, and security experts, identifies perimeter security design solutions appropriate to the character of the Monumental Core and more specifically the Lincoln Memorial. This report suggests "a low wall that encloses the circular mound upon which the memorial sits. The security perimeter extends across the Mall side of the closed portion of the circular roadway (incorporating bollards and planters, and continues in a line of metal bollards on the Mall side of this road to, and alongside, the steps leading to the Reflecting Pool. The security perimeter is completed across the axis of the Mall by placement of stone bollards at the foot of these steps (NCPC, 2002)."

Using the framework of the National Capital Planning Commission studies and the Booz-Allen, Hamilton, Inc. security plan for the National Capital Region for the National Park Service, the National Park Service developed a security plan that describes the type of security measures that should be taken to protect the United States Memorials and Monuments within the purview of the National Capital Region of the National Park Service from counter terrorism attacks. Based upon site conditions and use, pedestrian access, cultural landscape features, and other issues,

bollards and retaining walls were determined to best meet the purpose and need of this project. Posts and bollards provide the most ubiquitous security elements found in the Nation's Capital. They vary in design and provide ease of pedestrian circulation, meet accessibility requirements, and enhance the streetscape. In addition, retaining walls complement the architecture of adjacent buildings. Furthermore, bollards and retaining walls would form an urban design that would create a sense of unity.

During preliminary planning efforts, the National Park Service staff considered several alternatives for placement of the vehicular barriers. The project has two distinct parts: protection of the west side of the Lincoln Memorial and protection of the east side of the Memorial. Three options were assessed for protection of the west side. Two of these alternatives are evaluated in detail in this Environmental Assessment. The third alternative was dismissed from further analysis and reasons for dismissal are discussed later in this chapter (see Section 2.8, Alternatives Considered but Dismissed from Further Analysis). Three alternatives were assessed for protection of the east side of the Memorial. Two of these are studied in detail in this Environmental Assessment and the other was dismissed from further analysis.

Development of Alternatives for Visitor Services Improvements: In developing alternatives for improvements to visitor services, the National Park Service assessed pedestrian flows between monuments and memorial, the historic landscape, and park operations.

The alternatives developed for transportation improvements, security improvements, and visitor service improvements have been combined to create the alternatives evaluated in detail in this Environmental Assessment. The alternatives are as follows: Alternative A: No-Action Alternative; Alternative B: Installation of retaining wall behind existing sidewalk; and Alternative C: Installation of bollards behind the existing sidewalk. The Preferred Alternative is considered to be Alternative B for the purposes of this document.

2.1 ALTERNATIVE A – NO-ACTION

The No-Action Alternative describes the action of continuing the current management operations and conditions. No-action does not imply or direct discontinuing the current action or removing existing uses, developments, or facilities. The No-Action Alternative provides a basis for comparing the management direction and environmental consequences of the other alternatives. Under the No-Action Alternative, no transportation improvements would be made to Lincoln Circle. The construction of a vehicular barrier wall and installation of bollards to enable the National Capital Parks – Central to provide additional security to the Lincoln Memorial and its visitors would not occur. The lack of a vehicle barrier system would not help prevent attacks from vehicle bombs. New visitor services areas would not be constructed.

Transportation Improvements. Under the No-Action Alternative, Lincoln Circle would continue to be temporally closed on the east side of the Memorial through the use of concrete jersey barriers and planters. Tourmobiles would continue to enter the Lincoln Memorial grounds from 23rd Street (south). Tourmobiles and cabs would continue to park along Daniel French Drive and handicap parking would continue to be located on Lincoln Circle between 23rd Street (south) and Daniel French Drive. During peak traffic periods, Constitution Avenue/23rd Street (north) and Independence Avenue/23rd Street (south) would continue to operate at a level of service "F".

Pedestrian/vehicular conflicts would continue to occur. No signalization would occur for pedestrians.

Security Improvements. With the No-Action Alternative, concrete jersey barriers would continue from Daniel French Drive, around the west side of Lincoln Circle, and culminate at Henry Bacon Drive, where concrete planters bisect Lincoln Circle at Daniel French Drive and Henry Bacon Drive. Concrete jersey barriers would continue along the pedestrian plaza on the east side of the Lincoln Circle.

Visitor Services Improvements. Under the No-Action Alternative the gift shop which currently operates out of a kiosk located between 23rd Street (south) and Daniel French Drive and a food vendor operates a concession stand out of a temporary trailer at the same location would continue. This is would remain the only visitor services area that serves visitors at the Lincoln Memorial, Korean War Veterans Memorial, and the Vietnam Veterans Memorial.

2.2 ALTERNATIVE B – CONSTRUCTION OF RETAINING WALL BEHIND EXISTING SIDEWALK AND INSTALLATION OF BOLLARDS ALONG OUTER RING (PREFERRED ALTERNATIVE)

Under Alternative B, the Preferred Alternative, the National Park Service proposes to rehabilitate Lincoln Circle, construct a vehicular barrier system, and enhance visitor services areas. Improvements as described below would occur within Lincoln Circle and within the historic designed landscape. No changes are proposed to the monument to President Lincoln.

Transportation Improvements. The transportation improvements entail rehabilitating Lincoln Circle. Approximately 6,800 linear feet of roadway would be improved. A one-way tourmobile lane would be created along the west side from Daniel French Drive to Henry Bacon Drive to allow entry of tourmobiles onto Lincoln Circle without forcing a traffic merge or yield at the entry point. Concrete bus pads would be created on 23rd Street (south), Daniel French Drive, and Henry Bacon Drive. This would provide a bus queuing area and a new tourmobile traffic pattern. Handicap accessible parking spaces will be provided along Daniel French Drive.

Intersections at Daniel French and Henry Bacon Drives would be improved for pedestrian access. Crosswalks would be created and new traffic signals would be installed at the intersection of Lincoln Circle with 23rd Street (north) and Henry Bacon Drive to provide safe access for pedestrians visiting the Lincoln Memorial. One median would be created on Lincoln Circle between Henry Bacon Drive and 23rd Street (north) to make the roadway more pedestrian-friendly. Street paving would occur and curbs, sidewalks, storm drainage systems, drinking fountains, and streetlights would be removed or replaced.

The east side of Lincoln Circle, which is currently closed to through traffic with the use of makeshift security barriers, would be permanently closed to all traffic. This section of Lincoln Circle would be raised to sidewalk level to create a pedestrian plaza. The plaza will re-establish the historic footprint of the easternmost area of Lincoln Circle. No new or additional closures to Lincoln Circle would occur. The plaza would be concrete with a rectilinear scoring pattern. It will follow the historic circle roadway, complete with a curb line, but the curb will be flush and

the roadbed would be raised to provide a plaza. The plaza will re-establish the historic footprint of the easternmost area of Lincoln Circle, including restoring sidewalks and the tree line.

All of the design features are being developed in accordance with the *Streetscape Manual* and the *Cultural Landscape Report for the Lincoln Memorial Grounds*, as well as, with the assistance of the National Capital Planning Commission Security Task Force.

Security Improvements. Security improvements would consist of constructing a retaining wall behind the existing sidewalk on the western side of the Memorial beginning at Daniel French Drive on the south side of the Lincoln Memorial and continuing around the west side, to the north side, and ending at Henry Bacon Drive.

Two options are provided for security improvements to the eastern side. They are:

- Option One: This consists of metal bollards along the outer ring, which would begin where the retaining wall ended at Henry Bacon Drive. They would cross Lincoln Circle and continue along the outer ring, descending the outside portion of the middle stairs. A vehicular barrier wall would be constructed from the middle stairs to the inner stairs and granite bollards would be constructed at the base of the inner stairs. A vehicular barrier wall would stretch from the inner stairs to the middle stairs on the west side of the Memorial and metal bollards would continue up the outside of the middle stairs and follow the outer ring. The bollards would cross Lincoln Circle to connect with the retaining wall at Daniel French Drive.
- Option Two: This consists of metal bollards along the entire length of the eastern portion of outer ring of Lincoln Circle, which would begin where the retaining wall ended at Henry Bacon Drive and end where the retaining wall started at Daniel French Drive.

A separate secure access gate would also be provided on the west side of the Lincoln Memorial for access by the Secret Service. This would double as an emergency egress area during extensive use of the Lincoln Memorial during various ceremonies.

Visitor Services Improvements. Two visitor services areas would be constructed between Henry Bacon Drive and 23rd Street (north) on the north side and Daniel French Drive and 23rd Street (south) on the south side. The existing gift shop kiosk and the snack area would be combined into the south side visitor services area. Existing baseball fields on the north side of the Memorial may have to be relocated.

Figure 5 illustrates the type of design that would be used for the proposed visitor services areas. Figure 6 depicts the schematic design of Alternative B, Option One and Figure 7 depicts the schematic design of Alternative B, Option Two. Figures 8 and 9 provide a conceptual plan for the granite and metal bollards, respectively.



Figure 5: The proposed visitor services areas would be similar in design to the above photo.

Compatible appropriate sympathetic context design and material in keeping with the cultural landscape and historical setting of the Lincoln Memorial would be used with the transportation, security, and visitor services improvements. These would include:

- Design techniques and construction materials that would preserve the aesthetic qualities of the original roadway design at its historic location, including curb line;
- Restoration of the east side of the Memorial to its historic layout;
- Rehabilitation of the sidewalks to their historic appearance;
- Restoration of the historic tree landscape plan;
- Construction measures that would minimize any disturbance to roots, limbs, and branches that are character defining features of the Lincoln Memorial Grounds; and
- Massing, scale, and materials would be reflective of or consistent with the surrounding park resources and historic designed landscape.

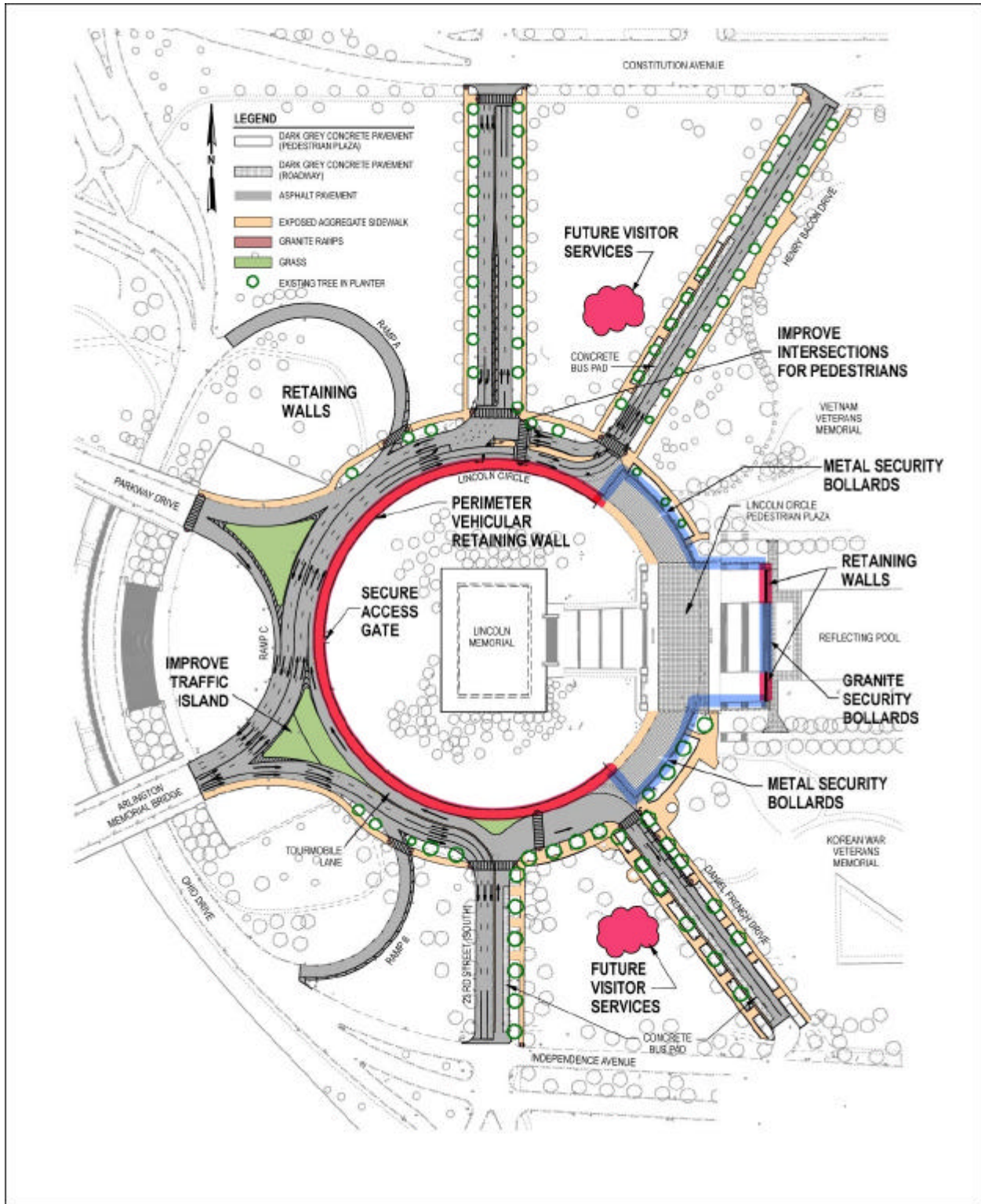


Figure 6: Preferred Alternative B, Option One site plan.

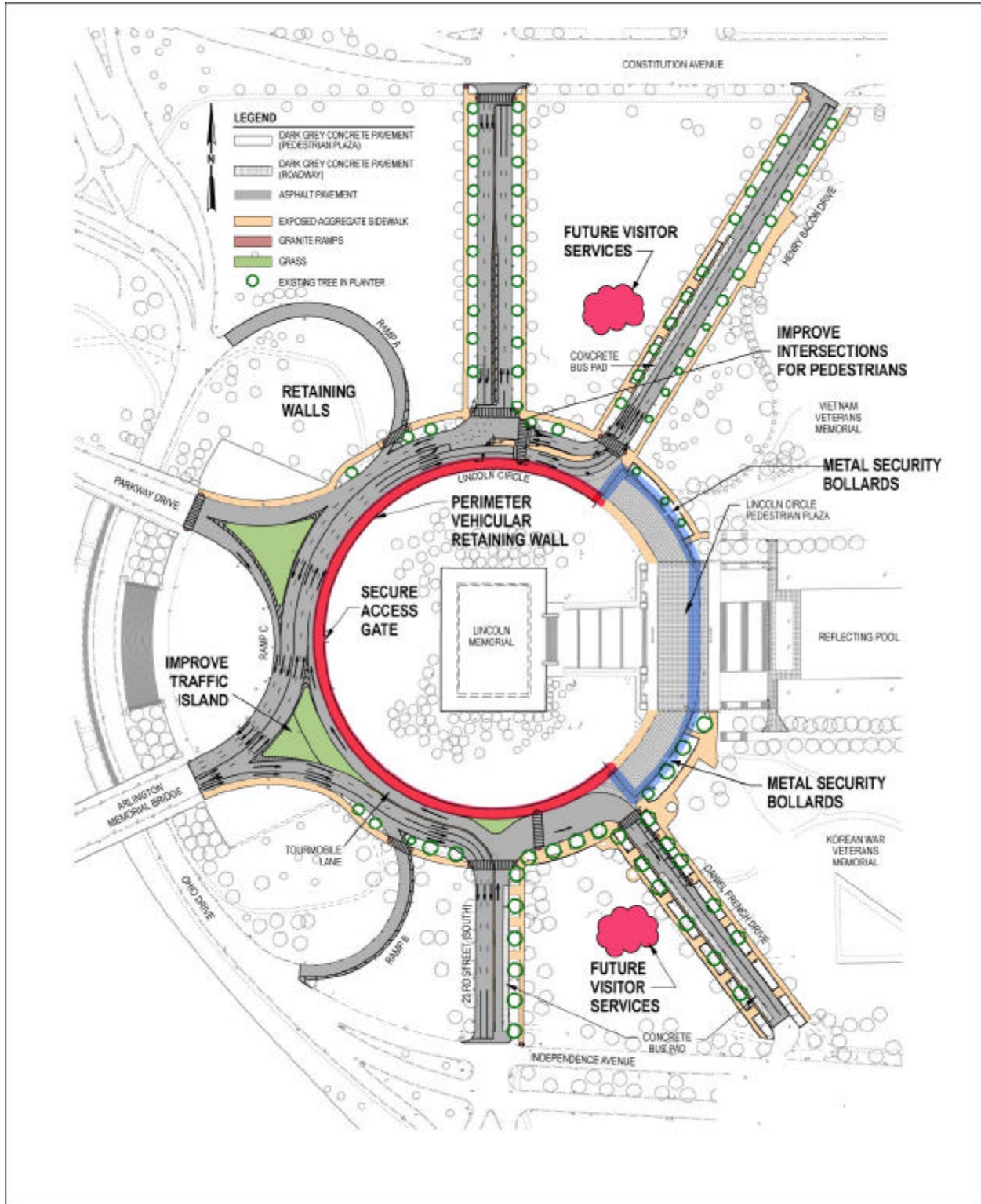


Figure 7: Preferred Alternative B, Option Two site plan.

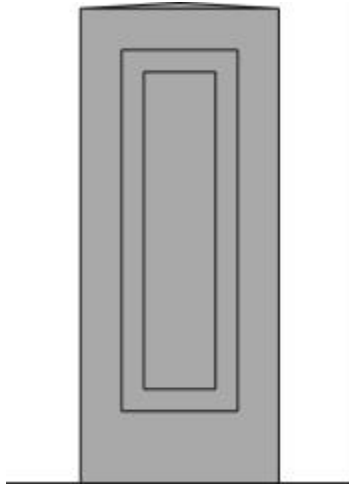


Figure 8: Proposed granite bollard.

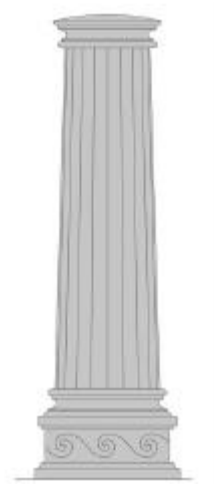


Figure 9: Proposed metal bollard.

2.3 ALTERNATIVE C – INSTALLATION OF BOLLARDS BEHIND EXISTING SIDEWALK AND ALONG OUTER RING

Alternative C, the National Park Service proposes to rehabilitate Lincoln Circle, provide security against a potential terrorist attack from a vehicular bomb, and would improve visitor services. Improvements as described below would occur within Lincoln Circle and within the historic designed landscape. No changes are proposed to the monument to President Lincoln.

Transportation Improvements. The transportation improvements proposed for Alternative C would be the same as those proposed under Alternative B.

Security Improvements. Security improvements under Alternative C would consist of placing metal bollards behind the existing sidewalk beginning along the western side of the Memorial at Daniel French Drive on the south side of the Lincoln Memorial and continuing around the west side ending at Henry Bacon Drive.

Two options are provided for security improvements to the eastern side. These are:

- Option One: This consists of metal bollards along the outer ring, which would begin where the bollards ended at Henry Bacon Drive. They would cross Lincoln Circle and continue along the outer ring, descending the outside portion of the middle stairs. A vehicular barrier wall would be constructed from the middle stairs to the inner stairs and granite bollards would be constructed at the base of the inner stairs. A vehicular barrier wall would stretch from the inner stairs to the middle stairs on the west side of the Memorial and metal bollards would continue up the outside of the middle stairs and follow the outer ring. The bollards would cross Lincoln Circle to connect with the bollards at Daniel French Drive (see Figure 10).
- Option Two: This consists of metal bollards along the entire length of the eastern portion of outer ring of Lincoln Circle, which would begin where the bollards ended at Henry Bacon Drive and end where the bollards started at Daniel French Drive (see Figure 11).

Visitor Services Improvements. The improvements to visitor services proposed under Alternative C would be the same as those proposed under Alternative B.

