

National Park Service  
U.S. Department of the Interior

National Mall & Memorial Parks  
Washington, D.C.



# **Environmental Assessment**

## Washington, D.C., Visitor Transportation Study for the National Mall and Surrounding Park Areas

November 2006



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**Environmental Assessment**  
**Washington, D.C., Visitor Transportation Study**  
**for the National Mall and Surrounding Park Areas**  
**National Mall & Memorial Parks**  
**Washington, D.C.**

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**Abstract:** The National Park Service provides educational / interpretive transportation services for visitors in the area of the National Mall and surrounding park areas in Washington, D.C., including Arlington National Cemetery. Current visitor transportation services are provided through an independent third-party contract that will expire in December 2007. The purpose of this project is to plan for a convenient visitor transportation service that will protect national park resources and that will ensure high-quality visitor experiences by offering a sustainable, educational, integrated, and affordable transportation network for visitors in the D.C. area. This study responds to the need to analyze the environmental impacts and gain public input on the conceptual range of services that may be offered in the future for visitor transportation.

**Public Comment:** This environmental assessment will be on review for 45 days. Comments may be submitted by mail to

Transportation Planner  
National Mall & Memorial Parks  
900 Ohio Dr. SW  
Washington DC 20024

Comments may also be submitted through the Internet at <[www.nps.gov/nama](http://www.nps.gov/nama)>.

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# SUMMARY

The Secretary of the Interior, through the Director of the National Park Service (NPS), has the exclusive right to provide interpretive transportation services for National Mall & Memorial Parks and other park sites in the metropolitan Washington, D.C., area. The purpose of this project is to plan for a convenient, well-connected interpretive visitor transportation service to national park sites in the D.C. area. This service will protect national park resources and ensure high-quality visitor experiences by offering a sustainable, educational, integrated, and affordable transportation network for visitors. The primary need for the planning study is to analyze the environmental impacts and to gain public input on the conceptual range of services that may be offered in the future for visitor transportation in the visitor core area\* and Arlington National Cemetery. Current services are provided through an independent third-party contract that will expire in December 2007.

## Alternatives

The National Park Service has identified and analyzed five alternatives to provide an interpretive visitor transportation service in the Washington, D.C., metropolitan area. Various transportation service characteristics, including routes and stops, have been identified and analyzed. In addition, policy changes for the recreational use of personal transportation vehicles (Segway® Human Transporters [HTs] and electric scooters)\*\* within the National Mall & Memorial Parks have been considered.

- Alternative 1 is the no-action alternative, and it would continue current transportation service. In-depth educational / interpretive opportunities would continue to be offered.
- Alternative 2, the preferred alternative, proposes an integrated, easy-to-use system with basic orientation and a choice of additional educational / interpretive services. Visitor transportation services would be expanded in the visitor core and Arlington National Cemetery. Free parking provided by the National Park Service in the vicinity of the National Mall would be changed to metered parking, and routes would be designated for the recreational use of Segway® HTs and electric scooters.
- Alternative 3 proposes a new ride-and-learn visitor bus transportation service that would be focused on providing a sightseeing and in-depth educational / interpretive experience, rather than on convenient transit service.
- Alternative 4 proposes a coordinated system of easy-to-use bus transit opportunities designed to maximize views while conveniently meeting needs for frequent transportation between visitor sites. A choice of educational / interpretive services would be offered. Parking would be eliminated on Madison Drive NW and Jefferson Drive SW, which would be closed to most private vehicles. The recreational use of Segway® HTs and electric scooters would be allowed on all park multi-use trails.

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\* The visitor core consists of the National Mall, the Smithsonian Institution and National Gallery museums, multiple memorials, and the White House.

\*\* A Segway® HT is a two-wheeled, self-balancing, electric-powered vehicle operated from a standing position. The Segway® HT can be considered to have both pedestrian and vehicle characteristics. It is often

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evaluated as part of a larger range of vehicles, such as bicycles, electric scooters, in-line skates, and wheelchairs (FHWA 2005).

For the purposes of this plan, an electric scooter is a three- or four-wheeled electric-powered vehicle operated from a sitting position.

- Alternative 5 incorporates the D.C. Downtown Circulator, with frequent bus service to meet the transportation needs of visitors, local residents, and workers in the central business district. No educational / interpretive programs would be offered.

Due to the number of factors that could influence fares, actual fares have not been determined for the alternatives.

## Environmental Impacts

Impacts would be adverse and beneficial, and they would range from short to long term in duration and from negligible to moderate in intensity. Environmental consequences are analyzed for the following topics:

- *Transportation* — The transportation service network, traffic operations, recreational access for Segway® HTs and electric scooters, and parking conditions were analyzed. Minor to moderate, long-term, beneficial impacts would result from improving transportation service in the visitor core area, emphasizing regional transit connections, allowing recreational Segway® HT and electric scooter use under Alternatives 2 and 4, and converting free parking on the National Mall to metered parking under Alternative 2. Negligible to moderate, long-term, adverse impacts would result under all alternatives from removing on-street parking at new transit stops and under Alternative 4 along Madison Drive NW and Jefferson Drive SW. There would be no additional impact under Alternatives 1, 3, 4, and 5 from continuing free parking around the National Mall, but the policy would be inconsistent with regional goals to encourage greater transit use and reduce congestion.
- *Visitor and user experience* — Visitor and user convenience, visitor access to destinations, educational / interpretive approach, and ridership were analyzed. All alternatives would have negligible to minor, long-term, beneficial impacts

from enhancing visitor and user convenience with better wayfinding programs, new transit vehicles, and upgraded transit stop facilities. Impacts from providing convenient access to top destinations in the Washington metropolitan area and from providing various options for educational / interpretive programs would be negligible to moderate, long term, and beneficial under Alternatives 2–5. An in-depth educational service with limited choice of interpretive programs (Alternatives 1 and 3) or no program at all (Alternative 5) would result in negligible to moderate, long-term, adverse impacts.

- *Public health, safety, and security* — Accessibility for persons with disabilities, security features, and potential conflicts between pedestrians and recreational users of Segway® HTs and electric scooters were analyzed.\* All alternatives would have negligible to moderate, long-term, beneficial impacts from providing fully accessible transit stops and transit vehicles equipped with security features, as well as the service provider undertaking safety and security programs. Increased recreational use by Segway® HTs and electric scooters under Alternatives 2 and 4 could increase conflicts with pedestrians, with negligible to minor, long-term, adverse impacts.
- *Park operations and visitor transportation service operations* — Differences between alternatives in staffing and the number of vehicles and transit stops would be a cost of doing business for any service provider. There would be no additional impacts under any alternative to NPS contract

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\* Currently, both Segway® HTs and electric scooters are permitted throughout the National Mall & Memorial Parks for use as a mobility aid by persons with a disability. Recreational use of Segway® HTs and scooters is otherwise restricted to specific north-south sidewalks crossing the National Mall (see the “Legislation and Policy Requirements” section of this document for more detail).

management or law enforcement and security.

- *Socioeconomic environment* — Impacts on the local and regional economies from increased employment opportunities and potential visitor and user spending in other sectors of the local and regional economies would be negligible, long term, and beneficial.

There would be no measurable impacts on cultural or natural resources, including air quality, soundscapes, historic structures, or the visual character of the National Mall and Arlington National Cemetery. Consequently, these impact topics were not further analyzed.

There would be no major impacts under any alternative, and no park resources or values would be impaired. Alternative 2 has been determined to be the environmentally preferred alternative because it would best meet the goals of the National Environmental Policy Act, as stated in section 101(b).

Following the close of the 45-day public comment period, all public comments will be reviewed and analyzed prior to the release of a decision document. The National Park Service will make appropriate changes to the environmental assessment based on comments received.

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## **ACRONYMS AND ABBREVIATIONS**

ADAAG	Americans with Disabilities Act Accessibility Guidelines
ARCO	Arlington County, Virginia
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DBID	Downtown Business Improvement District
DDOT	D.C. Department of Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GWMP	George Washington Memorial Parkway
HT	Human Transporter (as in Segway® Human Transporter)
MDW	U.S. Army Military District of Washington
MWCOG	Metropolitan Washington Council of Governments
NCPC	National Capital Planning Commission
NEPA	National Environmental Policy Act
NAMA	National Mall & Memorial Parks
NPS	National Park Service
TRB	Transportation Research Board
USC	United States Code
US DOD	U.S. Department of Defense
US DOT	U.S. Department of Transportation
US EPA	U.S. Environmental Protection Agency
WMATA	Washington Metropolitan Area Transit Authority
WMATC	Washington Metropolitan Area Transit Commission

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**PROJECT PURPOSE,  
NEED, AND CONTEXT**

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# INTRODUCTION

The Secretary of the Interior, through the Director of the National Park Service (NPS), has the exclusive right to provide interpretive transportation services for National Mall & Memorial Parks and other park sites in the metropolitan Washington, D.C., area. The service area explored in this environmental assessment includes the visitor core (consisting of the National Mall, the Smithsonian Institution and National Gallery museums, multiple memorials, and the White House), Arlington National Cemetery, and other major visitor destinations throughout the metropolitan area (see the “Project Vicinity Area” map).

Sites with the highest visitation in the visitor core area include the Washington Monument, the Vietnam Veterans Memorial, the Lincoln Memorial, the World War II Memorial, the U.S. Capitol, and the National Air and Space Museum (see the “Visitor Core: Top Visitor Destinations” map). Other park areas include the George Washington Memorial Parkway, Rock Creek Park, Chesapeake & Ohio Canal National Historical Park, Anacostia Park, Kenilworth Aquatic Gardens, Frederick Douglass National Historic Site, and Mary McLeod Bethune Council House National Historic Site.

## **PURPOSE**

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The purpose of this project is to plan for a convenient, well-connected interpretive visitor transportation service to national park sites in the Washington, D.C., area. This service will protect national park resources and ensure a high-quality visitor experience by offering a sustainable, educational, integrated, and affordable transportation network for visitors in the D.C. area. The specific goals of the project are to provide:

- a visually identifiable, high-quality transportation system that meets NPS policy goals and fits within the historic context of our nation’s capital

- a convenient, sustainable transportation system that provides access to and among existing and future NPS sites and other visitor destinations in the nation’s capital and that meets mobility needs and improves visitor enjoyment
- visitor orientation and educational interpretive services that promote an awareness and understanding of the significance of our nation’s capital and its memorials, landmarks, and rich cultural heritage
- a transportation system that supplements, supports, and is integrated with the existing urban transportation network and that maximizes direct and convenient connections to mass transit (Metrorail and Metrobus) and other transportation systems and services (including other commercial, private, and public service providers, as well as parking facilities)
- a model transportation solution that creatively explores all opportunities to work or partner with governmental agencies and public and private transit service providers to fulfill the mission of the National Park Service
- an easy-to-use transportation ticketing and payment system that is affordable, flexible, and coordinated with other transportation providers

## **NEED**

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The primary need for the planning study is to analyze the environmental impacts and to gain public input on the conceptual range of services that may be offered in the future for visitor transportation in the visitor core area and Arlington National Cemetery. Current services are provided through an independent third-party contract that will expire in December 2007.

The need for interpretive visitor transportation services includes the following:

- Over 26 million people annually visit the National Mall & Memorial Parks and other destinations in metropolitan Washington. Each day visitors typically travel to multiple destinations and use a range of transportation modes and services because many sites are too far apart for visitors to walk comfortably and conveniently. Transit systems are not consistently integrated or linked, and there is a gap in public transit to top destinations within the National Mall and East Potomac Park areas (see the “Visitor Core: Primary Public Transit Service” map). Visitor travel options, access, and connections between transportation systems need to be improved.
- In the next two decades the Metropolitan Washington region is expected to grow by 1.6 million people and 1.2 million jobs (Metropolitan Washington Council of Governments [MWCOCG] 2006). This growth will lead to continuing congestion on the region’s transportation infrastructure. Visitor transportation planning needs to take this growth into account.
- Parking is scarce in the District, and it is difficult for visitors to find parking close to top destinations in the visitor core. According to the *Mayor’s Parking Task-force Report*, approximately 400,000 on- and off-street parking spaces are available in the District of Columbia (D.C. Department of Transportation [DDOT] 2003c). These spaces are used by an estimated 197,000 personal vehicles that are registered in the District, and approximately 200,000 vehicles that enter the District during the morning peak. Regional parking management policies support transit incentives and the use of alternative modes of transportation (NCPC 2004a).
- The introduction of personal transportation vehicles for recreational use (Segway® Human Transporters [HTs] and electric

scooters\*) is growing in Washington, D.C., raising new questions about alternative modes of transportation. There is a need to address the appropriateness of such recreational use in park settings, growing demand, and safety concerns for all users, including bicyclists and pedestrians.