Compatible appropriate sympathetic context design and material in keeping with the cultural landscape and historical setting of the Lincoln Memorial would be used with the transportation, security, and visitor services improvements. These would include:

- Design techniques and construction materials that would preserve the aesthetic qualities of the original roadway design at its historic location, including curb line;
- Restoration of the east side of the Memorial to its historic layout;
- Rehabilitation of the sidewalks to their historic appearance;
- Restoration of the historic tree landscape plan;
- Construction measures that would minimize any disturbance to roots, limbs, and branches that are character defining features of the Lincoln Memorial Grounds; and

Massing, scale, and materials would be reflective of or consistent with the surrounding park resources and historic designed landscape.

2.4 ENVIRONMENTALLY PREFERRED ALTERNATIVE

In accordance with Director's Order #12, the National Park Service is required to identify the "environmentally preferred alternative" in all environmental documents, including environmental assessments. The Environmentally Preferred Alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969, which is guided by the Council on Environmental Quality. The Council on Environmental Quality provides direction that "[t]he environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in Section 101 of the National Environmental Policy Act," which considers:

1. Fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations;
2. Assuring for all generations safe, healthful, productive, and esthetically 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 will 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 (National Environmental Policy Act, Section 101)."

The No-Action Alternative (Alternative A) meets only Criterion 4, preserving important natural and cultural resources. Alternative B provides a better environmental approach than Alternative A, including the following advantages:

- Preventing loss of cultural resources (Criteria 1 and 4);
- Protecting cultural resources in an aesthetically compatible manner (Criterion 2); and
- Improving operation efficiency and sustainability (Criteria 3, 5, and 6).

Alternative C provides less aesthetically pleasing protection (due to the use of bollards) while providing the following advantages:

- Preventing loss of cultural resources (Criteria 1 and 4); and
- Improving operation efficiency and sustainability (Criteria 3, 5, and 6).

Alternative B is the Environmentally Preferred Alternative because it meets all six of the criteria set forth in the National Environmental Policy Act, while Alternative A meets only one of the criterion, and Alternative C meets five of the criteria. After review of potential resources and other impacts topics, and developing appropriate mitigation measures, Alternative B best ensures the preservation of park resources and values. Alternative B would alleviate impacts to historic and cultural resources currently being impacted by makeshift security barriers. In addition, Alternative B would meet urban design criteria as proposed by the National Capital Planning Commission Interagency Task Force in *Designing for Security in the Nation's Capital* and *The National Capital Urban Design and Security Plan*.

2.5 MITIGATION MEASURES OF THE PREFERRED ALTERNATIVE

Mitigation measures are presented as part of the Preferred Alternative. These actions have been developed to lessen the adverse effects of the Preferred Alternative. The following mitigation measures are recommended for the Preferred Alternative:

- The north service area would be constructed first. Once complete the gift shop, snack area, and information kiosks already existing on the south side would be transferred to the north side so that construction could begin on the south visitor services area, thereby eliminating disruption to visitor use and experience.
- Appropriate signage would be installed to warn motorists and pedestrians of construction. Appropriate traffic control measures would be used during construction.

- In order to meet requirements for individuals with disabilities, bollards would be placed a minimum of 4 feet apart.
- The bollards would be retractable to provide access to the Lincoln Memorial by National Park Service, U.S. Park Police, and other emergency vehicles.
- Compatible appropriate sympathetic context design and materials that would be in keeping with the cultural landscape and historical setting of the Lincoln Memorial would be used. These would include:
 - Design techniques and construction materials that would preserve the aesthetic qualities of the original roadway design at its historic location, including curb line;
 - Restoration of the east side of the Memorial to its historic layout;
 - Rehabilitation of the sidewalks to their historic appearance;
 - Restoration of the historic tree landscape plan;
 - Construction measures that would minimize any disturbance to roots, limbs, and branches that are character defining features of the Lincoln Memorial Grounds; and
 - Massing, scale, and materials would be reflective of or consistent with the surrounding park resources and historic designed landscape.

As the design, development, and consultation continue, other potential adverse effects may be identified. The National Park Service is also in consultation with the DC Historic Preservation Office to execute a Memorandum of Agreement for this project. In the event the Memorandum of Agreement is not signed before a final decision is made for this project on which alternative would be executed, the National Park Service will follow its own internal process so as to make its decision. Consultation and coordination would continue with the Commission of Fine Arts and the National Capital Planning Commission.

- Synchronization of traffic signals at 23rd Street (north)/Lincoln Circle and Constitution Avenue/Henry Bacon Drive during afternoon peak times would help control traffic at these two intersections; however, they should not adversely impact other traffic/flows.

2.6 SUSTAINABILITY

The National Park Service has adopted the concept of sustainable design as a guiding principle of facility planning and development. The objectives of sustainability are to design park facilities to minimize adverse effects on natural and cultural values, to reflect their environmental setting, and to maintain and encourage biodiversity; to construct and retrofit facilities using energy-efficient materials and building techniques; to operate and maintain facilities to promote their sustainability; and to illustrate and promote conservation principles and practices through

sustainable design and ecologically sensitive use. Essentially, sustainability is living within the environment with the least impact on the environment.

The No-Action Alternative does not support the practice of sustainability because the current use of concrete jersey barriers does not conform to the objectives of sustainability. The concrete jersey barriers adversely affect the natural and cultural resources of the Lincoln Memorial. The Preferred Alternative subscribes to and supports the practice of sustainable planning, design, and use of the Lincoln Memorial through a design that would preserve the sensitive context of the natural and cultural heritage of the Memorial and that minimize the adverse affects on the natural environment. Following the recommendations of the Commission of Fine Arts and the National Capital Planning Commission, the vehicular barrier system would blend in with the existing landscape, thereby meeting the sensitive context design of the Lincoln Memorial. A Memorandum of Agreement pursuant to the National Historic Preservation Act, Section 106 is being developed to further outline and mitigate the adverse effects on the cultural resources.

2.7 CONSTRUCTION COST AND SCHEDULE

The cost of the project is estimated to be \$6.5 million and construction is projected for Summer 2003.

2.8 ALTERNATIVES CONSIDERED BUT DISMISSED FROM FURTHER ANALYSIS

The National Park Service staff considered a range of alternatives during the preliminary planning and internal scoping. The Lincoln Memorial security project was broken into two parts: protection of the west side and protection of the east side. The first part, protection of the west side, consisted of three separate alternatives. The third alternative consists of constructing metal bollards along the front of the sidewalk, closest to Lincoln Circle, beginning at Daniel French Drive and continuing around to Henry Bacon Drive. This alternative was dismissed from further analysis because placement of bollards at this location would adversely impact the historic cultural landscape of the Lincoln Memorial because the bollards on the east side of the Memorial would be more visible than for other alternatives. In addition, placement of the bollards on the front of the sidewalk would create adverse impacts for visitors with disabilities as they would not be able to maneuver between the bollards at or near access ramps.

The second part of the Lincoln Memorial security project, protection from the east side considered two alternatives. The first alternative, protection along the inner ring, consisted of constructing bollards along the inner ring of the Memorial from Henry Bacon Drive to Daniel French Drive on the east side. This alternative was dismissed because Lincoln Circle would be open to vehicular traffic. The large number of visitors who move back and forth on the plaza would be required to cross Lincoln Circle from the Reflecting Pool, increasing their danger of from accidents caused by vehicular traffic. This alternative would also create adverse impacts for visitors with disabilities as they would not be able to maneuver between the bollards at or near access ramps and they would have to maneuver through traffic to access the Lincoln Memorial. In addition, this alternative does not provide sufficient security to visitors of the Memorial because this alternative would also provide easier access for a vehicular bomb to reach

the Lincoln Memorial due to the close access of the vehicular traffic to the east side of the Memorial.

2.9 IMPACT COMPARISON MATRIX

Table 1 compares and contrasts each of the alternatives, including the degree to which each alternative accomplishes the purpose or fulfills the need identified in the purpose and need section. Table 2 presents the impacts for comparison purposes of the project alternatives, including the No-Action Alternative. The table presents a concise summary of each alternative’s potential effects by impact.

TABLE 1: COMPARATIVE SUMMARY OF THE NO-ACTION AND THE ACTION ALTERNATIVES

Alternative A – No-Action Alternative	Alternative B – Construction of Retaining Wall Behind Existing Sidewalk and Installation Bollards Along Outer Ring (Preferred Alternative)	Alternative C – Installation of Bollards Behind Existing Sidewalk and Along Outer Ring
<p>The construction of a retaining wall and bollards to enable the National Capital Parks – Central to provide additional security to the Lincoln Memorial and its visitors would not occur. The lack of a vehicle barrier system would not help prevent attacks from vehicle bombs. The National Capital Parks - Central would continue the use of concrete jersey barriers to provide security.</p> <p>Meets Project Objectives? No. Continuing the existing conditions would neither improve the transportation around the Lincoln Memorial nor would it provide adequate security from a terrorist threat. Adequate visitor services areas would not be constructed.</p>	<p>Transportation improvements would occur. Construction of a retaining wall and installation bollards to provide additional security to the Lincoln Memorial and its visitors would occur. A retaining wall would be constructed behind the existing sidewalk along the north, south, and west sides of the Memorial. Option One consist of bollards along the outer ring would be constructed. They would continue down the outside of the middle stairs and cross the front of the inner stairs. A vehicular barrier wall would be constructed between the middle and the inner stairs. Option Two consists of bollards that would continue around the outer ring of Lincoln Circle. Two visitor services areas would be constructed.</p> <p>Meets Project Objectives? Yes. Transportation improvements would alleviate traffic flow problems and create enhanced pedestrian access. Impacts to historic and cultural resources currently being impacted by makeshift security barriers would be alleviated. It would provide adequate security from a terrorist threat. Visitor services would improve.</p>	<p>Transportation improvements would occur. Installation of bollards behind the existing sidewalk along the north, south, and west sides of the Memorial would occur. Option One consist of bollards continuing along the outer ring, down the middle stairs, and across the front of the inner stairs. A vehicular barrier wall would be constructed between the middle and the inner stairs. Option Two consists of bollards that would continue around the outer ring of Lincoln Circle. Two visitor services areas would be constructed.</p> <p>Meets Project Objectives? No. Transportation improvements would alleviate traffic flow problems and create adequate pedestrian access, but impacts to historic and cultural resources currently being impacted by makeshift security barriers would not be fully alleviated. It would not provide the most adequate security from a terrorist threat. Visitor services would improve.</p>

TABLE 2: COMPARATIVE SUMMARY OF THE POTENTIAL ENVIRONMENTAL IMPACTS

Impact Topic	Alternative A No-Action Alternative	Alternative B (Preferred Alternative)	Alternative C
Floodplains	No adverse impacts expected to occur.		
Transportation (Traffic)	Impacts would be moderate, long-term, and adverse. Continued impact to traffic on Lincoln Circle would occur. No cumulative effects would occur. No impairment to park resources and values would occur.	Moderate, long-term, and beneficial impacts associated with the rehabilitation of Lincoln Circle would occur. Minor, long-term, and adverse impacts to traffic would continue on Constitution Avenue and Henry Bacon Drive. Minor, short-term, adverse impacts from construction. Potential for short-term cumulative effects from construction of proposed action and the World War II Memorial. No impairment to park resources or values would occur. Mitigation measures would be implemented.	
Aesthetics and Visual Resources	Moderate, long-term, and adverse impacts would occur. Adverse, cumulative effects would occur. No impairment to park resources and values would occur.	Negligible, long-term, adverse impacts from bus queuing areas and visitor services areas. Minor, long-term, adverse impacts would occur from security improvements. Minor, long-term, and beneficial impacts would occur from improved traffic conditions and removal of existing makeshift security measures. Minor, short-term, adverse impacts from construction. Moderate, adverse cumulative effects would occur. Potential for short-term cumulative effects from construction of proposed action and the World War II Memorial. No impairment to park resources and values would occur. Mitigation measures would be implemented.	Impacts would be the same as for Alternative B, but use of bollards would create a moderate, long-term, adverse impact. Minor, short-term, adverse impacts from construction. Moderate cumulative effects would occur. Potential for short-term cumulative effects from construction of proposed action and the World War II Memorial. No impairment to park resources and values would occur. Mitigation measures would be implemented.

Impact Topic	Alternative A No-Action Alternative	Alternative B (Preferred Alternative)	Alternative C
Historic Resources	Moderate, short-term, and adverse impacts would occur. Cumulative effects would be moderate and adverse. Impairment to park resources would not occur.	Impacts would be negligible, long-term, and adverse from bus queuing areas and major, long-term, and adverse impacts from security improvements would occur. Negligible long-term, beneficial impacts from traffic improvements. Minor, long-term, beneficial impacts from removal of existing makeshift security measures. Minor, long-term, adverse impacts from enhanced visitor services would occur. Minor, short-term, adverse impacts from construction. Cumulative effects would be moderate and adverse. Potential for short-term cumulative effects from construction of proposed action and the World War II Memorial. No impairment to park resources and values would occur. Mitigation measures would be implemented.	Impacts would be the same as for Alternative B, but use of bollards would create a major, long-term, adverse impact. Minor, short-term, adverse impacts from construction. Cumulative effects would be indirect, moderate, long-term, and adverse. Potential for short-term cumulative effects from construction of proposed action and the World War II Memorial. No impairment to park resources and values would occur. Mitigation measures would be implemented.
Cultural Landscapes	Moderate, short-term, and adverse impacts would occur. Cumulative effects would be moderate, short-term, and adverse. Impairment to park resources would not occur.	Impacts would be negligible, long-term, and adverse from bus queuing areas and major, long-term, and adverse impacts from security improvements would occur. Minor long-term, beneficial impacts from traffic improvements. Minor, long-term, beneficial impacts from removal of makeshift security measures. Negligible, long-term, adverse impacts from enhanced visitor services would occur. Minor, short-term, adverse impacts from construction. Cumulative effects would be moderate and adverse. Potential for short-term cumulative effects from construction of proposed action and the World War II Memorial. No impairment to park resources and values would occur. Mitigation measures would be implemented.	Impacts would be the same as for Alternative B, but use of bollards would create a major, long-term, adverse impact. Minor, short-term, adverse impacts from construction. Cumulative effects would be moderate, long-term, and adverse. Potential for short-term cumulative effects from construction of proposed action and the World War II Memorial. No impairment to park resources and values would occur. Mitigation measures would be implemented.
Safety (Security)	Moderate, long-term, adverse impacts would occur. No cumulative effects would occur. No impairment to park resources and values would occur.	Moderate, long-term, and beneficial impacts would occur. Minor, short-term, adverse impacts from construction. Potential for short-term cumulative effects from construction of proposed action and the World War II Memorial. No impairment to park resources or values would occur. Mitigation measures would be implemented.	

Impact Topic	Alternative A No-Action Alternative	Alternative B (Preferred Alternative)	Alternative C
Visitor Use and Experience	Moderate, short-term, adverse impacts would occur. Beneficial, cumulative effects would occur. No impairment to park resources and values would occur.	Moderate, long-term, and beneficial impacts would occur. Minor, short-term, adverse impacts from construction. Moderate beneficial cumulative effects would occur. No impairment to park resources and values would occur. Potential for short-term cumulative effects from construction of proposed action and the World War II Memorial. Mitigation measures would be implemented.	
Park Operations	Minor to moderate, short-term, adverse impacts would occur. No cumulative effects would occur. No impairment to park resources or values would occur.	Negligible, long-term, and beneficial impacts would occur to transportation improvements. Minor, long-term, and beneficial impacts from security and visitor services improvements. Minor, short-term, adverse impacts from construction. Moderate and beneficial cumulative effects would occur. Potential for short-term cumulative effects from construction of proposed action and the World War II Memorial. No impairment to park resources and values would occur. No mitigation is recommended.	

3.0 AFFECTED ENVIRONMENT

The project area comprises approximately 30 acres of the 94 acres that make up the Lincoln Memorial grounds. The project area consists of maintained landscaped lawn on which the Memorial building is situated, Lincoln Circle, the pedestrian plaza, steps leading from the pedestrian plaza to the Reflecting Pool, the gift kiosk and concession stand, and First Amendment Booths. Tour bus and cab stands are located within the project area along Daniel French Drive. Handicap accessible parking is located between 23rd Street (south) and Daniel French Drive, next to the sidewalk on Lincoln Circle. Three baseball fields are located on a grassed area between 23rd Street (north) and Henry Bacon Drive. Adjacent to the project area is Constitution Avenue to the north; the Vietnam Veterans Memorial to the northeast; The Reflecting Pool, Washington Monument, and World War II Memorial construction area to the south; the Korean War Veterans Memorial to the southeast; Independence Avenue to the east; and the Potomac River, Ohio Drive, Arlington Memorial Bridge to the west. Arlington National Cemetery and the Custis-Lee Mansion are faintly visible to the west beyond Arlington Memorial Bridge.

The following provides a summary of the resources identified as impact topics associated with this project. These impact topics were determined during internal National Park Service project scoping as topics that may potentially have a greater than negligible adverse or beneficial impact and were noted on the Environmental Screening Form provided in Appendix A.

3.1 FLOODPLAINS

Once characterized as relatively flat with great storage capacity associated with its tidal wetlands, the Potomac River floodplain has been substantially altered. Both dredging of the river and filling of the adjacent tidal wetlands has substantially changed the historic nature of the floodplain. Parts of the Lincoln Memorial ground are within the 100-year floodplain; however, the portion of the grounds that make up the project area lies adjacent to, but outside of, the 100-year floodplain of the Potomac River (FEMA, 1975). The 100-year floodplain of the Potomac River is at an elevation of 14 to 14.5 feet National Geodetic Vertical Datum 29, adjacent to the Lincoln Memorial (see Figure 12).

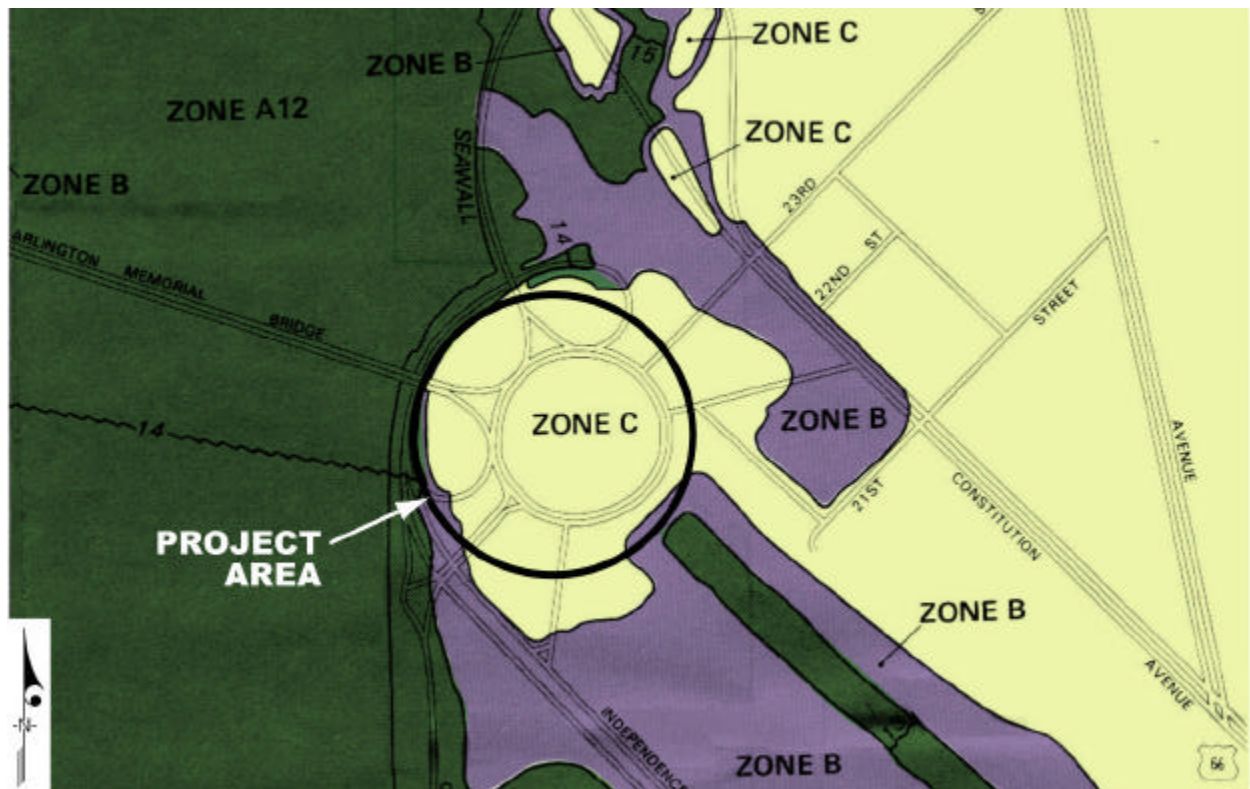


Figure 12: Floodplain Map. Source: FEMA, Flood Insurance Rate Map, District of Columbia, Washington, DC, 1985.

3.2 TRANSPORTATION (TRAFFIC)

Lincoln Circle was originally constructed as a one-way counter-clockwise circle. The circle fed from two-way radial roads. In 1972, the circle was closed to through traffic along the east side between Henry Bacon Drive on the north and Daniel French Drive on the south, except for tourmobiles and taxis, which were allowed to pick-up and drop-off visitors on the east side. By closing the east portion of Lincoln Circle, the circulation around the west side of the Memorial was changed to two-way traffic. Heavy traffic movements between the Arlington Memorial Bridge and Lincoln Circle have created major congestion problems during peak traffic periods. In addition many of the intersections near and around Lincoln Circle operate at an “F” level of service during evening peak traffic periods.

After the bombing of the Alfred P. Murrah Federal Building in April 1995, the east section of the circle was completely closed to all traffic. Tourmobiles, buses, and taxis now utilize Daniel French Drive for pick-up and drop-off of visitors. Visitor parking currently exists along Constitution and Independence Avenues and handicap parking is located between 23rd Street (south) and Daniel French Drive, next to the sidewalk on Lincoln Circle. Pedestrians access the Memorial from the east along walking paths leading from the Vietnam Veterans and Korean War Veterans Memorials. Pedestrian access from the west is hazardous due to the two-way traffic along the circle. The Memorial was made accessible to visitors with disabilities in 1976.

3.3 AESTHETICS AND VISUAL RESOURCES

The project area is defined visually by a network of roads, Memorials, and the historic designed landscape of the Lincoln Memorial. Arlington Memorial Bridge and the Watergate steps are adjacent to the project area to the west. Arlington National Cemetery and the Custis-Lee Mansion are faintly visible on the west side of Arlington Memorial Bridge. Directly north of the project area is 23rd Street (north) and Henry Bacon Drive. The Vietnam Veterans Memorial is located to the northeast. To the east are the Reflecting Pool and Washington Monument. Between the east end of the Reflecting Pool and 17th Street, N.W., the World War II Memorial is being constructed. The construction is contained within a fenced site, and the heavy construction is anticipated to be completed by winter 2004, with the dedication occurring on Memorial Day 2004 (May 31, 2004). The Korean War Veterans Memorial sits to the southeast and 23rd Street (south) and Daniel French Drive to the south. Unlike the elms that are still present along the radial roads, a few elm trees remain to suggest the designed landscape in the 1920s along the outer ring of Lincoln Circle (NPS, 1999f).

The main views and vistas from the Lincoln Memorial are the views to the Washington Monument and beyond (See Figure 13, View 2). This vista is a bank of elm trees that provide symmetry and balance. The Reflecting Pool and future World War II Memorial, now under construction, help comprise the vista looking east to the Washington Monument. The visual quality is heightened by the visitor's ability to see the U.S. Capitol Building past the Washington Monument. Vistas looking east to the Lincoln Memorial include views from the Watergate steps. Other important vistas include looking north from 23rd Street (south) and looking south from 23rd Street (north). Looking west the vistas include Arlington Memorial Bridge (Figure 12, View 5). Arlington National Cemetery and the Custis-Lee Mansion are faintly visible to west on the west side of Arlington Memorial Bridge. Other views are also shown in Figure 12 as well as corresponding photographs on the following page.



Figure 13: Views and vistas from and to the Lincoln Memorial.



View 1: Looking south on Henry Bacon Drive.



View 2: Looking east toward the Washington Monument.



View 3: Looking west from southeast corner of the Reflecting Pool.



View 4: Looking west from end of the Reflecting Pool.



View 5: View looking west from the Lincoln Memorial to the Arlington Memorial Bridge.



View 6: Looking east from the Arlington Memorial Bridge to the Lincoln Memorial.

Figure 13 continued: Views 1 through 6 depicting views and vistas from and to the Lincoln Memorial.

3.4 HISTORIC RESOURCES

“Historic properties” are any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places as defined in the National Historic Preservation Act (36 CFR 800). This term includes artifacts, records, and the remains that are related to and located within such properties, as well as traditional and culturally significant Native American sites and historic landscapes. The term “eligible for inclusion in the National Register” includes both properties formally determined eligible and all other properties that meet National Register listing criteria.

The Lincoln Memorial is listed on the National Register of Historic Places. It stands at the foot of 23rd Street, NW in West Potomac Park adjacent to the east bank of the Potomac River. It is bordered by Constitution and Independence Avenues on the north and south and by the Reflecting Pool on the east. The Lincoln Memorial was designed by Henry Bacon based on the style of ancient Greek temples. It stands 100 feet high, 190 feet long, and 119 feet wide. It is surrounded by 38 fluted Doric columns, one for each of the 26 states at the time of Lincoln’s death, and two columns recessed at the entrance behind the colonnade.

Leading up to the Memorial on the east side are the main steps. They begin at the edge of the Reflecting Pool and rise the Lincoln Memorial Circle roadway surround the edifice and continue to the main portal, spaced with series of platforms.

The interior of the Lincoln Memorial is divided into three chambers by two rows of ionic columns. The north and south side chambers contain carved inscriptions of Lincoln’s Second Inaugural Address and the Gettysburg Address. A mural resides above each inscription portraying the governing principles evident in Lincoln’s Life.

Lying between the north and south chambers is the central hall containing the solitary figure of Lincoln sitting in contemplation. It stands 19 feet tall from head to foot. It rests on an oblong pedestal 10 feet high, 16 feet wide, and 17 feet deep. Beneath the pedestal lies a platform 34.5 ½ feet long, 28 feet wide and 6 ½ feet high.

The first commission for a monument honoring Lincoln was proposed in 1867 shortly after Lincoln’s death, but it was not until 1901, when the McMillan Commission began looking at restoring the National Mall to reflect Pierre L’Enfant’s vision of a “federal city,” that a Memorial to Lincoln actually began. The McMillan Commission’s Plan incorporated a five-point kite shaped design that was to create fairly open parkland with the Lincoln Memorial at one end of the kite.

Congress approved a bill to construct the Memorial in 1910 and construction began in 1914. In 1922, the Memorial was dedicated by William H. Taft, the Lincoln Memorial Commission president. The period of significance for the Lincoln Memorial is 1912 to 1922.

The Lincoln Memorial Grounds is a contributing element to the designation of West Potomac Park in the National Register. The West Potomac Park nomination to the National Register was approved in 1972. The 1972 nomination lists structural features, such as monuments, memorials, and statues, but landscape features that contribute to the character of the Lincoln Memorial

Grounds (Lincoln Memorial, Reflecting Pool, and Watergate areas) were not covered. The nomination was updated in 2001 to include more specific information on the contributing landscape features. Details on the affected environment of the Lincoln Memorial Grounds are described in Section 3.4, Cultural Landscapes.

Other surrounding resources listed on the National Register include:

- Washington Monument
- Jefferson Memorial
- National Mall
- Ellipse
- L'Enfant Plan
- McMillan Plan

3.5 CULTURAL LANDSCAPES

As described by the National Park Service *Cultural Resource Management Guideline* (Director's Order # 28), a cultural landscape is:

“...a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of cultural landscape is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions.”

The Lincoln Memorial Grounds are listed on the National Register of Historic Places as a historic designed landscape. The original 1972 nomination did not include landscape features that contribute to the character of the Lincoln Memorial Grounds, but in 2001, the National Register nomination was updated to include more specific information on the contributing landscape features.

The Lincoln Memorial Grounds gained historical significance from 1914 to 1933, at which time landscape plans were implemented and completed. The landscape plan called for two rows of elm trees to be planted in parallel lines along the north and south sides of the Reflecting Pool area. At the Rainbow Pool, elm trees were designed in a curved line to complement the circular sections of the geometric outline (NPS, 1999f).

The plan for the Lincoln Memorial circle and radial roads featured a double row of elm trees, planted in opposite positions, on both sides of the radial roads. The outer circle showed a single circular band of elm trees next to the circle in the grassy strip between the roadway and the sidewalk. Outside the sidewalk, four bands of trees were to be planted. When the plan was implemented, the proposed double row of oppositely planted trees on the radial roads were scaled back to planting in alternative positions. The circular band of trees was followed for the eastern half of the circle. The western half of the outer circle consisted of the single circular band of trees that edged the curb, but the rest of the circle, outside the sidewalk, was completed with a double band instead of a quadruple band of elms.

The landscape plan for the inner circle was designed to contrast the radial roads and consisted of two plans. The first plan depicted plantings for the inner circle on the front and east side of the building with few shrubs along the north, south, and west sides. The first plan consisted of two rectangular planting beds with various plants lining the outer edges of the pavement along the entire length of the approachway. At the base of the raised terrace wall, groups of boxwood and yews were planted. Some dwarf boxwoods were planted in front of some of these groupings. At the corners of the terrace walls, plantings extend out from the wall into the grass lawn of the circular terrace. Specimens of American holly, common boxwood, and English yew were added to the north and south sides. The second plan depicted plantings for the rear of the Memorial (west side). Planting consisted of broadleaf evergreen trees, American holly, and southern magnolia. This arrangement projected the landscape from the corners of the terrace walls, as done on the east side (NPS, 1999f).

The distinct formal landscaped grounds were initially envisioned by the McMillan Commission in 1901 based upon the Commission's adaptation L'Enfant's Plan design for the Federal city. Pierre Charles L'Enfant first conceived the formal vistas between the axial arrangements of the buildings of primary importance around the National Mall in 1792. A gradual departure from his plan has occurred, but the McMillan Commission of 1902 sought to redesign the central area, reinforcing the axes and the vistas of L'Enfant's plan. The McMillan Commission's plan incorporated a five-point kite shaped design that was to create a view of fairly open parkland. Subsequent plans developed during the period of historic significance further defined and incorporated many of the McMillan Commission's underlying ideas (NPS, 1999f).

Three distinct landscapes compose the Lincoln Memorial Grounds. They include the Reflecting Pool area, the Lincoln Circle and radial roads, and the Watergate area. In addition, the relationship with the buildings and structural features with the landscape cannot be separated. Therefore, the Lincoln Memorial, Arlington Memorial Bridge, Watergate plaza and steps, Parkway Drive, and the Reflecting/Rainbow Pool are also considered contributing features to the historic landscape.

The Lincoln Memorial Grounds comprise three different landscape types as defined by the National Register for designed landscapes. They include:

- Monuments and Memorial Grounds – Lincoln Circle and radial road, and Reflecting Pool area;
- Public Spaces – Watergate steps and adjacent areas of West Potomac Park; and
- Parkways – Rock Creek and Potomac Parkway approach and Arlington Memorial Bridge as the connection to the George Washington Memorial Parkway.

A Cultural Landscape Report was completed in August 1999 by the National Capital Parks – Central. This report was completed to obtain a better understanding of the landscape surrounding the Lincoln Memorial Grounds. This document is also used to guide park managers in their efforts to manage and preserve the historic designed landscape of the Lincoln Memorial.

3.6 SAFETY (SECURITY)

In order to provide adequate security to Lincoln Memorial and safety to its visitors, many makeshift security measures have taken place. Since the bombing of the Alfred P. Murrah Federal Building in 1995, concrete jersey barriers and planters had been erected bisecting Lincoln Circle at Henry Bacon Drive on the north and Daniel French Drive on the south, eliminating vehicular access to the entrance of the Lincoln Memorial on the east side. Since September 11, 2001, additional concrete jersey barriers were double-lined and continued around the west side of the Memorial as seen in Figure 14.



Figure 14: Current makeshift security measure along the west and north sides of the Lincoln Memorial.

At Henry Bacon Drive, the concrete jersey barriers meet with the existing concrete barriers bisecting Lincoln Circle and continue along the outer rim of Lincoln Circle. The barriers connect with the existing barriers at Daniel French Drive. Concrete planters were placed between the traffic island at the Arlington Memorial Bridge and the existing sidewalk of the Lincoln Memorial to restrict access to the south side of the Lincoln Memorial.

Existing traffic conditions also provide unsafe conditions for visitors to the Lincoln Memorial. There are no traffic signals along the west side of Lincoln Circle to allow for pedestrian crossing.

3.7 VISITOR USE AND EXPERIENCE

The Lincoln Memorial Grounds, is approximately 94 acres and is part of the Monumental Core of Washington, DC. Along with the Lincoln Memorial, the Monumental Core is composed of the Franklin Delano Roosevelt Memorial, the Thomas Jefferson Memorial, the Korean War Veterans Memorial, the Vietnam Veterans Memorial, the Washington Monument, and President's Park (White House). Of the approximate 20 million visitors to the Monumental Core in a given year, approximately 4 million visit the Lincoln Memorial. The busiest time for the park is in the spring and summer months.

Once visitors arrive at the Lincoln Memorial, they can acquaint themselves with the site and find information needed through color site brochures, ranger staff, outdoor maps, and a visitor information kiosk. The visitor information kiosk is located on the south side of the Lincoln Memorial. A concession stand is located next to the visitor information kiosk. There is also a

small gift shop within the Memorial. Restrooms are located within the interior of the Lincoln Memorial next to the exhibit area. In addition, First Amendment booths are located on the outer circle of the east side of the Memorial.

Visitors to the Lincoln Memorial often visit other nearby memorials, monuments, and museums prior to or after visiting the Memorial. Visitors may view on their own or participate in guided tours of the various memorials and monuments that make up the Monumental Core. Tourmobiles offer daily narrated tours to the Lincoln Memorial and other sights on the National Mall, Arlington Cemetery, and the U.S. Capitol Building. This tour includes the Lincoln Memorial, Washington Monument, Jefferson Memorial, West Potomac Park, Arlington National Cemetery, Bureau of Engraving and Printing, Holocaust Museum, U.S. Capitol, Union Station, Smithsonian Museums, and the White House and President's Park.

3.8 PARK OPERATIONS

The Lincoln Memorial is open daily from 8 a.m. to midnight with interpretation services available except on Christmas Day when the Memorial is closed. The grounds are open 24 hours a day. The grounds are maintained by maintenance crews from approximately 6 a.m. to 3:30 p.m. U.S. Park Police are the primary responders to occurrences at the Memorial and enforce all federal laws and regulations.

The Park hosts numerous special events during the course of the year. Such events include the Annual 4th of July Fireworks Celebration; wreath presentation in the chamber to commemorate Lincoln's birthday; the Martin Luther King Day commemoration; and in recent history, Presidential inaugural ceremonies take place at the Lincoln Memorial every four years.

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4.0 ENVIRONMENTAL CONSEQUENCES

4.1 INTRODUCTION

This section describes the environmental consequences associated with each alternative of the proposed action. It is organized by impact topics, which refine the issues and concerns into distinct topics for discussion analysis. These topics allow a standardized comparison between the alternatives based on their impact to the environment. The National Environmental Policy Act of 1969 requires consideration of context, intensity, and duration of impacts, indirect impacts, cumulative effects, and measures to mitigate for such impacts. In addition, National Park Service policy also requires that “impairment” of park resources be evaluated in all environmental documents.

4.2 METHODOLOGY FOR ASSESSING IMPACTS

Potential impacts are described in terms of:

- Type - are the effects beneficial or adverse;
- Context - are the effects site-specific, local, or even regional;
- Duration - are the effects short-term, lasting through construction or less than one year, or long-term, lasting more than one year; and
- Intensity - are the effects negligible, minor, moderate, or major.

In this Environmental Assessment, the intensity of impacts is evaluated within a local (i.e., project area) context, while the intensity of the contribution of effects to cumulative effects is evaluated in a regional (i.e., Monumental Core) context. Because definitions of intensity (negligible, minor, moderate, major) vary by impact topic, intensity definitions are provided separately for each impact topic analyzed in this environmental assessment.

4.2.1 IMPAIRMENT TO PARK RESOURCES AND VALUES

In addition, the National Park Service’s *Management Policies, 2001* (NPS, 2000g) require analysis of potential effects to determine whether or not actions would impair park resources. The fundamental purpose of the National Park System, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values. However, the laws do give the National Park Service 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. Although Congress has given the National Park Service the management discretion to allow certain impacts within the park, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law

directly and specifically provides otherwise. The prohibited impairment is the integrity of park resources or values. An impact to any park resource or value may constitute an 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
- Identified as a goal in the park's general management plan or other relevant NPS planning documents.

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park. A determination on impairment is made in this section for impact topics retained for further analysis.

4.2.2 CUMULATIVE EFFECTS

The Council on Environmental Quality regulations, which implement the National Environmental Policy Act, require assessment of cumulative effects in the decision-making process for Federal projects. Cumulative effects 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 non-federal) or person undertakes such other actions” (40 CFR 1508.7). Cumulative effects are considered for all alternatives and are presented at the end of each impact topic discussion analysis. In addition, a summary of cumulative effect is provided in Section 4.10, Summary of Cumulative Effects.

Cumulative effects were determined by combining the impacts of the proposed action with other past, present, and reasonable foreseeable future actions. Therefore, it was necessary to identify other ongoing or foreseeable future projects at the Lincoln Memorial and, if necessary, the surrounding region. Future projects that may have the potential to add to cumulative effects include security improvements at the Washington Monument and the Jefferson Memorial; construction of the World War II Memorial; and road improvements at the Kennedy Center, Theodore Roosevelt Bridge, the west side of Arlington Memorial Bridge, Constitution Avenue, and Ohio Drive. These road improvement projects were considered in evaluating cumulative effects for the Lincoln Memorial Circle Rehabilitation and Security Project. There would be no short-term cumulative effects from construction activities of the Washington Monument security improvements because the various projects would occur at different times. Even though the Jefferson Memorial security improvements project may occur at the same time as the Lincoln Memorial project, no cumulative effect would occur because construction for each project would be at different locations and neither project would impact the other.

Other projects, such as the Vietnam Veterans Memorial Education Center and a memorial honoring Dr. Martin Luther King, Junior have been proposed. The Vietnam Veterans Memorial Education Center has not been authorized by Congress, while the Martin Luther King, Junior

Memorial has been authorized by Congress. However, no concepts for these projects have been developed. The projects are not anticipated to occur within the foreseeable future and; therefore, have not been considered when analyzing cumulative effects.

4.3 IMPACTS ON FLOODPLAINS

4.3.1 DEFINITION OF INTENSITY LEVELS

Analyses of the potential intensity of impacts to floodplains were derived from the available information on the Lincoln Memorial and the professional judgment of the National Capital Parks - Central staff. The National Capital Parks – Central is the administrator of the National Park Service units of the Monumental Core of our Nation’s Capital. The thresholds of change for the intensity of impacts on floodplains are defined as follows:

- *Negligible* - Floodplains would not be affected, or changes would be either non-detectable or if detected, would have effects that would be considered slight, and local;
- *Minor* - Changes in floodplains would be measurable, although the changes would be small, and the effects would be localized. No mitigation measure associated with water quality or hydrology would be necessary;
- *Moderate* - Changes in floodplains would be measurable and would be relatively local. Mitigation measures associated with water quality or hydrology would be necessary and the measures would likely succeed; or
- *Major* - Changes in floodplains would be readily measurable, would have substantial consequences that would be measurable and widespread. Mitigation measures would be necessary and their success would not be guaranteed.