- Any NPS interpretive transportation service needs to be coordinated with long-term planning goals for Washington, D.C., which include:
  - reducing vehicle congestion
  - improving air quality
  - providing visitor parking facilities outside the primary visitor destination areas
  - increasing visitor use of transit instead of private vehicles

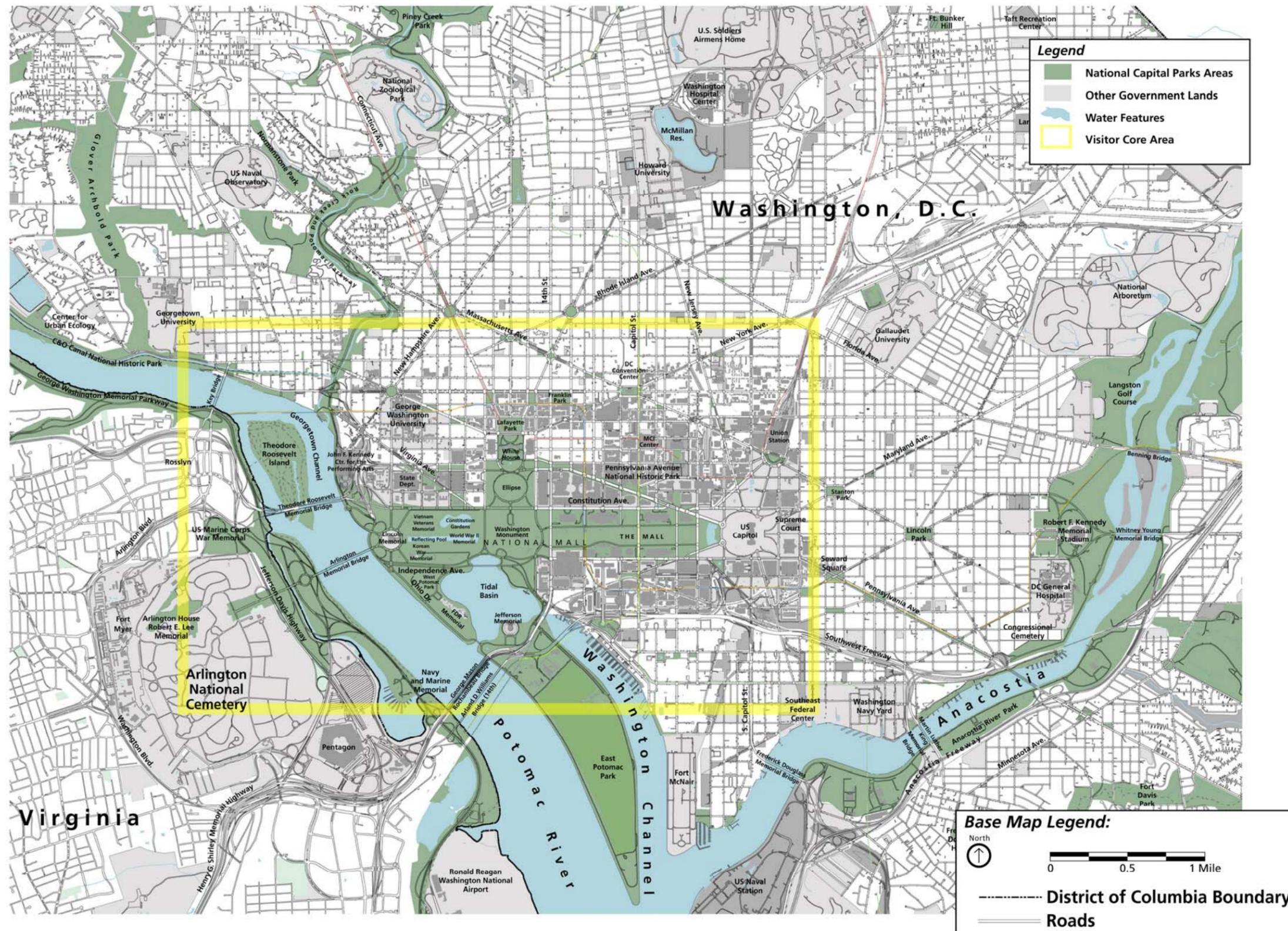
This environmental assessment presents five alternatives for an interpretive visitor transportation system and analyzes the potential environmental impacts that would result. This document has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) and the implementing regulations of the Council on Environmental Quality (CEQ), the National Historic Preservation Act of 1966, as amended, and NPS *Director’s Order #12: Conservation Planning, Environmental Impact Analysis, and Decision-making* and its accompanying handbook (NPS 2001).

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\* A Segway® HT is a two-wheeled, self-balancing, electric-powered vehicle operated from a standing position. The Segway® HT can be considered to have both pedestrian and vehicle characteristics. It is often evaluated as part of a larger range of vehicles, such as bicycles, electric scooters, in-line skates, and wheelchairs (FHWA 2005).

For the purposes of this plan, an electric scooter is a three- or four-wheeled electric-powered vehicle operated from a sitting position.

Currently, both Segway® HTs and electric scooters are permitted throughout the National Mall & Memorial Parks for use as a mobility aid by persons with a disability. Recreational use of Segway® HTs and scooters is otherwise restricted to specific north-south sidewalks crossing the National Mall (see the “Legislation and Policy Requirements” section of this document for more detail).

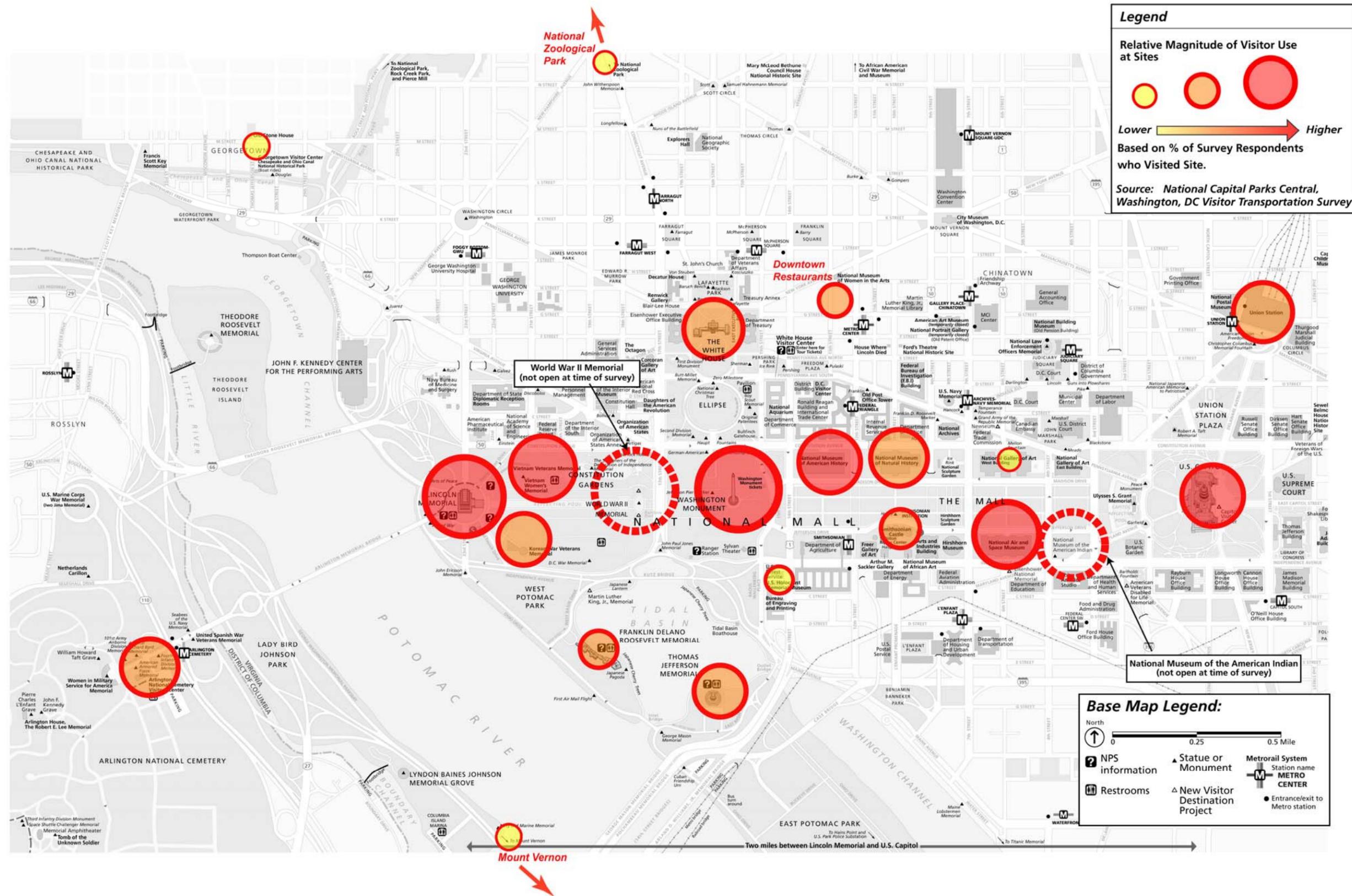


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# Visitor Core: Top Visitor Destinations

National Mall & Memorial Parks

June 2006 • 802/2008

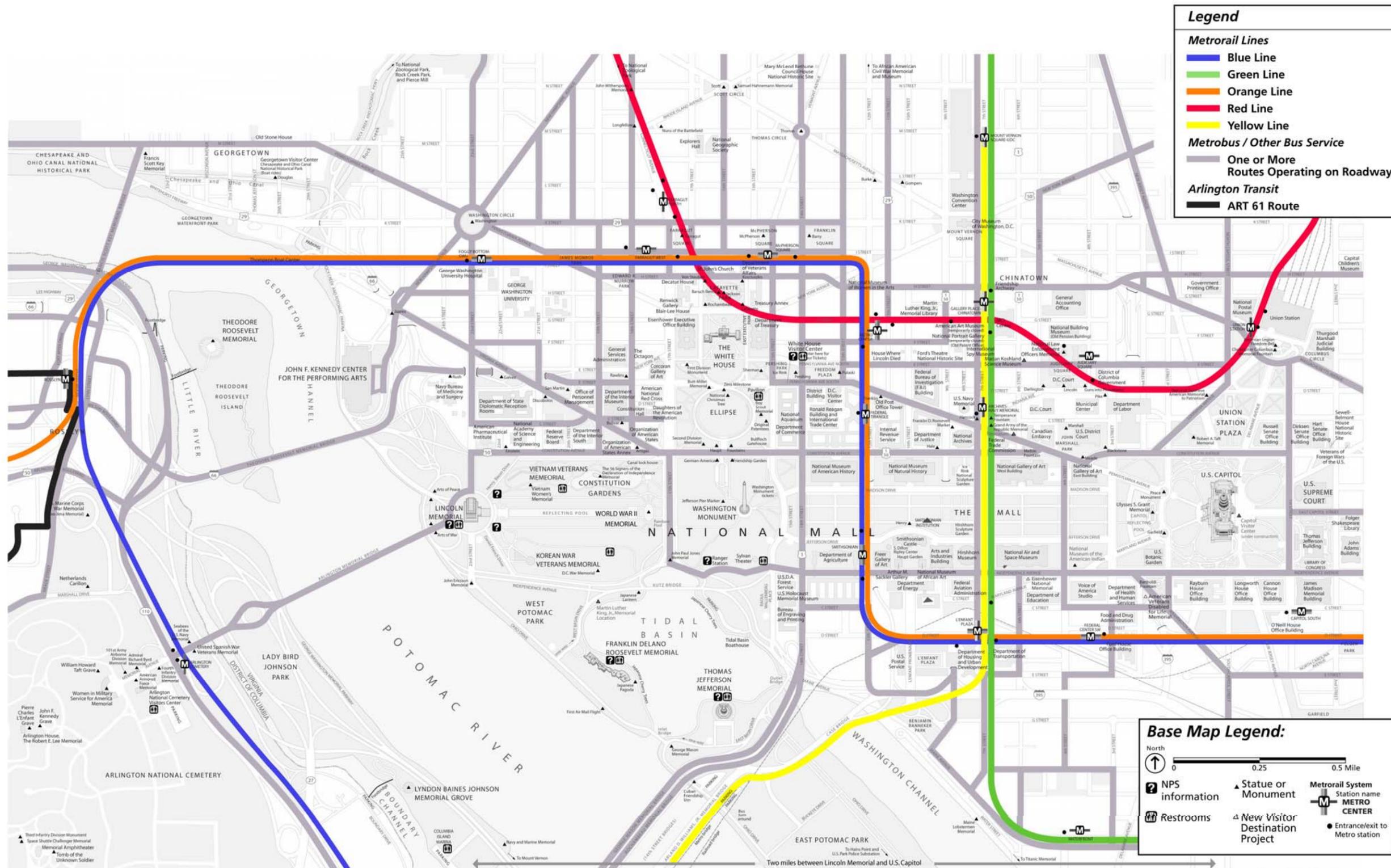


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# Visitor Core: Primary Public Transit Service

National Mall & Memorial Parks

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**Legend**

**Metrorail Lines**

- █ Blue Line
- █ Green Line
- █ Orange Line
- █ Red Line
- █ Yellow Line

**Metrobus / Other Bus Service**

- █ One or More Routes Operating on Roadway

**Arlington Transit**

- █ ART 61 Route

**Base Map Legend:**

North ↑

0 0.25 0.5 Mile

- ? NPS information
- R Restrooms
- ▲ Statue or Monument
- ▲ New Visitor Destination Project
- M Metrorail System Station name METRO CENTER
- Entrance/exit to Metro station

Source: Washington Metropolitan Area Transit Authority

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# LEGISLATION AND POLICY REQUIREMENTS

## **AUTHORITY TO PROVIDE INTERPRETIVE TRANSPORTATION SERVICES ON THE NATIONAL MALL**

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The Secretary of the Interior, through the Director of the National Park Service, is responsible for the operation of our national parks, which includes providing for their public enjoyment. To meet this responsibility, in the late 1960s the National Park Service contracted with Universal Interpretive Shuttle Corporation to conduct guided tours of the National Mall as an NPS concessioner. The Washington Metropolitan Area Transit Commission (WMATC) and others subsequently sought to bar the NPS concessioner from conducting tours of the Mall without WMATC approval. The NPS concessioner and the United States contended that the Secretary of the Interior's authority over national park lands, particularly his grant of "exclusive charge and control" over the Mall dating from 1898, permitted him to contract for the concessioner's service without interference.