4.3.2 ALTERNATIVE A – NO-ACTION ALTERNATIVE

Under the No-Action Alternative, transportation improvements would not be made, and no changes would occur to the vehicular security barrier or visitor services. Makeshift security measures would continue. Lincoln Circle would continue to be temporarily closed on the east side and tourmobiles, buses, and cabs would continue to park along Daniel French Drive. The existing gift shop and food vendor concession stand would remain. No impacts to the floodplains or floodplain functions or values would occur as a result of the No-Action Alternative because no changes are would occur that would alter the floodplain.

Cumulative Effects. A variety of past, present, and reasonably foreseeable actions have affected and would continue to affect the nearby floodplain. Because the No-Action Alternative would not directly or indirectly impact floodplains or floodplain functions or values, No-Action Alternative would not contribute to cumulative effects.

Conclusion. No impacts to floodplains would occur under the No-Action Alternative because no changes would occur that would alter the floodplain, nor would it contribute to cumulative effects. There would be no impairment to park resources or values.

4.3.3 ALTERNATIVE B – CONSTRUCTION OF RETAINING WALL BEHIND EXISTING SIDEWALK AND INSTALLATION OF BOLLARDS ALONG OUTER RING (PREFERRED ALTERNATIVE) AND ALTERNATIVE C – INSTALLATION OF BOLLARDS BEHIND EXISTING SIDEWALK AND ALONG OUTER RING

Impacts to floodplains would be the same for Alternative B and Alternative C. Under Alternatives B and C, no impacts to the 100-year floodplain would occur from the rehabilitation to Lincoln Circle, construction of a vehicular security barrier, security access gate, or visitor services areas because these proposed actions are outside the floodplain and would not affect functions or values of the nearby floodplain. Staging areas for construction would also be outside the 100-year floodplain and construction activities would not create short- or long-term impacts to the floodplain.

Cumulative Effects. A variety of past, present, and reasonably foreseeable actions have affected and would continue to affect the nearby floodplain. Because neither Alternative B or C would not contribute to directly or indirectly impact floodplains or floodplain functions or values, neither Alternatives B or C would not contribute to cumulative effects on this resource.

Conclusion. There would be no impacts to floodplains as a result of Alternatives B and C. Because there would be no major, adverse impacts to floodplain resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Lincoln Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. No mitigation measures are recommended.

4.4 IMPACTS ON TRANSPORTATION (TRAFFIC)

4.4.1 DEFINITION OF INTENSITY LEVELS

Analyses of the potential intensity of transportation and traffic in and around the Lincoln Memorial were derived from the available information on the Lincoln Memorial and the professional judgment of the National Capital Parks - Central staff. The National Capital Parks – Central is the administrator of the National Park Service units of the Monumental Core of our Nation's Capital. The thresholds of change for the intensity of impacts on transportation and traffic are defined as follows:

- *Negligible* - Traffic would not be affected, or the effects would be at the lower levels of detection and would not have an appreciable effect on traffic flow. There would be no changes in the level of service;
- *Minor* - The effect would be detectable, but would be of a magnitude that would not have an appreciable effect on traffic flow. There would be no noticeable changes in the traffic

congestion or level of service. If mitigation was needed to offset adverse effects, it would be simple and likely successful;

- *Moderate* - The effects would be readily apparent, and would result in a substantial change in traffic flow patterns, congestion, and/or level of service, in a manner noticeable to the public. Mitigation would be necessary to offset adverse effects and would likely be successful; or
- *Major* - The effects would be readily apparent and would result in a substantial change in traffic flow in a manner noticeable to the public and be markedly different from the current traffic flow patterns and levels of service. Extensive mitigation measures to offset adverse effects would be needed and their success could not be guaranteed.

4.4.2 ALTERNATIVE A – NO-ACTION ALTERNATIVE

Under the No-Action Alternative, improvements to Lincoln Circle would not occur. New pedestrian crosswalks and signal installation would not be constructed. A new tourmobile lane would not be created. Without these improvements, problems with traffic flow and pedestrian/traffic conflicts would continue. In addition, adequate tour bus parking would not be provided. Without additional parking, tour buses and tourmobiles would continue to double park to load and unload passengers. These impacts to transportation and traffic would be moderate, long-term, and adverse.

Makeshift security measures would continue and the existing gift shop and food concession would remain; however, this would not impact traffic or transportation.

Cumulative Effects. Future road improvements at the Arlington Memorial Bridge, the Theodore Roosevelt Bridge, the Kennedy Center, Constitution Drive, and Ohio Drive would improve traffic conditions to and around the Monumental Core. The No-Action Alternative would not contribute to these beneficial impacts, but, rather, would detract from them.

Planned future road improvements combined with the No-Action Alternative would have no cumulative effect to traffic and transportation. There would be no short-term cumulative effects under the No-Action Alternative from construction activities because there would be no construction at the Lincoln Memorial that would create a cumulative effect when added to the construction activities at the Washington Monument, Jefferson Memorial, or the World War II Memorial.

Conclusion. Impacts to traffic would be moderate, long-term, and adverse because no improvements to the existing traffic structure would occur and existing traffic problems would continue into the foreseeable future. There would be no cumulative effects under the No-Action Alternative. There would be no impairment of park resources or values.

4.4.3 ALTERNATIVE B – CONSTRUCTION OF RETAINING WALL BEHIND EXISTING SIDEWALK AND INSTALLATION OF BOLLARDS ALONG OUTER RING (PREFERRED ALTERNATIVE) AND ALTERNATIVE C – INSTALLATION OF BOLLARDS BEHIND EXISTING SIDEWALK AND ALONG OUTER RING

Impacts to transportation and traffic would be the same for both Alternative B and Alternative C.

Transportation Improvements. Rehabilitation of Lincoln Circle would occur under Alternatives B and C and these changes would have moderate, long-term, beneficial impacts. A one-way tourmobile lane would be created along the west side from Daniel French Drive to Henry Bacon Drive to allow entry of tourmobiles onto Lincoln Circle without forcing vehicles to merge or yield at the entry point. One lane would be reduced on Henry Bacon Drive between Lincoln Circle and Constitution Avenue. This would cause a diversion of existing traffic from Henry Bacon Drive to 23rd Street (north).

Crosswalks would be created and signals would be installed at Daniel French and Henry Bacon Drives. Additions would improve for pedestrian access. A median would be created on Lincoln Circle between Henry Bacon Drive and 23rd Street (north) for pedestrians using the crosswalk. The median would make the roadway more pedestrian-friendly. The east side of the Memorial would continue to be closed to all through traffic, and the existing roadway would be raised to sidewalk level to create a pedestrian plaza. The plaza will re-establish the historic footprint of the easternmost area of Lincoln Circle. An existing bus-drop off area exists at 23rd Street (south). Concrete bus pads and taxi stands would be upgraded on 23rd Street (south) and new ones constructed on Daniel French Drive, and Henry Bacon Drive. These new bus pads would reduce the need for buses, tourmobiles, and taxis to double park while loading and unloading passengers, improving traffic flow and pedestrian safety. However, there would be an adverse impact to surrounding roadways that would be minor and long-term. The intersections of Constitution Avenue/Henry Bacon Drive and Constitution Avenue/23rd Street (north) currently operate at or near capacity during both the a.m. and p.m. peak periods (FHWA, 2001). Modifications to Lincoln Circle at Henry Bacon Drive and associated traffic diversion would have the potential for these two intersections to exceed their capacity.

Security Improvements. The east side of the Memorial would be permanently closed to all through traffic and the existing roadway would be raised to sidewalk level to create a pedestrian plaza. This change would have a minor, long-term, adverse impact on traffic. Because the east side of the Memorial has been closed to through traffic for a number of years, the proposed action would not create a new discernable effect. Proposed security improvements on the west and east sides of the Memorial would not impede traffic; therefore, no impact is anticipated to occur to traffic and transportation from construction of a vehicular barrier system.

Visitor Services Improvements. The construction of new visitor services areas would not impact transportation or traffic conditions. These areas are designed to be accessible to pedestrian and National Park Service vehicles.

Cumulative Effects. Future road improvements at Arlington Memorial Bridge, the Theodore Roosevelt Bridge, the Kennedy Center, Constitution Drive, and Ohio Drive would improve

traffic conditions to and around the Monumental Core. These road improvements, along with those proposed under Alternatives B or C, would have a beneficial cumulative effect on traffic and transportation as there would be better traffic flow.

There would be no cumulative effects to traffic and transportation from the security improvements. Proposed security improvements at the Washington Monument and the Jefferson Memorial could result in a reduction in available parking. However, Alternatives B or C would not contribute to the impacts.

There would be no short-term cumulative effects from construction activities because various projects would occur at different times. For a short time there is the potential for an overlap in construction periods of the World War II Memorial and the Jefferson Memorial with the proposed action; however this would not result in any short-term cumulative effects to traffic or transportation as no road closures are anticipated. No traffic impacts would occur with construction of the World War II Memorial or the Jefferson Memorial

Conclusion. Beneficial impacts associated with improvements to the circulation and pedestrian around the Lincoln Memorial are anticipated to be moderate and long-term. Adverse impacts to the traffic at Constitution Avenue and Henry Bacon Drive and 23rd Street (north) would be minor and long-term. Closure of the east side of Lincoln Circle for proposed security improvements would have minor, long-term, and adverse impacts to traffic. Changes to visitor services would not impact traffic. Beneficial cumulative effects to traffic flow could result from future road improvements. No short-term cumulative effects are anticipated from construction activities.

Because there would be no major, adverse impacts to transportation and traffic resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Lincoln Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. Synchronization of traffic signals at 23rd Street (north)/Lincoln Circle and Constitution Avenue/Henry Bacon Drive during afternoon peak times would help control traffic at these two intersections; however, they should not adversely impact other traffic/flows. Appropriate signage will be installed to warn motorists and pedestrians of construction. Appropriate traffic control measures would be used during construction.

4.5 IMPACTS ON AESTHETICS AND VISUAL RESOURCES

4.5.1 DEFINITION OF INTENSITY LEVELS

Analyses of the potential intensity of aesthetics and visual resources were derived from the available information on the Lincoln Memorial and the professional judgment of the National Capital Parks - Central staff. The National Capital Parks – Central is the administrator of the National Park Service units of the Monumental Core of our Nation's Capital. The thresholds of change for the intensity of impacts on aesthetics and visual resources are defined as follows:

- *Negligible*, when the impact is localized and not measurable or at the lowest level of detection;
- *Minor*, when the impact is localized and slight, but detectable;
- *Moderate*, when the impact is readily apparent and appreciable; or
- *Major*, when the impact is severely adverse and highly noticeable.

4.5.2 ALTERNATIVE A – NO-ACTION ALTERNATIVE

Aesthetics and visual resources in the project area would not be further impacted by the No-Action Alternative. No transportation improvements would occur. The existing security measures consisting of concrete jersey barriers and planters would continue to adversely impact the aesthetics and visual resources of the Lincoln Memorial because they would continue to alter the views and vistas of the Lincoln Memorial and compromise the historic appearance of the Memorial. The makeshift security measures would also continue to impact the historic designed landscape. The impacts would continue to be moderate, short-term, and adverse. Landscaping maintenance would continue as suggested in the *Cultural Landscape Report on the Lincoln Memorial Grounds*. No enhanced visitor services would occur. The existing gift shop and concession stand would continue to impact the aesthetic and visual resources of the Lincoln Memorial because it can be seen from various views and vistas and its design is not fitting for its setting. The impact would be moderate, long-term, and adverse.

Cumulative Effects. Temporary security measures put in place at the Washington Monument and the various memorials in the Monumental Core have impacted aesthetics and visual resources in the past. Proposed security improvements at the Washington Monument and the Jefferson Memorial, and construction of the World War II Memorial may impact the aesthetics and visual resources of the Monumental Core in the future. The No-Action Alternative would contribute to the cumulative effect of these past and future actions with the presence of makeshift security measures. Planned future road improvements combined with the No-Action Alternative would have no cumulative effect to aesthetic and visual resources. There would be no short-term cumulative effects under the No-Action Alternative from construction activities because there would be no construction at the Lincoln Memorial that would create a cumulative effect when added to the construction activities at the Washington Monument, Jefferson Memorial, or the World War II Memorial.

Conclusion. The No-Action Alternative would continue to have a moderate, short-term, and adverse impact to aesthetics and visual resources in or surrounding the project area as a result of existing makeshift protective measures. Existing security measures would continue to detract from the vistas of the Lincoln Memorial. The No-Action Alternative, along with other past, and future security projects, would have adverse cumulative effects to aesthetics and visual resources. There would be no impairment to park resources or values.

4.5.3 ALTERNATIVE B – CONSTRUCTION OF RETAINING WALL BEHIND EXISTING SIDEWALK AND INSTALLATION OF BOLLARDS ALONG OUTER RING (PREFERRED ALTERNATIVE)

Transportation Improvements. The transportation improvements Lincoln Circle would have minor, long-term, beneficial impacts on aesthetics and visual resources of the Memorial. Repaving new curbs and sidewalks would improve the appearance of the circle. The east side of the Memorial would be permanently closed to all through traffic and the existing roadway would be raised to sidewalk level to create a pedestrian plaza. The plaza will re-establish the historic footprint of the easternmost area of Lincoln Circle.

The additional bus queuing area on the north side of the Memorial would result in negligible, long-term, adverse impacts to the vistas of the Lincoln Memorial and the Washington Monument, as there is currently no existing bus queuing area in this location. Appropriate sensitive context design would minimize the potential for impact.

Minor, short-term, adverse impacts would occur during construction because the placement of the staging area will be visible, as would construction fencing and cones, and detract from views of the Memorials.

Security Improvements. Under Alternative B, the installation of bollards and a vehicular barrier wall would improve the aesthetics and visual resources when compared to existing site conditions. The existing concrete jersey barriers and planters compromise the appearance of the Memorial and continue to impact the historic designed landscape. A minor, long-term, beneficial impact would result from the removal of existing makeshift security measures, restoring the sidewalks to their historic appearance, restoring the historic tree landscape plan, and restoring the east side of the Memorial to its historic layout. However, a minor, long-term, adverse impact would occur after installation of the vehicular barrier system because the use of a retaining wall on the west side would still impact the views and the vistas of the Memorial and the historic designed landscape.

Option One for the east side of the Memorial, the use of granite bollards and retaining walls in front of the Reflecting Pool, would create minor, long-term, adverse impacts to the aesthetics and visual resources. The use of granite bollards and the retaining wall would be detectable from various views and vistas, but the impact would be slight as the granite look of the bollards would blend in with the existing landscape.

Option Two for the east side of the Memorial, the use of metal bollards along the outer ring of Lincoln Circle, would create a moderate, long-term, adverse impact to aesthetics and visual resources. Because the Lincoln Memorial resides on a graded hilltop, approximately at 20 feet mean sea level, the bollards would be readily apparent. Consultation and coordination has occurred with the Commission of Fine Arts, the National Capital Planning Commission, and the DC Historic Preservation Office on the design of the security barrier as it will relate to the vistas of the Lincoln Memorial.

Minor, short-term, adverse impacts would occur during construction of the vehicular security barrier system because the placement of the staging area would be visible, as would construction fencing and cones, and detract from the views of the Memorial.

Visitor Services Improvements. Two visitor services areas would be constructed that would include a gift shop, concession stand, information kiosk. The existing gift shop and concession stand would be removed and be replaced with the new visitor services area on the southeast side of the Memorial. An identical visitor services area would be placed on the northeast side of the Memorial between Henry Bacon Drive and 23rd Street (north).

The adverse impact to aesthetics and visual resources resulting from the new visitor services areas would be negligible and long-term because the visitor services areas would be seen from various views and vistas of the Lincoln Memorial. Their placement would detract from the historic designed landscape. Sympathetic materials and design would be in keeping with the cultural landscape and historical setting of the historic designed landscape. Minor, short-term, adverse impacts to aesthetic and visual resources from construction would occur as result of the staging area and the use of construction fencing and cones.

Cumulative Effects. Temporary security measures put in place at the Lincoln Memorial, the Washington Monument, and the various memorials in the Monumental Core have negatively impacted aesthetics and visual resources in the past. Proposed security improvements at the Washington Monument and the Jefferson Memorial, and construction the World War II Memorial may impact the aesthetics and visual resources of the Monumental Core. When added to these past and reasonably foreseeable future actions, Alternative B would have adverse cumulative effects to aesthetics and visual resources of the Lincoln Memorial as the views to and from the Lincoln Memorial would be altered. The World War II Memorial would create a new element to the views and vistas of the Lincoln Memorial because there has not been a visible Memorial at the Rainbow Pool prior to construction of the World War II Memorial, when added to the proposed action it would create an adverse cumulative effect. Planned future road improvements combined with the No-Action Alternative would have no cumulative effect to aesthetic and visual resources.

There would be no short-term cumulative effects from construction activities because the various projects would occur at different times with one exception. For a short time there is the potential for an overlap in construction periods of the World War II Memorial and the Jefferson Memorial with Alternative B. During this time, there would result in a negligible, short-term, adverse cumulative effect to aesthetics and visual resources because construction of the World War II Memorial and the Lincoln Memorial project would be visible from either site. There would be no cumulative effects as a result of the Jefferson Memorial because the Jefferson Memorial and the Lincoln Memorial are not visible from either site.

Conclusion. The vehicular barrier system would impact aesthetics and visual resources of the Lincoln Memorial. Minor, long-term, beneficial impacts would result because the removal of the existing security measures (concrete jersey barriers and planters) would improve views of the Memorial. Negligible, long-term, beneficial impacts would result from transportation improvements to Lincoln Circle. Minor, short-term, adverse impacts would result from construction of the vehicular barrier system, visitor services areas, and transportation features,

such as new bus queuing areas, because of the construction staging area and construction fencing.

Minor, long-term, adverse impacts would occur after construction of the security improvements on the west side because the new features would be visible. Option One for the security improvements on the east side would create a minor, long-term, adverse impact as the security improvements would still be detectable. Moderate, long-term, adverse impacts would occur as a result of Option Two as the impact would be readily apparent. A negligible, long-term, adverse impact would result from the new visitor services areas as they would be seen from various views and vistas. Alternative B, along with other proposed projects, would have adverse cumulative effects to aesthetics and visual resources.

Because there would be no major, adverse impacts to aesthetics and visual resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Lincoln Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. To comply with Section 106 of the National Historic Preservation Act, The National Park Service would enter into a Memorandum of Agreement with the DC Historic Preservation Office to provide consultation in order to avoid adverse effects associated with the views and vistas of the Lincoln Memorial. Consultation and coordination would continue with the Commission of Fine Arts and the National Capital Planning Commission. Alternative B would be mitigated through the use of compatible appropriate sympathetic context design and materials in keeping with the cultural landscape and historical setting of the Lincoln Memorial. These would include:

- Design techniques and construction materials that would preserve the aesthetic qualities of the original roadway design at its historic location, including curb line;
- Restoration of the east side of the Memorial to its historic layout;
- Rehabilitation of the sidewalks to their historic appearance;
- Restoration of the historic tree landscape plan;
- Construction measures that would minimize any disturbance to roots, limbs, and branches that are character defining features of the Lincoln Memorial Grounds; and
- Massing, scale, and materials would be reflective of or consistent with the surrounding park resources and historic designed landscape.

4.5.4 ALTERNATIVE C – INSTALLATION OF BOLLARDS BEHIND EXISTING SIDEWALK AND ALONG OUTER RING

Transportation Improvements. Impacts to aesthetic and visual resources under Alternative C would be the same as those impacts described under Alternative B.