The United States Supreme Court held that the Secretary's exclusive authority to contract for services on the Mall was undiminished by the compact creating WMATC or otherwise (*Universal Interpretive Shuttle Corp. v. Washington Metropolitan Area Transit Commission*; 393 U.S. 186, 188 (1968)). In reaching this conclusion, the court stated as follows:

The Mall is, and was intended to be, an expansive, open sanctuary in the midst of a metropolis; a spot suitable for Americans to visit to examine the historical artifacts of their country and to reflect on monuments to the men and events of its history. The Secretary has long had exclusive control of the Mall and ample power to develop it for these purposes. We hold that the WMATC has not been empowered to impose its own regulatory requirements on the

same subject matter (393 U.S. 186, 193–94).

The court also noted that the Secretary had "substantial power over the Mall," and that, as the parties to *Universal Interpretive Shuttle* agreed, the Secretary was

free to enter into the [concession] contract in question[,] . . . to exclude traffic from the Mall altogether, or selectively to exclude from the Mall any carrier licensed by the WMATC or following WMATC instructions. Moreover, . . . the Secretary could operate the tour service himself without need to obtain permission from anyone (393 U.S. 186, 189).

These considerations continue to be relevant to current NPS planning efforts, and the Secretary of the Interior remains responsible for future interpretive visitor transportation services on national parklands. The National Park Service strives to meet this responsibility in conjunction with all area visitor and transportation agencies to best serve all visitors to our nation's capital.

## **NPS TRANSPORTATION POLICY**

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The *NPS Management Policies 2006* state that the National Park Service "will, where appropriate, emphasize and encourage alternative transportation systems, which may include a mix of buses, trains, ferries, trams, and — preferably — nonmotorized modes of access to and moving within parks. In general, the preferred modes of transportation will be those that contribute to maximum visitor enjoyment of, and minimum adverse impacts on, park resources and values" (NPS 2006b, sec. 9.2). The policies further state that the National Park Service will explore transportation systems if a project:

- is appropriate and necessary to meet park management needs or to provide for visitor use and enjoyment;

- is designed with extreme care and sensitivity to the landscape through which it passes;
- will not cause unacceptable impacts on natural and cultural resources and will minimize or mitigate those impacts that cannot be avoided;
- will reduce traffic congestion, noise, air pollution, and adverse effects on park resources and values;
- will not cause use in the areas it serves to exceed the areas' visitor carrying capacities;
- will incorporate the principles of energy conservation and sustainability;
- is able to demonstrate financial and operational sustainability;
- will incorporate universal design principles to provide for accessibility for all people, including those with disabilities;
- will take maximum advantage of interpretive opportunities and scenic values;
- will not violate federal, state, or local air pollution control plans or regulations;
- is based on a comprehensive and multi-disciplinary approach that is fully consistent with the park's general management plan and asset management plan;
- will enhance the visitor experience by offering new or improved interpretive or recreational opportunities, by simplifying travel within the park, or by making it easier or safer to see park features.

The *Management Policies 2006* also state in section 9.2 the following:

Early NPS participation in transportation studies and planning processes is crucial to the long-term strategy of working closely with other federal agencies; tribal, state and local governments; regional planning bodies; citizen groups; and others to enhance partnering and funding opportunities. The Service will participate in all transportation planning forums that may result in links to parks or impacts on park resources. Working

with federal, tribal, state, and local agencies on transportation issues, the Service will seek reasonable access to parks and connections to external transportation systems.

## **MULTIMODAL ACCESS**

The most popular way to get around the study area is by walking. Visitors also use bicycles and other nonmotorized wheeled conveyances, such as in-line skates. Newer modes of personal transportation are motorized and include Segway® HTs and electric scooters.

Segway® HTs and electric scooters meet the NPS definition of a motor vehicle, which is "every vehicle that is self-propelled and every vehicle that is propelled by electric power, but not operated on rails or upon water, except a snowmobile and a motorized wheelchair" (36 CFR 1.4). This would require that the public use of these vehicles be restricted to park roadways. However, as an interim policy the National Mall & Memorial Parks has limited recreational use of Segway® HTs only to specific north-south sidewalks crossing the National Mall, specifically, sidewalks adjacent to streets managed by the District of Columbia (3rd, 4th, 7th, and 14th streets NW/SW).

The use of Segway® HTs or electric scooters by persons with a disability is permitted on all park roads, sidewalks, and trails and within all park facilities, including memorials and the Washington Monument. All other use of personal transportation within this document is referred to as "recreational use." Consequently, a new park policy is required to allow the recreational use of Segway® HTs or electric scooters on park sidewalks and multi-use trails rather than just on park roads.

Within the District of Columbia, however, Segway® HTs do not meet the definition of a motor vehicle (ordinance A14-0497). Therefore, regardless of the purpose of use, they are allowed to operate on roadways or sidewalks (similar to bicycles) within the District, but under certain operational restrictions in the

downtown area. Due to high pedestrian activity in the downtown area, Segway® HTs are restricted to roadways only; however, this restriction is minimally enforced.

## **AIR QUALITY**

The National Park Service has a responsibility to protect air quality under both the 1916 Organic Act (16 USC 1-4) and the Clean Air Act (42 USC 85). In accordance with the *Management Policies 2006*, the National Park Service “will seek to perpetuate the best possible air quality in parks to (1) preserve natural resources and systems, (2) preserve cultural resources, and (3) sustain visitor enjoyment, human health, and scenic vistas” (NPS 2006b, sec. 4.7.1). Air quality related values are also to be protected, and in the D.C. metropolitan area these include historic structures, cultural landscapes, and other elements of a park environment that are sensitive to air pollution.

The District of Columbia is a nonattainment area for 8-hour ozone and particulate matter (PM 2.5) (US EPA 2006). This fact affects transportation policies of all governmental agencies within the District. The National Park Service will participate in the development of federal, state, and local air pollution control plans and regulations to remedy existing impacts on park resources and values from human-caused air pollution and to prevent future impacts.

## **RESOURCE IMPAIRMENT**

The fundamental purpose of the national park system is to conserve park resources and values (16 USC 1-4). NPS managers must always seek ways to avoid, or to minimize to

the greatest degree practicable, adversely impacting park resources and values. By law NPS superintendents have 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. 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 an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values. An impact to any park resource or value may constitute impairment. However, an impact would be more likely to constitute impairment to the extent that it has a major adverse effect on 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 relevant NPS planning documents.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in a park.

# CONTEXT FOR THE PLAN

## **NPS TRANSPORTATION, CIRCULATION, AND PARKING**

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### **Transportation Service**

The National Park Service has provided interpretive transportation services for visitors to the Washington, D.C., area since 1969. The present transportation service is provided under an independent third-party contract by Landmark Services, Inc., which offers Tourmobile Sightseeing for visitors to the National Mall and surrounding park areas. While stops and routes have varied over the years, multiple services are provided, including:

- the American Heritage Tour, which serves the National Mall & Memorial Parks, Union Station, the U.S. Capitol, and nearby sites
- the Arlington National Cemetery Tour, which is included with the American Heritage Tour and is also available as a separate tour
- the Twilight Tour, which is an evening tour of the major downtown memorials
- the Mount Vernon Tour, which includes George Washington's estate and gardens, with access by way of the George Washington Memorial Parkway
- the Frederick Douglass Tour, which goes to the national historic site

Because the interpretive visitor transportation service was designed to augment NPS interpretive services, as well as to provide transit access, guides are present on each Tourmobile vehicle to offer educational background information and to answer questions. The transportation service is provided year-round and served approximately 1.1 million visitors in 2004 (NPS 2004b).

Tourmobile operates approximately 40 vehicles, including buses, trams, and mini-buses (NPS 2004b). Some vehicles have been modi-

fied to run on compressed natural gas. Vehicles are stored and maintained at a maintenance facility on park land in East Potomac Park, which is under the jurisdiction of the National Mall & Memorial Parks.

### **Trails and Sidewalks**

Trails and sidewalks are another component of the NPS visitor transportation network, and visitors can walk or bicycle to visitor sites. There are over 10 miles of gravel, bituminous, and concrete walks and trails in the area of the National Mall. Wayside exhibits, signs, and plaques along sidewalks in several areas provide visitor education and interpretation. NPS ranger-led walking and bicycle tours and bicycle rental services at the Thompson Boat Center are available for park visitors. The boat center is operated by an independent third-party operator for the National Park Service and also offers canoe and kayak rentals, allowing visitors to see the area's monuments from a unique perspective and to explore the national park lands along the Potomac River.

### **Roads and Parking**

The National Park Service manages approximately 14 miles of roads within the National Mall & Memorial Parks, 1,900 free public parking spaces (including around 400 spaces on the National Mall near the museums), and approximately 100 additional spaces that are designated as parking for people with disabilities (including 27 handicapped spaces on the National Mall). Within the District of Columbia free parking is rare. The District of Columbia operates hundreds of parking meters on three streets (3rd, 4th, and 7th streets NW/SW) that cross the National Mall and on Independence Avenue SW and Constitution Avenue NW adjacent to the National Mall. Daily parking in a private downtown lot can cost up to \$20.

As previously noted, the Mayor's Parking Taskforce Committee estimated there are approximately 400,000 on- and off-street parking spaces in the District of Columbia. These spaces are used by approximately 197,000 non-commercial personal vehicles that are registered for personal use, and by an estimated 200,000 vehicles that enter the District during the morning peak (the number of people that enter is about twice that) (DDOT 2003c). As a result, parking is extremely limited for visitors. This conclusion is supported by the results of the NPS *Visitor Transportation Survey*. Conducted in the spring and summer of 2003, the survey reported that 65% of respondents said finding parking is difficult (NPS 2003f). The survey also indicated that 70% of the respondents would be willing to park and take a shuttle to major attractions.

## NATIONAL PARK AREAS

The alternatives within this study focus on the following visitor core parks, along with several surrounding parks, as described below.

### Visitor Core Parks

- *National Mall & Memorial Parks* — Most of the park areas in the visitor core are managed by the National Mall & Memorial Parks. The National Mall is the area extending west from the U.S. Capitol to the Potomac River and includes the Mall, Washington Monument, World War II Memorial, Constitution Gardens, Vietnam Veterans Memorial, Lincoln Memorial, Korean War Veterans Memorial, Tidal Basin, Franklin Delano Roosevelt (FDR) Memorial, Thomas Jefferson Memorial, and George Mason Memorial. Additionally the National Mall & Memorial Parks manages Ford's Theatre National Historic Site and the House Where Lincoln Died (Petersen House), Pennsylvania Avenue National Historic Park, East Potomac Park, the Old Post Office Tower, and numerous squares, smaller parks, circles, and triangles throughout downtown Washington, D.C.
- *President's Park* — President's Park is the setting for the White House and includes Lafayette Park, President's Park South (the Ellipse), and the adjacent White House Visitor Center (NPS 2000a).

### Surrounding Park Areas

- *National Capital Parks-East* — Twelve major park areas, encompassing over 8,000 acres, are included in National Capital Parks-East. Park units include Anacostia Park, Kenilworth Aquatic Gardens, Frederick Douglass National Historic Site, and Mary McLeod Bethune Council House National Historic Site, among many others.
- *Arlington National Cemetery* — Arlington National Cemetery, across the Potomac River from the District of Columbia, is administered by the U.S. Department of the Army. Within the cemetery is Arlington House, the Robert E. Lee Memorial, which is administered by the National Park Service as a unit of the George Washington Memorial Parkway. Two of the more popular sites are the Tomb of the Unknowns and the grave of President John F. Kennedy.
- *George Washington Memorial Parkway* — The George Washington Memorial Parkway extends from Mount Vernon to Great Falls, Virginia. This 38-mile-long park unit also includes the Mount Vernon Memorial Highway, the Clara Barton Parkway, and the Spout Run Parkway, each of which is a major arterial road for the region.
- *Rock Creek Park* — Rock Creek Park, in the northern portion of Washington, D.C., encompasses approximately 1,755 acres. The park is primarily a wooded valley surrounded by the heavily urbanized metropolitan area (NPS 2002c). Rock Creek Parkway lies within the park and serves as a major arterial road in the region.
- *Chesapeake & Ohio Canal National Historical Park* — Chesapeake & Ohio Canal National Historical Park stretches nearly 185 miles along the Potomac River between Washington, D.C., and Cumberland,

Maryland, and encompasses approximately 19,236 acres. Hiking, bicycling, and horseback riding are the most popular means of traveling through the park (NPS 2003a).