Security Improvements. Under Alternative C, the installation of a vehicular barrier system would improve the aesthetics and visual resources when compared to existing site conditions. The existing concrete jersey barriers and planters compromise the appearance of the Memorial and continue to impact the historic designed landscape. A minor, long-term, beneficial impact would result from the removal of these makeshift security measures. However, a moderate, long-term, adverse impact would occur after installation of the vehicular barrier system on the west side because the use of bollards would be readily apparent and continue to impact the views and the vistas of the Memorial and the historic designed landscape.

Option One for the east side of the Memorial, the use of granite bollards and retaining walls in front of the Reflecting Pool, would create minor, long-term, adverse impacts to the aesthetic and visual resources. The use of granite bollards and the retaining wall would be detectable from various views and vistas, but the impact would be slight as the granite look of the bollards would blend in with the existing landscape.

Option Two for the east side of the Memorial, the use of metal bollards along the outer ring of Lincoln Circle, would create a moderate, long-term, adverse impact to aesthetics and visual resources. Because the Lincoln Memorial resides on a graded hilltop, approximately at 20 feet mean sea level, the bollards would be readily apparent. Consultation and coordination has occurred with the Commission of Fine Arts, the National Capital Planning Commission, and the DC Historic Preservation Office on the design of the security barrier as it will relate to the vistas of the Lincoln Memorial.

Minor, short-term, adverse impacts would occur during construction of the vehicular security barrier system because the placement of the staging area will be visible, as would construction fencing and cones.

Visitor Services Improvements. Impacts to aesthetics and visual resources under Alternative C would be the same as under Alternative B.

Cumulative Effects. Cumulative effects to aesthetics and visual resources under Alternative C would be the same as those described under Alternative B.

Conclusion. The vehicular barrier system would impact aesthetics and visual resources of the Lincoln Memorial. Minor, long-term, beneficial impacts would be because from the removal of the existing security measures (concrete jersey barriers and planters) would improve views of the Memorial. Negligible, long-term, beneficial impacts would result from transportation improvements to Lincoln Circle. Moderate, short-term, adverse impacts would result from construction of the vehicular barrier system, visitor services areas, and transportation features, such as new bus queuing areas, because of the construction staging area and construction fencing.

Moderate, long-term, adverse impacts would occur after construction because the security improvements on the west side would be visible. Option One for the security improvements on the east side would create a minor, long-term, adverse impact as the security improvements would still be detectable. Moderate, long-term, adverse impacts would occur as a result of Option Two as the impact would be readily apparent. A negligible, long-term, adverse impact

would result from the new visitor services areas as they would be seen from various views and vistas. Alternative B, along with other proposed projects, would have adverse cumulative effects to aesthetics and visual resources.

Because there would be no major, adverse impacts to aesthetics or visual resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Lincoln Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. To comply with Section 106 of the National Historic Preservation Act, The National Park Service would enter into a Memorandum of Agreement with the DC Historic Preservation Office to provide consultation in order to avoid major adverse effects associated with the views and vistas of the Lincoln Memorial. Consultation and coordination would continue with the Commission of Fine Arts and the National Capital Planning Commission. Alternative C would be mitigated through the use of compatible appropriate sympathetic context design and materials in keeping with the cultural landscape and historical setting of the Lincoln Memorial. These would include:

- Design techniques and construction materials that would preserve the aesthetic qualities of the original roadway design at its historic location, including curb line;
- Restoration of the east side of the Memorial to its historic layout;
- Rehabilitation of the sidewalks to their historic appearance;
- Restoration of the historic tree landscape plan;
- Construction measures that would minimize any disturbance to roots, limbs, and branches that are character defining features of the Lincoln Memorial Grounds; and
- Massing, scale, and materials would be reflective of or consistent with the surrounding park resources and historic designed landscape.

4.6 IMPACTS TO CULTURAL RESOURCES AND SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT

Section 101(b)(4) of the National Environmental Policy Act of 1969 (P.L. 91-190), as amended, requires the Federal government to coordinate and plan its actions to, among other goals, "preserve important historic, cultural and natural aspects of our national heritage...." The Council of Environmental Quality implementing regulations require that Federal impacts to historic and cultural resources be included as part of the National Environmental Policy Act process.

In this environmental assessment, impacts to cultural resources are described in terms of type, context, duration, and intensity, as described above, which is consistent with the regulations of

the Council of Environmental Quality that implement the National Environmental Policy Act. These impact analyses are intended, however, to comply with the requirements of both the National Environmental Policy Act and Section 106 of the National Historic Preservation Act. In accordance with the Advisory Council on Historic Preservation's regulations implementing Section 106 of the National Historic Preservation Act (36 CFR Part 800, Protection of Historic Properties), impacts to archeological and cultural resources were identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that were either listed in or eligible to be listed in the National Register of Historic Places; (3) applying the criteria of adverse effect to affected cultural resources either listed in or eligible to be listed in the National Register; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Under the Advisory Council's regulations, a determination of either adverse effect or no adverse effect must also be made for affected National Register eligible cultural resources. An adverse effect occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the National Register (e.g., diminishing the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association). Adverse effects also include reasonably foreseeable effects caused by Alternative B that would occur later in time, be farther removed in distance, or be cumulative (36 CFR Part 800.5, Assessment of Adverse Effects). A determination of no adverse effect means there is an effect, but the effect would not diminish in any way the characteristics of the cultural resource that qualify it for inclusion in the National Register.

4.6.1 IMPACTS TO HISTORIC RESOURCES

4.6.1.1 DEFINITION OF INTENSITY LEVELS

In order for a structure or building to be listed in the National Register of Historic Places, it must meet one or more of the following criteria of significance: A) associated with events that have made a significant contribution to the broad patterns of our history; B) associated with the lives of persons significant in our past; C) embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction; or D) have yielded, or may be likely to yield, information important in prehistory or history. In addition, the structure or building must possess integrity of location, design, setting, materials, workmanship, feeling, and association (*National Register Bulletin, How to Apply the National Register Criteria for Evaluation*). For purposes of analyzing potential impacts to historic structures/buildings, the thresholds of change for the intensity of an impact are defined as follows:

- *Negligible* - Impact(s) is at the lowest levels of detection - barely perceptible and not measurable. For purposes of Section 106, the determination of effect would be *no adverse effect*.
- *Minor* - Adverse impact - impact would not affect the character defining features of a National Register of Historic Places eligible or listed structure or building. For purposes of Section 106, the determination of effect would be *no adverse effect*. Beneficial impact -

stabilization/ preservation of character defining features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect*.

- *Moderate* - Adverse impact - impact would alter a character defining feature(s) of the structure or building, but would not diminish the integrity of the resource to the extent that its National Register eligibility is jeopardized. For purposes of Section 106, the determination of effect would be *no adverse effect*. Beneficial impact – rehabilitation of a structure or building in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect*.
- *Major* - Adverse impact - impact would alter a character defining feature(s) of the structure or building, diminishing the integrity of the resource to the extent that it is no longer eligible to be listed in the National Register. For purposes of Section 106, the determination of effect would be *adverse effect*. Beneficial impact – restoration of a structure or building in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect*.

4.6.1.2 ALTERNATIVE A – NO-ACTION ALTERNATIVE

Historic resources in the project area would not be further impacted by the No-Action Alternative. The Lincoln Memorial and the historic designed landscape of the Lincoln Memorial Grounds would continue to be impacted by the use of concrete jersey barriers and planters because they would continue to impact the historic integrity of the Lincoln Memorial and the Lincoln Memorial Grounds. The design of the makeshift security measures is not fitting for its historic setting. The impacts would continue to be moderate, long-term, and adverse. Landscaping maintenance would continue as suggested in the *Cultural Landscape Report on the Lincoln Memorial Grounds*.

No transportation improvements or enhanced visitor services would occur. The existing gift shop and concession stand would continue to impact the historic resources of the Lincoln Memorial and its grounds because its design is not fitting for its historic setting it would; therefore, continue to affect the historic appearance that made the Lincoln Memorial and its historic designed landscape eligible for the National Register of Historic Places. The impact would be moderate, long-term, and adverse.

Cumulative Effects. Temporary security measures put in place at the Washington Monument and the various memorials in the Monumental Core have impacted historic resources in the past. Proposed security improvements at the Washington Monument and the Jefferson Memorial, and construction of the World War II Memorial may impact the historic resources of the Monumental Core by introducing elements not in keeping with the historic nature of these resources as described within their National Register nominations. The presence of makeshift security measures under the No-Action Alternative would contribute to the cumulative effect of these past and future actions. Planned future road improvements combined with the No-Action Alternative would have no cumulative effect to historic resources. There would be no short-term

cumulative effects under the No-Action Alternative from construction activities because there would be no construction at the Lincoln Memorial thus no cumulative effect when added to the construction activities at the Washington Monument, Jefferson Memorial, or the World War II Memorial.

Section 106 Summary. In accordance with Section 106 of the National Historic Preservation Act, implementation of the No-Action Alternative would have *no adverse effect* on historic properties. The historic resources have been impacted with the use of concrete jersey barriers and planters, the gift shop, and concession stand, but they do not diminish the integrity of the resource to the extent that the site's National Register eligibility is jeopardized.

Conclusion. Existing makeshift security barriers and planters would remain in place and continue to have a moderate, short-term, adverse impact on historic resources. The existing gift shop and concession stand would also remain creating a moderate, long-term, adverse impact. Existing security measures, gift shop, and concession stand would continue to detract from the historic integrity and setting of the Lincoln Memorial. Cumulative effects associated with the No-Action Alternative would be moderate, short-term, and adverse. No impairment to park resources or values would occur.

4.6.1.3 ALTERNATIVE B – CONSTRUCTION OF RETAINING WALL BEHIND EXISTING SIDEWALK AND INSTALLATION OF BOLLARDS ALONG OUTER RING (PREFERRED ALTERNATIVE)

Transportation Improvements. The improvements to transportation surrounding the Lincoln Memorial would have negligible, long-term, beneficial impacts on historic resources of the Memorial because the traffic conditions are anticipated to improve, and would not detract from the views and vistas of the Lincoln Memorial. The east side of the Memorial would be permanently closed to all through traffic and the existing roadway would be raised to sidewalk level to create a pedestrian plaza. The plaza will re-establish the historic footprint of the easternmost area of Lincoln Circle.

The additional bus queuing area on the north side of the Memorial would result in negligible, long-term, adverse impacts to the historic resources of the Lincoln Memorial and the Washington Monument, as no queuing area currently exists on the north side and this would introduce a new component into the historic setting. Appropriate sensitive context design would minimize the potential for impact.

Security Improvements. Under Alternative B, the installation of bollards and a vehicular barrier system would improve the historic resources when compared to existing site conditions. The existing concrete jersey barriers and planters compromise the historic appearance of the Memorial and continue to impact the historic designed landscape. A moderate, long-term, beneficial impact would result from the removal of existing makeshift security measures, restoring the sidewalks to their historic appearance, restoring the historic tree landscape plan, and restoring the east side of the Memorial to its historic layout.

The Lincoln Memorial and the historic designed landscape are listed on the National Register of Historic Places. Alternative B may have a major, long-term, adverse impact under the National

Environmental Policy Act that may constitute an adverse effect on historic properties under Section 106 of the National Historic Preservation Act because the construction of a vehicular barrier wall and installation of bollards would introduce a new element into the historic resources of the Memorial that is not consistent with the defining features of either National Register nomination. Under this alternative, the retaining wall on the western side would constitute a new element in the historic landscape as would either Option One or Option Two on the eastern side of the Memorial. The National Park Service has entered into consultation with the DC Historic Preservation Office (see letter in Appendix A). As design, development, and consultation continue, other potential adverse effects could be identified. The adverse impact to historic resources under the National Historical Preservation Act would be mitigated below a level of significance.

Visitor Services Improvements. Two visitor services areas would be constructed that would include a gift shop, concession stand, and information kiosk. The existing gift shop and concession stand would be removed and replaced with the new visitor services area on the southeast side of the Memorial. An identical one would be placed on the northeast side of the Memorial between Henry Bacon Drive and 23rd Street (north).

The adverse impact of the visitor services areas to historic resources would be minor and long-term because the visitor services areas would be seen from various views and vistas of the Lincoln Memorial. It would not detract from the historic designed landscape because sympathetic materials and design would be in keeping with the cultural landscape and historical setting of the historic designed landscape.

Cumulative Effects. Temporary security measures put in place at the Lincoln Memorial, the Washington Monument, and the various memorials in the Monumental Core have negatively impacted historic resources in the past. These security measures are not in keeping with the historic character of the Lincoln Memorial or the historic designed landscape. When added to past and reasonably foreseeable future actions, such as the Washington Monument and Jefferson Memorial security projects, Alternative B would have moderate, adverse cumulative effects to historic resources of the Monumental Core from the security improvements by introducing a new element in the historic context that would be visible from various views and vistas.

Planned future road improvements, along with Alternative B, would not create a cumulative effect.

There would be no short-term cumulative effects from construction activities because the various projects would occur at different times. Construction of the World War II Memorial and the Jefferson Memorial would overlap with the Lincoln Memorial, which would cumulatively impact historic resources for a short time. However, impacts would not diminish the integrity of the historic resources to the extent the sites' National Register eligibility is jeopardized.

Section 106 Summary. In accordance with Section 106 of the National Historic Preservation Act, Alternative B may have an *adverse effect* on historic properties. However, through a Memorandum of Agreement with the DC Historic Preservation Office, the National Park Service would mitigate to avoid or reduce the impacts below the level of significance for a major adverse impact under the National Environmental Policy Act. With this mitigation, Alternative B would

not diminish the integrity of the resource to the extent that the site's National Register eligibility would be jeopardized.

Conclusion. With appropriate mitigation, Alternative B would not diminish the integrity of the resource to the extent that the site's National Register eligibility would be jeopardized. Mitigation would also lower the impacts from construction of the security improvements to moderate, long-term, and adverse under the National Environmental Policy Act. Negligible, long-term, beneficial impacts would result from the transportation improvements to improve traffic conditions and negligible, long-term, adverse impacts would result from the creation of bus queuing areas on the north side of the Memorial because this would add a new component into the historic designed landscape. Enhanced visitor services would create a minor, long-term adverse impact because they would be seen from all views of the Memorial. There would be a moderate, adverse, cumulative effect on historic resources from Alternative B and other past and reasonably foreseeable future actions.

Because there would be no major, adverse impacts to historic resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Lincoln Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. Alternative B would be mitigated through compatible appropriate sympathetic context design and materials that would be in keeping with the cultural landscape and historical setting of the Lincoln Memorial. These would include:

- Design techniques and construction materials that would preserve the aesthetic qualities of the original roadway design at its historic location, including curb line;
- Restoration of the east side of the Memorial to its historic layout;
- Rehabilitation of the sidewalks to their historic appearance;
- Restoration of the historic tree landscape plan;
- Construction measures that would minimize any disturbance to roots, limbs, and branches that are character defining features of the Lincoln Memorial Grounds; and
- Massing, scale, and materials would be reflective of or consistent with the surrounding park resources and historic designed landscape.

As the design, development, and consultation continue, other potential adverse effects may be identified. The National Park Service is also in consultation with the DC Historic Preservation Office to execute a Memorandum of Agreement for this project. In the event the Memorandum of Agreement is not signed before a final decision is made for this project on which alternative would be executed, the National Park Service will follow its own internal process so as to make its decision.

4.6.1.4 ALTERNATIVE C – INSTALLATION OF BOLLARDS BEHIND EXISTING SIDEWALK AND ALONG OUTER RING

Transportation Improvements. The impacts to historic resources for Alternative C would be the same as with Alternative B.

Security Improvements. Under Alternative C, the installation of bollards would improve the historic resources when compared to existing site conditions. The existing concrete jersey barriers and planters compromise the historic appearance of the Memorial and continue to impact the historic designed landscape. A moderate, long-term, beneficial Impact would result from the removal of existing makeshift security measures, restoring the sidewalks to their historic appearance, restoring the historic tree landscape plan, and restoring the east side of the Memorial to its historic layout.

Under Alternative C, a vehicular barrier system consisting of bollards would be installed around the Memorial. The Lincoln Memorial and the historic designed landscape are listed on the National Register of Historic Places. Alternative C may have a major, long-term, adverse impact under the National Environmental Policy Act that may constitute an adverse effect on historic properties under Section 106 of the National Historic Preservation Act because the construction of bollards introduces a new element into the historic landscape that is not consistent with the defining features of either National Register designations. Under this alternative, the bollards on the western side would constitute a new element in the historic landscape as would either Option One or Option Two on the eastern side of the Memorial. The National Park Service has entered into consultation with the DC Historic Preservation Office (see letter in Appendix A). As design, development, and consultation continue, other potential adverse effects could be identified. The adverse impact to historic resources under the National Historical Preservation Act would be mitigated below a level of significance.

Visitor Services Improvements. Impacts to historic resources for Alternative C would be the same as under Alternative B.

Cumulative Effects. Cumulative effects to historic resources under Alternative C would be the same as those described under Alternative B.

Section 106 Summary. In accordance with Section 106 of the National Historic Preservation Act, Alternative C may have an *adverse effect* on historic properties. However, through a Memorandum of Agreement with the DC Historic Preservation Office, the National Park Service would mitigate to avoid or reduce the impacts below the level of significance for a major adverse impact under the National Environmental Policy Act. Therefore, Alternative C would impact the historic properties, but these impacts would not diminish the integrity of the resource to the extent that the site's National Register eligibility is jeopardized.

Conclusion. With appropriate mitigation, Alternative C would not diminish the integrity of the resource to the extent that the site's National Register eligibility would be jeopardized. Mitigation would also lower the impacts from construction of the security improvements to moderate, long-term, and adverse under the National Environmental Policy Act. Impacts from transportation improvements and enhanced visitor services would be minor, long-term, and

adverse. Negligible, long-term, beneficial impacts would result from the transportation improvements to improve traffic conditions and negligible, long-term, adverse impacts would result from the creation of bus queuing areas on the north side of the Memorial because this would add a new component into the historic designed landscape. Enhanced visitor services would create a minor, long-term adverse impact because they would be seen from all views of the Memorial. When added to past and reasonably foreseeable future actions, the Alternative C would have a moderate adverse cumulative effect on historic resources within the Monumental Core.

Because there would be no major, adverse impacts to historic resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Lincoln Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. Alternative C would be mitigated through compatible appropriate sympathetic context design and materials that would be in keeping with the cultural landscape and historical setting of the Lincoln Memorial. These would include:

- Design techniques and construction materials that would preserve the aesthetic qualities of the original roadway design at its historic location, including curb line;
- Restoration of the east side of the Memorial to its historic layout;
- Rehabilitation of the sidewalks to their historic appearance;
- Restoration of the historic tree landscape plan;
- Construction measures that would minimize any disturbance to roots, limbs, and branches that are character defining features of the Lincoln Memorial Grounds; and
- Massing, scale, and materials would be reflective of or consistent with the surrounding park resources and historic designed landscape.

As the design, development, and consultation continue, other potential adverse effects may be identified. The National Park Service is also in consultation with the DC Historic Preservation Office to execute a Memorandum of Agreement for this project. In the event the Memorandum of Agreement is not signed before a final decision is made for this project on which alternative would be executed, the National Park Service will follow its own internal process so as to make its decision.

4.6.2 IMPACTS TO CULTURAL LANDSCAPES

4.6.2.1 DEFINITION OF INTENSITY LEVELS

In order for a cultural landscape to be listed in the National Register, it must meet one or more of the following criteria of significance: A) associated with events that have made a significant

contribution to the broad patterns of our history; B) associated with the lives of persons significant in our past; C) embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction; D) have yielded, or may be likely to yield, information important in prehistory or history (*National Register Bulletin, How to Apply the National Register Criteria for Evaluation*). The landscape must also have integrity of those patterns and features - spatial organization and land forms; topography; vegetation; circulation networks; water features; and structures/buildings, site furnishings or objects - necessary to convey its significance (*Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes*). For purposes of analyzing potential impacts to cultural landscapes, the thresholds of change for the intensity of an impact are defined as follows:

- *Negligible* - Impact(s) is at the lowest levels of detection - barely perceptible and not measurable. For purposes of Section 106, the determination of effect would be *no adverse effect*.
- *Minor* - Adverse impact - impact(s) would not affect the character defining patterns and features of a National Register of Historic Places eligible or listed cultural landscape. For purposes of Section 106, the determination of effect would be *no adverse effect*. Beneficial impact – preservation of character defining patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes*. For purposes of Section 106, the determination of effect would be *no adverse effect*.
- *Moderate* - Adverse impact - impact(s) would alter a character defining pattern(s) or feature(s) of the cultural landscape, but would not diminish the integrity of the landscape to the extent that its National Register eligibility is jeopardized. For purposes of Section 106, the determination of effect would be *no adverse effect*. Beneficial impact – rehabilitation of a landscape or its patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes*. For purposes of Section 106, the determination of effect would be *no adverse effect*.
- *Major* - Adverse impact - impact(s) would alter a character defining pattern(s) or feature(s) of the cultural landscape, diminishing the integrity of the landscape to the extent that it is no longer eligible to be listed in the National Register. For purposes of Section 106, the determination of effect would be *adverse effect*. Beneficial impact – restoration of a landscape or its patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes*. For purposes of Section 106, the determination of effect would be *no adverse effect*.

4.6.2.2 ALTERNATIVE A – NO-ACTION ALTERNATIVE

Cultural landscapes in the project area would not be further impacted by the No-Action Alternative. The Lincoln Memorial Grounds, a historic designed landscape and a contributing

element to the West Potomac Park National Register designation, would continue to be impacted by the use of concrete jersey barriers and planters. The security measures would continue to impact the historic integrity of the Lincoln Memorial Grounds and compromise its historic appearance. The impacts would continue to be moderate, short-term, and adverse. Landscaping maintenance would continue as suggested in the 1999 *Cultural Landscape Report on the Lincoln Memorial Grounds*.

No transportation improvements would occur and visitor services would not be enhanced. The existing gift shop and concession stand would continue to impact the cultural landscape of the Lincoln Memorial Grounds because it is a modern addition to the cultural landscape. The impact would be moderate, long-term, and adverse.

Cumulative Effects: Temporary security measures put in place at the Washington Monument and the various memorials in the Monumental Core have impacted cultural landscapes in the past. Proposed security improvements at the Washington Monument and the Jefferson Memorial, and construction of the World War II Memorial may impact the cultural landscape of the Monumental Core by introducing elements not in keeping with the historic layout of these resources as described within their National Register nominations. The presence of makeshift security measures under the No-Action Alternative would contribute to the cumulative effect of these past and future actions. Planned future road improvements combined with the No-Action Alternative would have no cumulative effect to cultural landscapes. There would be no short-term cumulative effects under the No-Action Alternative from construction activities because there would be no construction at the Lincoln Memorial that would create a cumulative effect when added to the construction activities at the Washington Monument, Jefferson Memorial, or the World War II Memorial.

Section 106 Summary. In accordance with Section 106 of the National Historic Preservation Act, implementation of the No-Action Alternative would have *no adverse effect* on the cultural landscape. The cultural landscape has been impacted with the use of concrete jersey barriers and planters, the gift shop, and concession stand, but they do not diminish the integrity of the resource to the extent that the site's National Register eligibility is jeopardized.

Conclusion. Existing makeshift security barriers and planters would remain in place and continue to have a moderate, short-term, adverse impact on the cultural landscape. The existing gift shop and concession stand would also remain creating a moderate, long-term, adverse impact. Existing security measures, gift shop, and concession stand would continue to detract from the historic integrity and setting of the Lincoln Memorial Grounds. Cumulative effects associated with the No-Action Alternative would be moderate, short-term, and adverse. No impairment to park resources or values would occur.

4.6.2.3 ALTERNATIVE B – CONSTRUCTION OF RETAINING WALL BEHIND EXISTING SIDEWALK AND INSTALLATION OF BOLLARDS ALONG OUTER RING (PREFERRED ALTERNATIVE)

Transportation Improvements. The transportation improvements surrounding the Lincoln Memorial would have negligible, long-term, beneficial impacts on the cultural landscape because the traffic conditions are anticipated to improve, and would not detract from the views and vistas

associated with the historic designed landscape. The east side of the Memorial would be permanently closed to all through traffic and the existing roadway would be raised to sidewalk level to create a pedestrian plaza. The plaza will re-establish the historic footprint of the easternmost area of Lincoln Circle.

The additional bus queuing area on the north side of the Memorial would result in negligible, long-term, adverse impacts to the cultural landscape of the Lincoln Memorial and the Washington Monument, as no queuing area currently exists on the north side and this would introduce a new component to the historic designed landscape. Appropriate sensitive context design would minimize the potential for impact

Security Improvements. Under Alternative B, the installation of bollards and a vehicular barrier wall would improve the cultural landscape when compared to existing site conditions. The existing concrete jersey barriers and planters compromise the historic appearance of the historic designed landscape. A moderate, long-term, beneficial impact would result from the removal of the existing makeshift security measures, restoring the sidewalks to their historic appearance, restoring the historic tree landscape plan, and restoring the east side of the Memorial to its historic layout. These improvements would be completed as outlined in the 1999 *Cultural Landscape Report on the Lincoln Memorial Grounds*.

The Lincoln Memorial Grounds, composed of the Reflecting Pool area, Lincoln Circle and radial roads, and the Watergate area, all contribute to the West Potomac Park designation on the National Register of Historic Places as a historic designed landscape. The installation of bollards and a vehicular barrier wall may have a major, long-term, adverse impact under the National Environmental Policy Act that may constitute an adverse effect on historic properties under Section 106 of the National Historic Preservation Act because they would introduce a new element into the historic designed landscape of the Memorial that is not consistent with the defining features of the National Register designation. Under this alternative, the retaining wall on the western side would constitute a new element in the historic landscape as would either Option One or Option Two on the eastern side of the Memorial. The National Park Service has entered into consultation with the DC Historic Preservation Office (see letter in Appendix A). As design, development, and consultation continue, other potential adverse effects could be identified. The adverse impact to historic resources under the National Historical Preservation Act would be mitigated below a level of significance.

Visitor Services Improvements. Two visitor services areas would be constructed that would include a gift shop, concession stand, and information kiosk. The existing gift shop and concession stand would be removed and replaced with the new visitor services area on the southeast side of the Memorial. An identical one would be placed on the northeast side of the Memorial between Henry Bacon Drive and 23rd Street (north).

The adverse impact of the visitor services area to the cultural landscape would be minor and long-term because the visitor services areas would be seen from all views and vistas of the Lincoln Memorial; however, the impact would be mitigated through compatible new design and materials. These security improvements would not detract from the historic designed landscape because sympathetic materials and design would be used in keeping with the cultural landscape and historical setting of the historic designed landscape.

Cumulative Effects. Temporary security measures put in place at the Lincoln Memorial, the Washington Monument, and the various memorials in the Monumental Core have negatively impacted the cultural landscape in the past because these security measures are not in keeping with the historic character of the historic designed landscape. When added to past and reasonably foreseeable future actions, such as the Washington Monument and Jefferson Memorial security improvements, Alternative B would have moderate, adverse cumulative effects to the cultural landscapes of the Monumental Core from the security improvements by introducing a new element in the historic context that would be visible from various views and vistas. Planned future road improvements, along with Alternative B, would not create a cumulative effect.

There would be no short-term cumulative effects from construction activities because the various projects would occur at different times. Construction of the World War II Memorial and the Jefferson Memorial would overlap with the Lincoln Memorial, which would cumulatively impact cultural landscapes for a short time. However, impacts would not diminish the integrity of the historic designed landscape to the extent the sites' National Register eligibility is jeopardized.

Section 106 Summary. In accordance with Section 106 of the National Historic Preservation Act, Alternative B may have an *adverse effect* on historic properties. However, through a Memorandum of Agreement with the DC Historic Preservation Office, the National Park Service would mitigate to avoid or reduce the impacts below the level of significance for a major adverse impact under the National Environmental Policy Act. Therefore, Alternative B would impact the historic properties, but the impacts would not diminish the integrity of the resource to the extent that the site's National Register eligibility is jeopardized.

Conclusion. With appropriate mitigation, Alternative B would not diminish the integrity of the resource to the extent that the site's National Register eligibility would be jeopardized. Mitigation would also lower the impacts from construction of the security improvements to moderate, long-term, and adverse under the National Environmental Policy Act. Minor, long-term, beneficial impacts would result from the transportation improvements to improve traffic conditions and negligible, long-term, adverse impacts would result from the creation of bus queuing areas on the north side of the Lincoln Memorial because this would add a new component into the historic designed landscape. Enhanced visitor services would create a minor, long-term adverse impact because they would be seen from all views of the Memorial. There would be a moderate, adverse, cumulative effect on cultural landscapes from Alternative B and other past and reasonably foreseeable future actions.

Because there would be no major, adverse impacts to cultural landscape resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Lincoln Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. Alternative B would be mitigated through compatible appropriate sympathetic context design and materials that would be in keeping with the cultural landscape and historical setting of the Lincoln Memorial. These would include:

- Design techniques and construction materials that would preserve the aesthetic qualities of the original roadway design at its historic location, including curb line;
- Restoration of the east side of the Memorial to its historic layout;
- Rehabilitation of the sidewalks to their historic appearance;
- Restoration of the historic tree landscape plan;
- Construction measures that would minimize any disturbance to roots, limbs, and branches that are character defining features of the Lincoln Memorial Grounds; and
- Massing, scale, and materials would be reflective of or consistent with the surrounding park resources and historic designed landscape.

As the design, development, and consultation continue, other potential adverse effects may be identified. The National Park Service is also in consultation with the DC Historic Preservation Office to execute a Memorandum of Agreement for this project. In the event the Memorandum of Agreement is not signed before a final decision is made for this project on which alternative would be executed, the National Park Service will follow its own internal process so as to make its decision.

4.6.2.4 ALTERNATIVE C – INSTALLATION OF BOLLARDS BEHIND EXISTING SIDEWALK AND ALONG OUTER RING

Transportation Improvements. The impacts to cultural landscapes for Alternative C would be the same as under Alternative B.

Security Improvements. Under Alternative C, the installation of bollards would improve the cultural landscape when compared to existing site conditions. The existing concrete jersey barriers and planters compromise the historic appearance of the historic designed landscape. A moderate, long-term, beneficial impact would result from the removal of the existing makeshift security measures, restoring the sidewalks to their historic appearance, restoring the historic tree landscape plan, and restoring the east side of the Memorial to its historic layout. This would be completed as outlined in the 1999 *Cultural Landscape Report on the Lincoln Memorial Grounds*.

Under alternative C, a vehicular barrier system consisting of bollards would be installed. The historic designed landscape, a contributing element to the National Register designation of West Potomac Park, is listed on the National Register of Historic Places. Alternative C may have a major, long-term, adverse impact under the National Environmental Policy Act that may constitute an adverse effect on historic properties under Section 106 of the National Historic Preservation Act because the construction of bollards introduces a new element into the historic landscape that is not consistent with the defining features of the National Register designation. Under this alternative, the retaining wall on the western side would constitute a new element in

the historic landscape as would either Option One or Option Two on the eastern side of the Memorial. The National Park Service has entered into consultation with the DC Historic Preservation Office (see letter in Appendix A). As design, development, and consultation continue, other potential adverse effects could be identified. The adverse impact to historic resources under the National Historical Preservation Act would be mitigated below a level of significance.

Visitor Services Improvements. Impacts to the cultural landscape under Alternative C would be the same as those described under Alternative B.

Cumulative Effects. Cumulative effects to the cultural landscape under Alternative C would be the same as those described under Alternative B.

Section 106 Summary. In accordance with Section 106 of the National Historic Preservation Act, Alternative C may have an *adverse effect* on historic properties. However, through a Memorandum of Agreement with the DC Historic Preservation Office, the National Park Service would mitigate to avoid or reduce the impacts below the level of significance for a major adverse impact under the National Environmental Policy Act. Therefore, Alternative C would impact the historic properties, but the impacts would not diminish the integrity of the resource to the extent that the site's National Register eligibility is jeopardized.

Conclusion. With appropriate mitigation, Alternative C would not diminish the integrity of the resource to the extent that the site's National Register eligibility would be jeopardized. Mitigation would also lower the impacts from construction of the security improvements to moderate, long-term, and adverse under the National Environmental Policy Act. Minor, long-term, beneficial impacts would result from the transportation improvements to improve traffic conditions and negligible, long-term, adverse impacts would result from the creation of bus queuing areas on the north side of the Lincoln Memorial because this would add a new component into the historic designed landscape. Enhanced visitor services would create a minor, long-term adverse impact because they would be seen from all views of the Memorial. There would be a moderate, adverse, cumulative effect on cultural landscapes from Alternative B and other past and reasonably foreseeable future actions.

Because there would be no major, adverse impacts to cultural landscape resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Lincoln Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. Alternative C would be mitigated through compatible appropriate sympathetic context design and materials that would be in keeping with the cultural landscape and historical setting of the Lincoln Memorial. These would include:

- Design techniques and construction materials that would preserve the aesthetic qualities of the original roadway design at its historic location, including curb line;

- Restoration of the east side of the Memorial to its historic layout;
- Rehabilitation of the sidewalks to their historic appearance;
- Restoration of the historic tree landscape plan;
- Construction measures that would minimize any disturbance to roots, limbs, and branches that are character defining features of the Lincoln Memorial Grounds; and
- Massing, scale, and materials would be reflective of or consistent with the surrounding park resources and historic designed landscape.

As the design, development, and consultation continue, other potential adverse effects may be identified. The National Park Service is also in consultation with the DC Historic Preservation Office to execute a Memorandum of Agreement for this project. In the event the Memorandum of Agreement is not signed before a final decision is made for this project on which alternative would be executed, the National Park Service will follow its own internal process so as to make its decision.

4.7 IMPACTS ON SAFETY (SECURITY)

4.7.1 DEFINITION OF INTENSITY LEVELS

Analyses of the potential intensity of safety and security were derived from the available information on the Lincoln Memorial and the professional judgment of the National Capital Parks - Central staff. The National Capital Parks – Central is the administrator of the National Park Service units of the Monumental Core of our Nation’s Capital. The thresholds of change for the intensity of impacts on safety and security are defined as follows:

- *Negligible* - Public health and safety would not be affected, or the effects would be at low levels of detection and would not have an appreciable effect on the public health or safety;
- *Minor* -The effect would be detectable and would likely be short-term, but would not have an appreciable effect on public health and safety. If mitigation were needed, it would be relatively simple and would likely be successful;
- *Moderate* - The effects would be readily apparent and long-term, and would result in substantial, noticeable effects to public health and safety on a local scale. Mitigation measures would probably be necessary and would likely be successful; or
- *Major* - The effects would be readily apparent and long-term, and would result in substantial, noticeable effects to public health and safety on a regional scale. Extensive mitigation measures would be needed, and their success would not be guaranteed.

4.7.2 ALTERNATIVE A – NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the makeshift security measures would continue. The use of concrete jersey barriers and concrete planters as security measures are anticipated to be

temporary and short-term. They do not provide adequate security necessary to protect the Lincoln Memorial and its visitors from the possible threat of vehicular bombs. The impacts to security of the Lincoln Memorial and its visitors are moderate, long-term, and adverse under the No-Action Alternative. Access for individuals with disabilities is currently impeded in some areas by jersey barriers.

In addition, under the No-Action Alternative, transportation improvements would not occur and new visitor services areas would not be constructed. Impacts to the security of visitors to the Lincoln Memorial are moderate, long-term, and adverse as conflict between motorized vehicles and pedestrians would continue. This would not affect security at the site.

Cumulative Effects. Proposed security improvements at the Washington Monument and Jefferson Memorial would improve visitor safety. The No-Action Alternative would not contribute to beneficial cumulative effects on safety and security.

There would be no short-term cumulative effects under the No-Action Alternative from construction activities because there would be no construction at the Lincoln Memorial that would create a cumulative effect when added to the construction activities at the Washington Monument, Jefferson Memorial, or the World War II Memorial.

Conclusion. Impacts to safety and security of the Lincoln Memorial, under the No-Action Alternative would be moderate, long-term, and adverse from existing inadequate security measures and conflicts between vehicles and pedestrians. The No-Action Alternative would not contribute to cumulative effects on security and safety of the Lincoln Memorial. No impairment to park resources or values would occur.

4.7.3 ALTERNATIVE B – CONSTRUCTION OF RETAINING WALL BEHIND EXISTING SIDEWALK AND INSTALLATION OF BOLLARDS ALONG OUTER RING (PREFERRED ALTERNATIVE) AND ALTERNATIVE C – INSTALLATION OF BOLLARDS BEHIND EXISTING SIDEWALK AND ALONG OUTER RING

Impacts to safety and security would be the same for Alternative B and Alternative C.

Transportation Improvements. Under Alternatives B and C, improvements to the transportation surrounding the Lincoln Memorial would occur. Pedestrian access would improve at the intersections of Daniel French and Henry Bacon Drives. Crosswalks would be created and new traffic signals would be installed at the intersection of Lincoln Circle with 23rd Street (north). The east side of the Memorial would be permanently closed to all through traffic and the existing roadway would be raised to sidewalk level to create a pedestrian plaza. The plaza will re-establish the historic footprint of the easternmost area of Lincoln Circle. These improvements would create moderate, long-term, beneficial impacts to safety and security of the visitors by reducing the conflict between motorized vehicles and pedestrians.

Minor, short-term, adverse impacts to the safety of visitors from construction would occur from visitors having to maneuver around the construction staging areas.

Security Improvements. A new vehicular barrier system would be constructed under these alternatives, resulting in moderate, long-term, beneficial impacts to safety and security. Construction of vehicular security barriers surrounding the western side of the Lincoln Memorial, whether it be a retaining wall as under Alternative B or bollards as under Alternative C, would provide more adequate protection to the Memorial and its visitors from the threat of vehicular bombs. Under both alternatives, either Option One or Option Two on the eastern side of the Memorial would provide adequate protection to the Memorial and its visitors from the threat of vehicular bombs. Access for individuals with disabilities would be improved because bollards would be placed at a minimum distance of 4 feet apart to allow for passage of wheelchairs, and Lincoln Circle would be elevated to sidewalk level, creating easier pedestrian access. The Lincoln Memorial would still be accessible by National Park Service, U.S. Park Police, and other emergency vehicles because the metal bollards that would be retractable.

Minor, short-term, adverse impacts to the safety of visitors from construction would occur from visitors having to maneuver around the construction staging areas.

Visitor Services Improvements. New visitor services areas would be constructed on the north and south ends of the Memorial. No impacts to safety and security would occur as a result of this construction. Minor, short-term, adverse impacts to the safety of visitors from construction would occur from visitors having to maneuver around the construction staging areas.

Cumulative Effects. Proposed security improvements at the Washington Monument and Jefferson Memorial would improve visitor safety. Alternatives B and C would also improve visitor safety. Therefore, reasonably foreseeable future actions along with Alternative B or C, would have a moderate, long-term, beneficial cumulative effect on safety and security in the Monumental Core.

There would be no short-term cumulative effects from construction activities because the various projects would occur at different times. For a short time there is the potential for an overlap in construction periods of the World War II Memorial and the Jefferson Memorial with the proposed action. This overlap would not cumulatively change the safety and security of the visitors or employees on a cumulative level because these impacts are not incremental to other past, present, or reasonably foreseeable future actions.