## RELATIONSHIP TO OTHER TRANSPORTATION PLANS

### NPS Plans

In the late 1990s NPS transportation planning indicated a need to plan future interpretive visitor transportation services for the memorial core area plus a larger (multi-park) area, which would be more extensive than the area served by the current NPS concessioner. In addition, planning by the National Capital Planning Commission (NCPC) and the District of Columbia have indicated a broader need to address urban congestion, visitor and bus parking limitations, and regional air quality concerns.

In the spring and summer of 2003 the National Park Service conducted the *Washington, D.C., Visitor Transportation Survey* to assess the preferences and needs of visitors regarding transit in the metropolitan area (NPS 2003f). The results were used to identify the desired range of transportation services for national park system sites in and around the District of Columbia. In addition, the National Park Service reviewed successful planning practices for visitor transit networks from Boston, Savannah, Orlando, Philadelphia, and London, and it inventoried comparable visitor transit services in Washington, D.C. The case studies are presented in the *Visitor Transportation Study: Report on Urban Visitor Transportation Services* (USDOT 2004) and in the *National Capital Parks—Central / Memorial Core Alternative Transportation Study: Washington, D.C., Local Comparables Report* (NPS 2003e). These studies were used to help develop the desired range of visitor transportation services for this environmental assessment.

### NCPC Plans

The National Capital Planning Commission is charged with planning the orderly development of federal buildings and landscapes in the District of Columbia and the six surrounding counties in Maryland and Virginia. The National Park Service is a member of the commission. The commission has prepared the following plans to guide the management of park areas in the nation's capital, including visitor services and facilities.

*Extending the Legacy: Planning America's Capital for the 21st Century.* Referred to as the *Legacy Plan*, this document presents a vision for the nation's capital over the next 50 to 100 years (NCPC 1997). It calls for extending the monumental core by creating opportunities for new museums, memorials, and federal office buildings in all quadrants of the city. The historic character and open space of the National Mall and its adjacent ceremonial corridors would be preserved, while growth and new development would be accommodated. Public transit would be expanded by removing obsolete freeways, bridges, and railroad tracks that fragment the city, and by developing a supplementary transit system called the Circulator to carry tourists and commuters around the monumental core. Other transportation goals call for improving Metrorail stations and park-and-ride facilities in outlying areas, and for developing better shuttles to and from these stations.

*Comprehensive Plan for the National Capital: Federal Elements.* The *Federal Elements* portion of the comprehensive plan establishes new goals and policies for future federal development (NCPC 2004a). Together these elements create a planning framework connected by three central goals: accommodating federal and national activities, reinforcing smart growth, and supporting coordination with local and regional governments. Regional transportation goals are to reduce vehicle congestion, improve air quality, increase transit use, and provide parking outside primary destination areas. The goals and policies of the

plan's transportation element promote a balanced, multi-pronged strategy to maximize local use and visitor access to the region's extensive transit system.

**Memorials and Museums Master Plan.** Prepared in cooperation with the Commission of Fine Arts and the National Capital Memorial Commission, the *Memorials and Museums Master Plan* guides the location and development of future commemorative and cultural facilities in and around the District of Columbia (NCPC 2001). This plan suggests that future visitor destinations will be spread beyond the monumental core, and that visitor transportation services should be able to accommodate new visitor destinations.

**Downtown Circulator Implementation Plan.** The D.C. Department of Transportation, the Washington Metropolitan Area Transit Authority (WMATA), and the Downtown Business Improvement District (DBID) partnered with the National Capital Planning Commission to address the need for a frequent, low-cost Downtown Circulator to move residents, commuters, and visitors around the monumental core (NCPC/DDOT/DBID/WMATA 2003). The following are goals of the plan:

- Improve connectivity between the monumental core and the central business district.
- Provide circulation for visitors within the downtown and monumental core.
- Enable downtown workers to make business and shopping trips.
- Supplement Metrobus and Metrorail.
- Reduce traffic congestion.

The first phase of the Downtown Circulator began operating in June 2005, and this service is considered to be part of the existing transit

network.\* Phase one routes do not operate on NPS roadways.

### Local Plans

The *District of Columbia Tour Bus Management Initiative* was completed in October 2003 (DDOT 2003). The study's objective was to develop a plan to alleviate long-standing problems that negatively affect tour bus operations, as well as traffic conditions, the visitor experience, and the city environment. The alternatives in this environmental assessment are compatible with the recommendations of the bus management initiative.

## SCOPING EFFORTS FOR THE ENVIRONMENTAL ASSESSMENT

Scoping under the National Environmental Policy Act is defined as an early and open process to determine the breadth of environmental issues and the range of alternatives to be considered. The process can be used to identify which issues need to be analyzed in detail and which can be eliminated from in-depth analysis. National Mall & Memorial Parks conducted scoping with the public and interested/affected groups and agencies, as well as with park staff and resource professionals.

In addition to public meetings and written feedback, the National Park Service acquired a wealth of scoping information during the 2003 *Visitor Transportation Survey* (NPS 2003f), including the following:

- *Visitor profiles* — type of travel group, age distribution, group size, limitations on ability to walk distances

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\* In March 2006, while this document was being developed, an additional Circulator route, known as the Smithsonian/National Gallery of Art route, was implemented. This route passes through the National Mall & Memorial Parks and uses existing Metrobus stops. For purposes of this environmental assessment, the Circulator service is evaluated as proposed in 2003; new routes are not included in the evaluation.

- *Trip characteristics* — purpose of visits, length of stay, location of overnight stays
- *Perceptions and use of transportation* — ease of driving, parking, transit use; use of sightseeing services
- *Visitor preferences for a future transportation system* — desirable types of transit and related services
- *Detailed travel patterns* — number of destinations visited and sequence

The public scoping process included a visitor survey, a newsletter, public meetings, consultation with public agencies and organizations, and a project website. Citizens and public agencies were asked to identify issues that should be addressed in the environmental assessment, including alternatives, potential impacts, and suggested mitigation measures.

The internal scoping process involved meeting with the staff of the National Mall & Memorial Parks and surrounding regional parks. Internal and public scoping defined the project’s purpose and need, identified potential actions, determined likely issues and impact topics, and placed the potential actions within the context of other planning efforts. As a result of scoping, the project incorporated an existing transit proposal known as the D.C. Circulator, placed additional focus on multi-modal transportation (Segway® HTs, scooters, and bicycles), and further addressed parking issues.

## IMPACT TOPICS

Impact topics are the resources or values of concern that could be either beneficially or adversely affected by implementing any of the alternatives being considered. Impact topics were identified based on federal laws, regulations, executive orders, NPS *Management Policies 2006*, NPS director’s orders, and scoping comments. A brief rationale for the selection of each impact topic is given below, as well as the rationale for dismissing specific topics from further consideration.

## Impact Topics Analyzed in Detail

All of the proposed alternatives include implementing a visitor transportation service, and two alternatives also consider policy changes for personal transportation (Segway® HTs and electric scooters). The following impact topics were determined to be relevant to the environmental analysis of these alternatives.