Conclusion. Impacts to the safety and security of the Lincoln Memorial and its visitors would be moderate, long-term, and beneficial. Minor, short-term, adverse impacts to the safety of visitors from construction would occur from visitors having to maneuver around the construction staging areas. Alternatives B and C, along with reasonably foreseeable future actions, would have a beneficial cumulative effect on safety in the Monumental Core.

Because there would be no major, adverse impacts to safety and security resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Lincoln Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. In order to meet requirements for individuals with disabilities, the bollards would be placed a minimum of 4 feet apart. Bollards that would be retractable would be used for access to the Lincoln Memorial by National Park Service, U.S. Park Police, and other emergency vehicles.

4.8 IMPACTS ON VISITOR USE AND EXPERIENCE

4.8.1 DEFINITION OF INTENSITY LEVELS

Analyses of the potential intensity of visitor use and experience were derived from the available information on the Lincoln Memorial and the professional judgment of the National Capital Parks - Central staff. The National Capital Parks – Central is the administrator of the National Park Service units of the Monumental Core of our Nation’s Capital. The thresholds of change for the intensity of impacts on visitor use and experience are defined as follows:

- *Negligible* - Visitors would not be affected or changes in visitor use and/or experience would be below or at the level of detection. Any effects would be short-term. The visitor would not likely be aware of the effects associated with the alternative;
- *Minor* - Changes in visitor use and/or experience would be detectable, although the changes would be slight and likely short-term. The visitor would be aware of the effects associated with the alternative, but the effects would be slight;
- *Moderate* - Changes in visitor use and/or experience would be readily apparent and likely long-term. The visitor would be aware of the effects associated with the alternative and would likely be able to express an opinion about the changes; or
- *Major* - Changes in visitor use and/or experience would be readily apparent and have important long-term consequences. The visitor would be aware of the effects associated with the alternative and would likely express a strong opinion about the changes.

4.8.2 ALTERNATIVE A – NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the existing security measures consisting of concrete jersey barriers and planters would continue to cause moderate, long-term, adverse impacts to visitor use and experience. The current makeshift security barriers detract from the visitor experience and impede visitor movement to and from the Memorial. In addition, no transportation improvements or enhanced visitor services would occur. The existing traffic flow would continue to operate at a Level of Service F. This would continue to affect visitor use and experience because the traffic levels would impede access to the Memorial. In addition, the existing gift shop and concession stand are unable to handle the amount of visitors that come to the Lincoln Memorial every year. Impacts associated with transportation and the visitor services area would be moderate, long-term, and adverse.

Cumulative Effects. Planned road improvements and security improvements at the Washington Monument and Jefferson Memorial would have beneficial impacts on visitor use and experience by providing better access to the Monumental Core and better security for visitors. The No-

Action Alternative would not contribute to these beneficial impacts. Therefore, there would be no cumulative effects on visitor use and experience.

There would be no short-term cumulative effects under the No-Action Alternative from construction activities because there would be no construction at the Lincoln Memorial that would create a cumulative effect when added to the construction activities at the Washington Monument, Jefferson Memorial, or the World War II Memorial.

Conclusion. Visitor use and experience would continue to be impacted under the No-Action Alternative. Moderate, short-term, adverse impacts would continue to occur because makeshift security barriers currently being used as they detract from the visitor experience and impede pedestrian flow. Moderate, long-term, adverse impacts would occur by not improving transportation around the Memorial and the visitor services area. No cumulative effects on visitor use and experience would occur. No impairment to park resources and values would occur.

4.8.3 ALTERNATIVE B – CONSTRUCTION OF RETAINING WALL BEHIND EXISTING SIDEWALK AND INSTALLATION OF BOLLARDS ALONG OUTER RING (PREFERRED ALTERNATIVE) AND ALTERNATIVE C – INSTALLATION OF BOLLARDS BEHIND EXISTING SIDEWALK AND ALONG OUTER RING

Impacts to visitor use and experience would be the same for both Alternative B and Alternative C.

Transportation Improvements. Under Alternatives B and C, improvements to the transportation surrounding the Lincoln Memorial would occur. These alternatives would improve vehicular and pedestrian access to the memorial. The existing bus queuing area and taxi stand along Daniel French Drive would continue and an additional bus queuing area on the north side of the Memorial along Henry Bacon Drive would spread out the amount of buses loading and unloading visitors between two areas and eliminate the need for buses and taxis to double park while loading and unloading passengers. Pedestrian access would improve at the intersections of Daniel French and Henry Bacon Drives. Crosswalks would be created and new traffic signals would be installed at the intersection of Lincoln Circle with 23rd Street (north). The east side of the Memorial would be permanently closed to all through traffic and the existing roadway would be raised to sidewalk level to create a pedestrian plaza. The plaza will re-establish the historic footprint of the easternmost area of Lincoln Circle. These improvements would create moderate, long-term, beneficial impacts to visitor use and experience because these improvements would provide safer visitor access, enhancing the visitor experience and use of the park. These improvements would also enhance visitation to the surrounding Memorials in the Monumental Core.

Minor, short-term, adverse impacts to visitor use and experience from construction would occur from visitors having to maneuver around the construction staging areas, and from temporary lane closures during roadway construction.

Security Improvements. Construction of a vehicular barrier system on the western side would provide beneficial impacts to visitor use and experience by improving pedestrian access to and from the Lincoln Memorial. In addition, the introduction of adequate security from the potential threat of a vehicular bomb would be moderate, long-term, and beneficial. Under both alternatives, either Option One or Option Two on the eastern side of the Memorial would provide adequate protection to the Memorial and its visitors from the threat of vehicular bombs. The security improvements may adversely impact visitor experience by impacting the views to and from the Memorial. This impact would be moderate and long-term.

Minor, short-term, adverse impacts to visitors would occur during construction from placement of the staging area and the use of the construction fencing and cones, which could impede pedestrian access and would temporarily create a negative visitor experience.

Visitor Services Improvements. For Alternatives B and C, new visitor services areas would be constructed on the north and south sides of the Memorial. The existing gift shop kiosk and the snack area on the south side would be removed and replaced with the new visitor services area on the south side. Existing baseball fields may have to be relocated with the addition of a new visitor services area on the north side. Impacts to visitor use and experience would be similar for Alternatives B and C. Two visitor services areas would create impacts that would be moderate, long-term, and beneficial because two visitor services areas would spread out the amount of visitors utilizing either area creating an enjoyable visitor experience. Impacts associated with relocation of the baseball fields would be negligible as there are baseball fields within the near vicinity that would be utilized. The visitor services area proposed for the north side of the Memorial would also serve visitors to the Vietnam Veterans Memorial. Construction impacts would be minor, short-term, and adverse to visitor use and experience because of placement of the staging area and the use of the construction fencing and cones, which could impede pedestrian access. The existing gift shop kiosk and snack area would remain open until the north side visitor services area was constructed.

Cumulative Effects. Planned road improvements and security improvements at the Washington Monument and Jefferson Memorial would have beneficial impacts on visitor use and experience by providing better access to the Monumental Core and better security for visitors. The improvements proposed under Alternatives B and C would also have beneficial impacts, leading to a moderate, beneficial cumulative effect on visitor use and experience. However, there would also be a moderate, adverse cumulative effect from the proposed action, when combined with other past, present, and reasonably foreseeable future actions such as the security improvements at the Washington Monument and the construction of the World War II Memorial. These adverse impacts result from the changes to the views and vistas of each of these Memorials on each other.

There would be no short-term cumulative effects from construction activities because the various projects would occur at different times. For a short time there is the potential for an overlap in construction periods of the World War II Memorial and the proposed action, which would result in a minor, short-term adverse cumulative effect to visitor use and experience because access to around portions of the Lincoln Memorial and the Rainbow Pool would be restricted at different times during construction. Construction periods of the Jefferson Memorial and the proposed action would also overlap, a negligible, short-term, cumulative effect is anticipated because

visitors to the Washington, DC area would more than likely visit both sites and their visitor experience of both Memorials would be affected by construction activities.

Conclusion. Alternatives B and C would have moderate, long-term, beneficial impacts on visitor use and experience as a result of new visitor services areas and enhanced access to and from the Lincoln Memorial. The security improvements may adversely impact visitor experience by impacting the views to and from the Memorial. Minor, short-term, adverse impacts would result from construction from the placement of staging areas and construction materials. Moderate, beneficial impacts on visitor use and experience would occur under these alternatives from transportation and security improvements and enhanced visitor services. Moderate, beneficial cumulative effects would occur from planned road improvements and security improvements by providing better access to the Monumental and better security for its visitors. A moderate adverse cumulative effect would occur from the security improvements as the views of each of the Memorials would be impacted.

Because there would be no major, adverse impacts to visitor use and experience resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Lincoln Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. To mitigate impacts to visitors during the construction of the visitor services areas, the north service area would be constructed first, leaving the existing gift shop and concession stand open. The gift shop, concession stand, and information kiosks on the south side would then be transferred to the north side so that construction could begin on the south visitor services area, thereby eliminating disruption to visitor use and experience.

4.9 IMPACTS ON PARK OPERATIONS

4.9.1 DEFINITION OF INTENSITY LEVELS

The National Park Service staff's knowledge regarding operational efficiency, protection, and preservation of important resources, and providing an effective visitor experience was used to determine intensity levels of potential impacts on Memorial operations. For purposes of analyzing potential impacts, the thresholds of change for the intensity of an impact are defined as follows:

- *Negligible* - Park operations would not be affected, or the effects would be at low levels of detection and would not have an appreciable effect on park operations;
- *Minor* - The effect would be detectable and likely short-term, but would be of a magnitude that would not have an appreciable effect on monument operations. If mitigation was needed to offset adverse effects, it would be simple and likely successful.
- *Moderate* - The effects would be readily apparent, likely long-term, and would result in a substantial change in park operations in a manner noticeable to staff and to the public.

Mitigation measures would be necessary to offset adverse effects and would likely be successful; or

- *Major* - The effects would be readily apparent and would result in a substantial change in park operation in a manner noticeable to staff and the public and be markedly different from existing operations. Extensive mitigation measure to offset adverse effects would be needed and their success could not be guaranteed.

4.9.2 ALTERNATIVE A – NO-ACTION ALTERNATIVE

Under the No-Action Alternative, No transportation improvements would occur. Traffic congestion and flow would continue to be problematic. The existing concrete jersey barriers and planters would remain. The concrete jersey barriers and planters provide temporary security to the Lincoln Memorial and its visitors, but inadequate protection. New visitor services areas would not be constructed. The existing gift shop and concession stand would remain. Park operations are impacted because the existing visitor services area is not sufficient to handle the ever increasing amount of visitors that visit the Lincoln Memorial each year. Overall park operations would be expected to sustain minor to moderate, long-term, adverse impacts as a result of inefficient visitor services, traffic congestion, and security features. Current maintenance activities are not being impacted by current practices.

Cumulative Effects. Planned road improvements and security improvements at the Washington Monument would have beneficial impacts on park operations by improving visitor services and providing better access to the Monumental Core. The No-Action Alternative would not contribute to these beneficial impacts. Therefore, there would be no cumulative effects on park operations.

There would be no short-term cumulative effects under the No-Action Alternative from construction activities because there would be no construction at the Lincoln Memorial that would create a cumulative effect when added to the construction activities at the Washington Monument, Jefferson Memorial, or the World War II Memorial

Conclusion. The No-Action Alternative would have minor to moderate, long-term, adverse effects on park operations. Inefficient visitor services, traffic congestion, and security features would continue and remain problematic. No cumulative affects would occur. No impairment to park resources and values would occur.

4.9.3 ALTERNATIVE B – CONSTRUCTION OF RETAINING WALL BEHIND EXISTING SIDEWALK AND INSTALLATION OF BOLLARDS ALONG OUTER RING (PREFERRED ALTERNATIVE) AND ALTERNATIVE C – INSTALLATION OF BOLLARDS BEHIND EXISTING SIDEWALK AND ALONG OUTER RING

Impacts to park operations would be the same for both Alternative B and Alternative C.

Transportation Improvements. Under Alternatives B and C, transportation improvements would occur. Traffic congestion and flow would be beneficially impacted through installation of traffic signals and pedestrian crosswalks at the intersection of Lincoln Circle with 23rd Street (north)

and Henry Bacon Drive. The plaza would be raised to be even with the existing sidewalk and would create easier access to the Lincoln Memorial from the Reflecting Pool. The plaza will re-establish the historic footprint of the easternmost area of Lincoln Circle. This would eliminate vehicles from driving in front of the Memorial. Park operations would be expected to sustain beneficial impacts, which would be negligible and long-term because with better traffic flow and safer pedestrian access, park rangers would be able to conduct their jobs more efficiently.

Minor, short-term, adverse impacts to park operations from construction would occur from maintenance crews and park interpreters having to maneuver around the construction staging areas.

Security Improvements. For Alternatives B and C, a vehicle barrier system on the western and eastern side of the Lincoln Memorial would be built. Under both alternatives, security measures for the western side and either Option One or Option Two on the eastern side of the Memorial would meet long-term National Park Service objectives for security at the Memorial and for its visitors, creating minor, long-term, beneficial impacts to park operations. To provide access for National Park Service, U.S. Park Police, and emergency vehicles under these alternatives, metal bollards would be retractable.

Minor, short-term, adverse impacts to park operations from construction would occur from maintenance crews and park interpreters having to maneuver around the construction staging areas.

Visitor Services Improvements. New visitor services areas would be constructed on the north and south sides of the Memorial under these alternatives. A minor, long-term, beneficial impact would occur to park operations because the new facilities would provide better working conditions for operations by National Park Service and concessions staff.

Minor, short-term, adverse impacts to park operations from construction would occur from maintenance crews and park interpreters having to maneuver around the construction staging areas. None of the improvements would require additional park rangers to staff the Lincoln Memorial.

Cumulative Effects. Planned road improvements and security improvements at the Washington Monument and Jefferson Memorial would have beneficial impacts on park operations by improving visitor access and services to the Monumental Core. The improvements proposed under Alternatives B and C would also have beneficial impacts, leading to a moderate, beneficial cumulative effect on park operations.

There would be no short-term cumulative effects from construction activities because the various projects would occur at different times. For a short time there is the potential for an overlap in construction periods of the World War II Memorial and the Jefferson Memorial with the proposed action, which would result in a minor, short-term adverse cumulative effect to park operations because maintenance crews and park interpreters would have to maneuver around construction areas to conduct their jobs.

Conclusion. Alternatives B and C would be expected to create negligible, long-term, beneficial impacts on National Park Service operations as a result of transportation improvements as traffic

flow and safer pedestrian access would occur and park rangers would be able to better their jobs. Minor, long-term, beneficial impacts from security improvements would occur by meeting long-term objectives for security. Visitor services would create a minor, long-term, beneficial impact by enhancing visitor experience. There would be moderate, beneficial cumulative effects to park operations under these alternatives by improving visitor access and services to the Monumental Core. Short-term, cumulative effects would occur from construction because park interpreters and maintenance crews would have to maneuver around construction areas.

Because there would be no major, adverse impacts to park operation resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Lincoln Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. No mitigation measures are recommended.

4.10 SUMMARY OF CUMULATIVE EFFECTS

Following is a summary of cumulative effects associated with each of the alternatives considered in this Revised Environmental Assessment. As discussed in Section 4.4.2, cumulative effects were determined by combining the impacts of the proposed action with other past, present, and reasonable foreseeable future actions. Future projects that may have the potential to add to cumulative effects include security improvements at the Washington Monument and the Jefferson Memorial; construction of the World War II Memorial; and road improvements at the Kennedy Center, Theodore Roosevelt Bridge, the west side of Arlington Memorial Bridge, Constitution Avenue, and Ohio Drive. These road improvement projects were considered in evaluating cumulative effects for the Lincoln Memorial Circle Rehabilitation and Security Project.

4.10.1 ALTERNATIVE A – NO-ACTION ALTERNATIVE

The No-Action Alternative would not directly or indirectly impact floodplains. Therefore this alternative would not contribute to cumulative effects on this resource. Other proposed projects in the Monumental Core would have beneficial impacts to transportation, safety and security, visitor use and experience, and park operations. The No-Action Alternative would have negative impacts on these resources and would therefore not contribute to the beneficial impacts associated with the other proposed projects.

Temporary security measures put in place at the Washington Monument and the various memorials in the Monumental Core have impacted aesthetics and visual resources, historic resources, and cultural landscapes in the past. Proposed security improvements at the Washington Monument and the Jefferson Memorial and construction of the World War II Memorial may impact these resources in the future by adding new elements to the historic designed landscape. Makeshift security measures left in place under the No-Action Alternative would contribute to cumulative effects on aesthetics and visual resources, historic resources, and

cultural landscapes by altering the views and vistas of the Lincoln Memorial and altering the historic appearance of the historic designed landscape.

There would be no short-term cumulative effects under the No-Action Alternative because there would be no construction that would add to cumulative effects of construction activities from other proposed projects.

4.10.2 ALTERNATIVE B – CONSTRUCTION OF RETAINING WALL BEHIND EXISTING SIDEWALK AND INSTALLATION OF BOLLARDS ALONG OUTER RING (PREFERRED ALTERNATIVE) AND ALTERNATIVE C – INSTALLATION OF BOLLARDS BEHIND EXISTING SIDEWALK AND ALONG OUTER RING

Neither Alternative B nor Alternative C would directly or indirectly impact floodplains. Therefore this alternative would not contribute to cumulative effects on this resource.

Future road improvements at Arlington Memorial Bridge, the Theodore Roosevelt Bridge, the Kennedy Center, Constitution Drive, and Ohio Drive, along with transportation improvements proposed under Alternatives B or C, would improve traffic conditions to and around the Monumental Core. These cumulative effects would be moderate, beneficial, and long-term. Proposed security improvements at the Washington Monument and the Jefferson Memorial could result in a reduction in available parking. However, Alternatives B or C would not contribute to the impacts. Enhancements to visitor services areas would not directly or indirectly impact transportation; therefore the proposed changes would not contribute to cumulative effects on this resource.

Temporary security measures put in place at the Lincoln Memorial, the Washington Monument, and the various memorials in the Monumental Core have negatively impacted aesthetics and visual resources, historic resources, and cultural landscapes in the past. Proposed security improvements at the Washington Monument and the Jefferson Memorial, and construction the World War II Memorial may impact these resources in the future by adding new elements to the historic designed landscape and altering the views and vistas of the Monumental Core. When added to these past and reasonably foreseeable future actions, the proposed actions under either Alternative B or Alternative C would add to these cumulative effects by also adding new elements to the historic designed landscape and altering views and vistas. With proper mitigation, the cumulative effects under these alternatives would be minor to moderate, adverse, and long-term, but would not diminish the integrity of the historic resources to the extent that the sites' National Register eligibility is jeopardized.

Security improvements proposed under Alternatives B or C, combined with improvements at the Washington Monument and Jefferson Memorial, would have moderate, long-term, beneficial cumulative effects on visitor safety by reducing the threat of vehicular bombs. Transportation improvements and enhancements to visitor services areas would not affect safety and security and thus would not contribute to cumulative effects.

Planned road improvements and planned security improvements at the Washington Monument and Jefferson Memorial, combined with the planned transportation improvements, security

improvements, and enhancements to visitor services areas under either Alternatives B or C, would have moderate, long-term, beneficial cumulative effects on visitor use and experience and park operations by providing better access to the Monumental Core and better security for visitors. However, these projects, when combined would also have a moderate, long-term adverse impact on visitor experience by altering the views and vistas of the Monumental Core.

There would be no short-term cumulative effects from construction activities because the various projects would occur at different times with two exceptions. For a short time there is the potential for an overlap in construction periods of the World War II Memorial and the Jefferson Memorial with Alternative B or C. During this time, this would result in negligible, short-term, adverse cumulative effects to aesthetics and visual resources, historic resources, cultural landscapes, safety, visitor experience, and park operations. Construction activities associated with the construction of the World War II Memorial and this project would be visible from either site, and access around portions of the memorials would be restricted at times. Construction activities associated with the construction of the Jefferson Memorial security improvements and this project would not diminish the integrity of the historic designed landscape to the extent the sites' National Register eligibility is jeopardized.

4.11 CONSULTATION AND COORDINATION

Scoping is the effort to involve agencies and the general public in determining the scope of issues to be addressed in the environmental document. Among other tasks, scoping determines important issues and eliminates unimportant issues; allocates assignments among the interdisciplinary team members and/or other participating agencies; identifies related projects and associated documents; identifies other permits, surveys, consultations, etc., required by other agencies; and creates a schedule that allows adequate time to prepare and distribute the environmental document for public review and comment before a final decision is made. Scoping includes any interested agency, or any agency with jurisdiction by law or expertise (including the Advisory Council on Historic Preservation, the State Historic Preservation Officer, and Indian Tribes) to obtain early input.

Internal scoping and design analysis studies have been completed that have helped the National Capital Region and the National Capital Parks – Central examine a number of alternatives for construction of a vehicular barrier system at the Lincoln Memorial. Some of these alternatives were retained for further study, while others were dismissed for not meeting the purpose and need of this project.

Numerous planning meetings have been held with the Commission of Fine Arts and the National Capital Planning Commission to solicit their input on the design criteria for this project. The National Park Service formally presented preliminary design concepts for this project to the National Capital Planning Commission and the Fine Arts Commission during scheduled meetings in the summer of 2002, which were open to the public. The public was able to provide comment during these meetings. Public comments were taken into consideration by both Commissions in their review of the design concepts. After review periods outlined in each Commissions' guidelines, both Commissions approved the design concepts for this project.

Meetings have also been held with the DC Historic Preservation Office. Since the approval of the design concepts for this project by the National Capital Planning Commission and the Commission of Fine Arts, the DC Historic Preservation Office has suggested the National Park Service consider an option to the alternatives (Alternative B and C). The Commission of Fine Arts has approved of this option to the alternatives. The National Park Service is still in the process of obtaining approval from the National Capital Planning Commission.

The National Park Service is also in consultation with the DC Historic Preservation Office to execute a Memorandum of Agreement for this project. In the event the Memorandum of Agreement is not signed before a final decision is made for this project on which alternative would be executed, the National Park Service will follow its own internal process so as to make its decision.

This Environmental Assessment was first distributed for public review and comment during November 2002. A public meeting was held during this time to seek input from the interested public. As a result of the National Park Service review of the comments it received from individuals and organizations during that public comment period and from the public meeting, the National Park Service revised this environmental assessment and updated it accordingly. This revised environmental assessment will be made available to the public for its review and any comments received by the National Park Service would be considered prior to making its decision.

4.12 SELECTED FEDERAL LAWS

The following laws and associated regulations provided direction for the design or project alternatives, the analysis of impacts, and the formulation of mitigation/avoidance measures:

National Environmental Policy Act of 1969 (Title 42 U.S. Code Sections 4321 to 4370 [42 USC 4321-470]). The purposes of the National Environmental Policy Act include encouraging “harmony between [humans] and their environment and promote efforts which will prevent or eliminate damage to the environment...and stimulate the health and welfare of[humanity].” The purposes of the National Environmental Policy Act are accomplished by evaluating the effects of Federal actions. The results of these evaluations are presented to the public, Federal agencies, and public officials in document format (e.g., environmental assessments and environmental impact statements) for consideration prior to taking official action or making official decisions. Implementing regulations for the National Environmental Policy Act are contained in Part 1500 to 1515 of Title 40 of the U.S. Code of Federal Regulations (40 CFR 1500-1515).

Endangered Species Act of 1973, as amended (16 USC 1531-1544). The purposes of the Endangered Species Act include providing “a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved.” According to the Endangered Species Act, “all Federal departments and agencies shall seek to conserve endangered species and threatened species: and “[e]ach Federal agency shall...insure that any action authorized, funded, or carried out by such agency...is not likely to jeopardize the continued existence of any endangered species or threatened species.” The U.S. Fish and Wildlife Service (non-marine species) and the National Marine Fisheries Service (marine species, including anadromous fish and marine mammals) administer the Endangered Species

Act. The effects of any agency action that may affect endangered, threatened, or proposed species must be evaluated in consultation with either the U.S. Fish and Wildlife Service or National Marine Fisheries Service, as appropriate. Implementing regulations that describe procedures for interagency cooperation to determine the effects of actions on endangered, threatened, or proposed species are contained in 50 CFR 402. The National Park Service has obtained concurrence from the U.S. Fish and Wildlife Service that the proposed action is not expected to impact Federally listed endangered and threatened species or species of concern.

National Historic Preservation Act of 1966, as amended (16 USC 470 *et sequentia*). Congressional policy set forth in the National Historic Preservation Act includes preserving “the historical and cultural foundations of the Nation” and preserving irreplaceable examples important to our national heritage to maintain “cultural, educational, aesthetic, inspirational, economic, and energy benefits.” The National Historic Preservation Act also established the National Register of Historic Places composed of “districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering, and culture.” Section 106 of the National Historic Preservation Act requires that Federal agencies take into account the effects of their actions on properties eligible for or included in the National Register of Historic Places and coordinate such actions with the State Historic Preservation Office. National Historic Preservation Act also requires Federal agencies, in consultation with the State Historic Preservation Office, to locate, inventory, and nominate all properties that appear to qualify for the National Register of Historic Places, including National Historic Landmarks. Further, it requires Federal agencies to document those properties in the case of an adverse effect and propose alternatives to those actions, in accordance with the National Environmental Policy Act.

5.0 LIST OF PREPARERS

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APPENDIX A

Agency Correspondence and Coordination Letters

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401



September 9, 2002

Mr. Steven E. Pomeroy
Environmental Scientist
Greenhorne & O'Mara, Inc.
9001 Edmonston Road
Greenbelt, Maryland 20770

RE: Proposed Installation of Vehicle Barrier Systems at the Lincoln and Jefferson Memorials, Washington, District of Columbia

Dear Mr. Pomeroy:

This responds to your letter, received August 12, 2002, requesting information on the presence of species which are federally listed or proposed for listing as endangered or threatened in the above referenced project area. We have reviewed the information you enclosed and are providing comments in accordance with Section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Except for occasional transient individuals, no proposed or federally listed endangered or threatened species are known to exist within the project impact area. Therefore, no Biological Assessment or further Section 7 consultation with the U.S. Fish and Wildlife Service is required. Should project plans change, or should additional information on the distribution of listed or proposed species become available, this determination may be reconsidered.

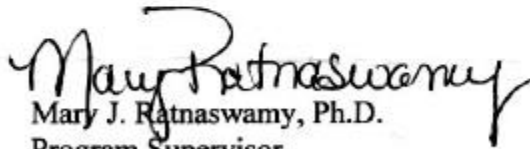
This response relates only to federally protected threatened or endangered species under our jurisdiction. Limited information is currently available regarding the distribution of other rare species in the District of Columbia. However, the Nature Conservancy and National Park Service (NPS) have initiated an inventory of rare species within the District. For further information on such rare species, you should contact Ellen Gray of the DC Natural Heritage Program at (202) 342-1443 ext. 223.

An additional concern of the Service is wetlands protection. Federal and state partners of the Chesapeake Bay Program have adopted an interim goal of no overall net loss of the Basin's remaining wetlands, and the long term goal of increasing the quality and quantity of the Basin's wetlands resource base. Because of this policy and the functions and values wetlands perform, the Service recommends avoiding wetland impacts. All wetlands within the project area should

be identified, and if alterations of wetlands is proposed, the U.S. Army Corps of Engineers, Baltimore District, should be contacted for permit requirements. They can be reached at (410) 962-3670.

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interests in these resources. If you have any questions or need further assistance, please contact Charisa Morris at 410-573-4550.

Sincerely,


Mary J. Ratnaswamy, Ph.D.
Program Supervisor
Threatened and Endangered Species



United States Department of the Interior

NATIONAL PARK SERVICE
Center for Urban Ecology
Natural Resources and Science
4598 MacArthur Blvd., N.W.
Washington, D.C. 20007

N16 (NCR-NRS)

August 21, 2002

Steven E. Pomeroy, Environmental Scientist
Greenhorne & O'Mara, Inc.
9001 Edmonston Road
Greenbelt, MD 20770

Dear Mr. Pomeroy:

We have reviewed your letter and map of August 7 requesting information regarding federally listed endangered and threatened species as well as rare species in and near the Lincoln and Jefferson Memorials in Washington, DC. We have no records of rare, threatened, and endangered species in either location. In addition, we recommend that you contact the Fish and Wildlife Service, which has Federal oversight for rare, threatened, and endangered species.

If you have any questions, or need further assistance, please contact me at 202-342-1443 Ext. 223.

Sincerely,

A handwritten signature in black ink that reads "Ellen van Snik Gray". The signature is written in a cursive style.

Dr. Ellen van Snik Gray
Interim Director, DC Natural Heritage Program

Enclosure

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IN REPLY REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE

National Capital Region
1100 Ohio Drive, S.W.
Washington, D.C. 20242

L3215(NCR-LRP)

JUL 1 2002

Mr. Gregory McCarthy
Historic Preservation Officer
District of Columbia Office of Planning
801 North Capitol Street, NE., 3rd Floor
Washington, D.C. 20002

Dear Mr. McCarthy:

Lincoln Memorial Circle was closed to vehicular traffic in the early 1970s in order to eliminate pedestrian-vehicular conflict in at one of our most heavily visited memorials. More recently, temporary security measures to protect the Lincoln Memorial, including planters, jersey barriers and fencing, have been installed. The Lincoln Circle Rehabilitation and Security Improvement project would rehabilitate the existing traffic lanes, create a pedestrian plaza reminiscent of the historic circle east of the Memorial and incorporate a vehicular barrier system composed of low walls and bollards. Under separate cover, we are transmitting to you the necessary materials for review by your office and the District of Columbia Historic Preservation Review Board.

The project includes approximately 6,800 linear feet of roadways. The rehabilitation work will include replacement of deteriorated and/or substandard components and installation of new components. Items to be removed and replaced are street pavement, curbs, sidewalks, storm drainage systems, drinking fountains, and streetlights. New components include traffic signals, realignment of some traffic lanes, and a perimeter security system.

A primary feature of this project is the new pedestrian plaza that will be located in the eastern one quarter of Lincoln Circle which will highlight and facilitate the increased pedestrian use of this area for public gatherings of national interest. This plan permanently removes vehicular traffic in this section of the circle. The plaza will be concrete with a rectilinear scoring pattern. It will follow the historic circle roadway, complete with a curb line, but the curb will be flush and the roadbed raised to provide a plaza. The plaza will re-establish the historic footprint of the easternmost area of Lincoln Circle.

Concrete pads will be installed adjacent to the west curbs of both Henry Bacon and Daniel French Drives to provide access points for public transportation systems. French Drive will also accommodate handicapped parking spaces. Future concession kiosks are planned for the

Mr. Gregory McCarthy

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parkland adjoining both French and Bacon Drives. These have been indicated on the site plan as future projects.

All of the design features are being developed in accordance with the Streetscape Manual and the Cultural Landscape Report for the Lincoln Memorial Grounds as well as with the assistance of the National Capital Planning Commission Security Task Force and its design consultants. In order to maintain the existing trees, one of the character defining features of the Lincoln Memorial Grounds, construction measures will be included to minimize any disturbance to roots, limbs, and branches.

To improve pedestrian safety, traffic flow, and Tourmobile access, there will be changes along the west side of Lincoln Circle and at its intersections with 23rd Street and Bacon Drive, north of the Memorial. The design concept provides three lanes on the eastbound inner loop of the Lincoln Circle, consisting of two 12-foot wide through lanes, and a dedicated left turn lane. A dedicated lane for Tourmobile will added from 23rd Street south of the Memorial to the west side of the Circle. At that point, other eastbound traffic can merge into that lane as well. On the north side of the Memorial, 23rd Street would also be modified to accommodate four 12-foot wide lanes (2 northbound and 2 southbound) and a wider median. This is consistent with the new intersection geometry and anticipated traffic levels. In addition, new traffic signals with a pedestrian feature in their sequence will be installed at both intersections.

This project incorporates a vehicular barrier system that includes a low retaining wall encircling the Lincoln Memorial on the south, west and north and bollards on the east and along the Approachway Steps. The wall will be 30 inches in height measured from the adjacent edge of the inner sidewalk to the top of the coping stone. The face of the wall will be offset 20 inches from the edge of the inner sidewalk. At the ground level there will be a stone strip 6 inches in height that covers the area between the edge of the sidewalk and the face of the wall. There will also be a 6-inch coping stone approximately 18 inches wide. This permits an 18-inch high stone panel between the coping stone and the 6-inch stone strip, that will be Milford Pink Granite quarried in Massachusetts. In order to provide for secure emergency access to the circular terrace, a gate system will be incorporated into the wall on the west side of the Memorial. The access gate will be 12 feet wide and will either be a folding wall, constructed to match the proposed retaining wall, or if this is not feasible, two retractable bollards will be installed.

A line of bollards will cross the pedestrian plaza at the north and south termination points of the security wall, follow the outer perimeter of the pedestrian plaza until reaching the first set of steps that lead to the Reflecting Pool. At the point the bollards will turn and follow the steps to within approximately 20 feet of the Reflecting Pool, then turn and extend parallel to the end of the Reflecting Pool. Two additional wall segments would be constructed between the main stairs to the Reflecting Pool and the interior stairs flanking both sides. These walls each measure approximately 50 feet wide. This scheme will complete the security perimeter, but allow official and emergency vehicles to pass north/south along the west end of the Reflecting Pool. The design of the bollards will be compatible with the Lincoln Memorial.

We have applied the criteria of effect of the Advisory Council on Historic Preservation and have determined that the Lincoln Memorial Circle rehabilitation and associated security improvements

Mr. Gregory McCarthy

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would potentially have an adverse effect on the National Register qualities of the Lincoln Memorial. The construction of the wall and bollards introduces a new element into the historic landscape, which could be mitigated through compatible new design and materials. The loss of the historic roadway to the east of the Memorial could be mitigated by the evocation of the historic roadway through new materials, including the curb line, at the historic location. As the design development and consultation continue, other potential adverse effects may be identified.

We hope that you will concur in our finding of potential adverse effect and work with us and the Advisory Council on Historic Preservation in developing a Memorandum of Agreement to provide for consultation in order to avoid adverse effects on this historic resource. For further information, please contact me or Steve Lorenzetti, Chief, Division of Resource Management, National Capital Parks – Central. Mr. Lorenzetti can be reached at (202) 485-9680.

Sincerely,



Acting
Regional Director, National Capital Region

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APPENDIX B

Environmental Screening Form

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Environmental Screening Form

<p>Project Description/Location:</p> <p>The Lincoln Memorial Circle Rehabilitation and Security Project, Washington, DC</p>

	Yes	No	Data Needed to Determine
Mandatory Criteria (A-N). Would the proposal, if implemented:			
A. Have material adverse effects on public health or safety?		X	
B. Have adverse effects on such unique characteristics as historic or cultural resources; park, recreation, or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands; floodplains; or ecologically significant or critical areas, including those listed on the National Register of Natural Landmarks?			Are in discussions with the SHPO
C. Have highly controversial environmental effects?		X	
D. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?		X	
E. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?		X	
F. Be directly related to other actions with individually insignificant, but cumulatively significant, environmental effects?		X	
G. Have adverse effects on properties listed or eligible for listing on the National Register of Historic Places?			X
H. Have adverse effects on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have adverse effects on designated Critical Habitat for these species?		X	
I. Require compliance with Executive Order 11988 (Floodplain Management), Executive Order 11990 (Protection of Wetlands), or the Fish and Wildlife Coordination Act?	X		

	Yes	No	Data Needed to Determine
J. Threaten to violate a federal, state, local, or tribal law or requirement imposed for the protection of the environment?		X	
K. Involve unresolved conflicts concerning alternative uses of available resources (NEPA sec. 102(2)(E)).		X	
L. Have a disproportionate, significant adverse effect on low income or minority populations (EO 12898).		X	
M. Restrict access to and ceremonial use of Indian sacred sites by Indian religious practitioners or adversely affect the physical integrity of such sacred sites (EO 130007)		X	
N. Contribute to the introduction, continued existence, or spread of federally listed noxious weeds (Federal Noxious Weed Control Act).		X	
O. Contribute to the introduction, continued existence, or spread of non-native invasive species or actions that may promote the introduction, growth or expansion of the range of non-native invasive species (EO 13112).		X	
P. Require a permit from a federal, state, or local agency to proceed, unless the agency from which the permit is required agrees that a CE is appropriate?	X		
Q. Have the potential for significant impact as indicated by a federal, state, or local agency or Indian tribe?		X	
R. Have the potential to be controversial because of disagreement over possible environmental effects.		X	
S. Have the potential to violate the NPS Organic Act by impairing park resources or values?		X	
Tailor the following to meet individual park unit/project needs. Are any measurable impacts possible in the following categories relating to physical, natural, or cultural resources?			
A. Geological resources—soils, bedrock, streambeds, etc.		X	
B. From geohazards		X	
C. Air quality, traffic, or from noise	X		
D. Water quality or quantity	X		
E. Streamflow characteristics		X	
F. Marine or estuarine resources		X	
G. Floodplains or wetlands	X		

	Yes	No	Data Needed to Determine
H. Land use, including occupancy, income, values, ownership, type of use		X	
I. Rare or unusual vegetation—old growth timber, riparian, alpine, etc.		X	
J. Species of special concern (plant or animal; state or federal listed or proposed for listing) or their habitat		X	
K. Unique ecosystems, biosphere reserves, World Heritage sites		X	
L. Unique or important wildlife or wildlife habitat		X	
M. Unique or important fish or fish habitat		X	
N. Introduce or promote non-native species (plant or animal)		X	
O. Recreation resources, including supply, demand, visitation, activities, etc.	X		
P. Visitor experience, aesthetic resources	X		
Q. Cultural resources, cultural landscape, sacred sites, etc.			X
R. Socioeconomics, including employment, occupation, income changes, tax base, infrastructure, etc.		X	
S. Minority and low-income populations, ethnography, size, migration patterns, etc.		X	
T. Energy resources		X	
U. Other agency or tribal land use plans or policies		X	
V. Resource, including energy, conservation potential		X	
W. Urban quality, gateway communities, etc.	X		
X. Long-term management of resources or land/resource productivity		X	
Y. Other important environmental resources		X	

Please answer the following questions.

- 1. Are the personnel preparing this form familiar with the site, and/or has a site visit been conducted? (Attach additional pages noting when site visit took place, staff attending, etc.)

The person preparing this form is the chief of the Resource Management division of the park. He visits the site at least once a week and is familiar with past historical natural and cultural research on the site.

- 2. Has consultation with all affected agencies or tribes been completed? (Attach additional pages detailing the consultation, including the name, date, and summary of comments from other agency or tribal contacts.)

The National Park Service is the only affected agency and there are no recognized tribes in this area.



Instructions

When you have completed a site visit (or if staff are familiar with the specifics of the site) and consultation with affected agencies and/or tribes, and if the answers in the checklist above are all "no," you may proceed to the categorical exclusion form (appendix 2) if the action is described in section 3-4 of NPS-12. If any answers in the checklist are "yes" or "data needed to determine," or if the action is not described in section 3-4, prepare an environmental assessment or environmental impact statement.

Attach maps, notes of site visits, agency consultation, relevant data or reports, the categorical exclusion form or other relevant information to this form to begin the statutory/administrative record file.

Signatory

In signing this form, you are saying you have completed a site visit or are familiar with the specifics of the site, that you have consulted with affected agencies and tribes, and that the answers to the questions posed in the checklist are, to the best of your knowledge, correct.

 <hr/> Interdisciplinary Team Leader	<u>October 8, 2002</u> Date
 <hr/> Technical specialist/field of expertise	<u>Resource Manager</u> Technical specialist/field of expertise