### Transportation Network

The regional transportation network provides residents, commuters, and visitors with many choices, and the alternatives being considered could affect those choices. In addition to walking, regional transportation modes include cars, public transit, tour buses, trolleys, Segway® HTs, electric scooters, and bicycles. These modes use a network of regional infrastructure, including roads, surface rails, subways, trails, sidewalks, and parking facilities. Additionally, the regional transportation network includes travel by plane, train, and boat; however, these modes are outside the scope of this study. The roadway network is managed for efficiency by means of a system of traffic operations (traffic signal timing, roadway design, etc.). Policies and plans shape the priorities for the overall network, such as travel demand management, a policy that encourages more efficient travel choices.\* This topic analyzes how alternatives function within the transportation network and further the goals of regional transportation plans.

### Visitor and User Experience

Interpreting the significance of the national parks in the project area is fundamental to visitor experiences, helping visitors understand and be inspired by why these areas have been recognized as nationally significant and included in the national park system. Changes in the convenience of proposed transporta-

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\* Travel demand management consists of programs and policies to reduce and manage the demand within transportation corridors and by transportation mode, to disperse peak-period traffic, and/or to encourage transit usage and capacity.

tion service, the ability of visitors to access sites, and the educational / interpretive approach are analyzed.

### ***Public Health, Safety, and Security***

The opportunity for visitors to be able to safely enjoy national park resources is integral to the NPS mission, and the National Park Service, its contractors, and cooperators continually seek to provide a safe and healthful environment for all visitors and employees, in accordance with *NPS Management Policies 2006* (NPS 2006b, sec. 8.2.5.1). The security climate has changed significantly since the transportation service was initiated in the late 1960s. Bicycle use has increased, and new modes of personal transportation, such as Segway® HTs, have emerged. The 2003 *Visitor Transportation Survey* indicated that approximately 50% of the visitors to the National Mall & Memorial Parks believe that feeling safe is an important characteristic of a transportation service (NPS 2003f). This topic analyzes differences in how alternatives would address the transportation system and security, access for visitors with limited mobility, and trail and sidewalk safety.

### ***Socioeconomic Impacts***

The National Park Service has the responsibility to ensure that commercial services are necessary and appropriate and that they are financially viable (NPS 2006b, sec. 10.2.2). This topic looks at differences in how the alternatives would affect the local and regional economies.

### ***Park Operations and Visitor Transportation Service Operations***

The National Park Service is committed to the principles of sustainable facility development and operations (NPS 2006b, sec. 9). Differences in how alternatives would affect maintenance activities, staffing requirements, NPS contract management, and law enforcement and security requirements are analyzed.

### **Impact Topics Dismissed from Further Analysis**

The following topics were dismissed from detailed analysis because there would either be no impacts or the impacts would be negligible (barely detectable and localized) or minor (affecting a relatively small number of resources, features, or individuals, localized, and not appreciable), as described below.

- ***Cultural Resources*** — Park staff have identified no archeological resources, ethnographic resources, or Indian Trust resources or sacred sites within the area of potential effect, which is defined as the paved routes for proposed visitor transit and personal transportation. Therefore, these resources would not be affected.

Historic structures and cultural landscapes occur within the existing urban paved road network. None of the alternatives would change either this setting or the paved road network. Each alternative proposes substituting higher capacity buses for lower capacity private vehicles, resulting in a net decrease in the number of vehicles using the road network. Therefore, a change in the mix of vehicles in the study area would have no effect on historic structures or cultural landscapes within the study area.

- ***Natural Resources*** — The alternatives would not affect geologic resources, soils, vegetation, lightscares, water quality, floodplains, wetlands, or prime and unique farmlands within the project area because actions would occur within the existing paved urban environment.

No threatened or endangered species, species of concern, designated critical habitats, or ecologically critical areas are listed for the study area. Urban wildlife species within the project area are typically limited to those that have adjusted to human activity, and there would be no additional impacts under the alternatives considered.

- **Air Quality** — Impacts on air quality would be negligible, beneficial, and long term throughout the region. No alternative being considered would introduce vehicle emissions into new areas. A mass transit service, as well as personal transportation options, would offer an alternative to the use of private automobiles to access visitor sites, therefore likely reducing the number of vehicle trips compared to current conditions. However, this reduction would not be detectable within the context of the metropolitan area as a whole.

In addition, the use of clean fuels was considered when representative transit vehicles were identified. These fuels include clean diesel, biodiesel, and compressed natural gas, along with hybrid electric vehicles. Any of these recommended fuels or vehicles would meet or be well below current emission standards. Electric personal transportation vehicles have no emissions.

- **Soundscapes** — In the visitor core area there would be no impact to the level of noise as the area is already affected by noise from vehicular traffic, railway traffic, and commercial and military air traffic.

Continuing shuttle bus sightseeing tours within Arlington National Cemetery would not noticeably change the number of transit vehicles, and there would be no noise-related impacts on the urban soundscape. Extending transportation service under some alternatives to the U.S. Marine Corps War Memorial, north to the Netherlands Carillon or to the Rosslyn Metrorail station, or south to planned memorials and the Pentagon City Metrorail station would increase the number of transit vehicles traveling through new areas of Arlington National Cemetery and on adjacent roadways. However, the resulting small increase in transit vehicle trips would result in negligible impacts within the existing urban soundscape of Arlington National Cemetery.

Because there would be no impacts on soundscape in the visitor core and negligible impacts in Arlington National Cemetery, this topic was dismissed from further analysis.

- **Viewsheds** — The visual character of the significant viewsheds within the study area, including the National Mall, Arlington Memorial Bridge, Arlington National Cemetery, and the major memorials, would not be affected by any alternative. All transit service would operate on the existing urban road network, and no changes are proposed to this road network or any of the historic viewsheds.
- **Energy Requirements** — As previously mentioned, under all alternatives a range of clean fuels would be used for proposed transportation services. Energy requirements of operating the transit vehicles would be imperceptible on either a local or regional scale, with negligible, localized, long-term adverse impacts from operating transit vehicles.
- **Environmental Justice** — Each federal agency is responsible for ensuring that the effects of its programs, policies, and activities do not have a disproportionately high and adverse environmental impact on minority and low-income populations. All the alternatives propose transit and personal transportation services to all populations and within primarily park and commercial settings; therefore, all impacts, whether beneficial or adverse, would affect all populations equally. No racial, ethnic, or socioeconomic group would bear a disproportionate share of the effects resulting from the implementation of any alternative.

Construction-related activities for transit stop improvements would result in negligible, site-specific, short-term, adverse impacts to air quality, soundscapes, energy requirements, transportation, and visitor and user experience. Consequently, these impacts are not further evaluated.