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Report to Congressional Requesters

July 2001

PARK SERVICE

Visitor Center Project Costs, Size, and Functions Vary Widely

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United States General Accounting Office
Washington, DC 20548

July 24, 2001

The Honorable James V. Hansen
Chairman, Committee on Resources
House of Representatives

The Honorable Joel Hefley
Chairman, Subcommittee on National
Parks and Public Lands
Committee on Resources
House of Representatives

The National Park Service manages and maintains thousands of facilities to provide nearly 300 million visitors a year a safe and enjoyable visit to the nation's parks and monuments. One of the most important of these facilities is the visitor center, which serves as a focal point for visitors to learn about a park and offers a variety of services, including such basic services as orientation and information, exhibits and interpretation, publication sales, and restrooms. Most of the Park Service's 384 parks have a visitor center, but as existing visitor center buildings age and new parks are added to the system, new or renovated visitor centers are needed. Some of the existing visitor centers occupy buildings that were constructed in the early part of the century and were adapted to provide visitor services. Many other visitor centers were built as the Park Service expanded and added parks during the 1950s, 1960s, and 1970s. This expansion, combined with budget tightening of the 1980s and early 1990s, resulted in few visitor centers being built over the last 20 years. In the 1990s, however, the Park Service began to plan for an increase in the number of visitor center projects.

Concerned that some of the new visitor center projects included new services, such as transportation facilities, and also appeared more costly than the projects that were built in the past, you asked us to provide detailed information, such as costs and functions, on Park Service visitor center projects that have been built or that are being planned to be built. Specifically, you asked us to determine (1) the number, status, and reasons for Park Service visitor center projects; whether these projects involved new construction or renovation of existing facilities; and whether these projects were identified as priorities by the park service or by the Congress; (2) the costs of the visitor center projects and the functions included in those projects; and (3) the sources of funding for the projects.

To answer the three objectives, we identified parks with projects that include visitor centers that had completion dates between fiscal years 1996 through 2005, and sent a questionnaire to each because the Park Service does not gather detailed data on visitor center projects that have been built or those that are expected to be built. The response rate was 100 percent. We collected data on visitor center projects to capture all the functions that are included in such projects and because the Park Service maintains funding and cost data for construction projects, not buildings. It is important to note that visitor center projects do not necessarily include only the construction of a visitor center building, but may also include related functions, such as parking lots for the visitor center, the rehabilitation of land, and transportation facilities. We used fiscal year 1996 as the starting point for our analysis because the Park Service's financial and regional reorganizations prior to 1996 made data difficult to obtain and would have required a lengthy, costly effort to gather complete data. We used fiscal year 2005 as our cutoff point for data collection because beyond that year, projects are less certain and the data are more subject to change. In order to report the cost and funding information in a consistent manner, we asked the Park Service to provide us with the information in constant fiscal year 2000 dollars. Some of the visitor center project data are based on self-reported information and are subject to limitations. We took various steps as described in the scope and methodology to establish the overall validity of the cost data. A detailed description of our scope and methodology is in appendix I.

Results in Brief

The Park Service has 80 projects to construct or renovate visitor centers that either have been completed since fiscal year 1996 or are expected to be completed by fiscal year 2005. Of the 80 visitor center projects, 16 are complete, 15 are under construction, and 49 are being planned. Many of the parks cited one or more of the following reasons for needing either a new or renovated visitor center: the need to replace obsolete or deficient facilities or exhibits, the need for more space, and the need to handle more visitors. Furthermore, some parks noted that they had no visitor center at all, or that the existing center was in a poor location. The 80 projects are almost evenly split between new buildings and renovations of existing buildings. Of the 80 projects, 53 were identified as a priority by the Park Service and confirmed by the Congress, and an additional 27 projects were identified as a priority by the Congress.

The Park Service estimates that a total of about $542 million will be spent for the 80 projects that include visitor centers (funds are in constant 2000 dollars). About $204 million has already been spent for the projects and

the Park Service estimates that an additional $338 million will be spent to complete the projects. It is important to note that the $204 million are actual costs, while the $338 million represent projected future costs that are subject to change. We cannot determine whether these projects are more costly over time because the individual project costs vary widely, making it hard to discern a trend. Individual project costs vary, from a low of $500,000 at the Great Smoky Mountains National Park in Tennessee to a high of $39 million in private funds for a planned park partnership project at Gettysburg National Military Park in Pennsylvania. The project costs vary for three main reasons. First, costs for newly built projects are generally higher than for projects that renovate existing visitor centers. Second, aside from five basic functions that nearly all visitor center projects have—information, exhibits, restrooms, publication sales, and administrative space for visitor center personnel—additional functions included in each visitor center project, such as auditoriums, curatorial areas, and transportation facilities, vary widely depending on the needs of the individual parks. And third, the physical size of the visitor centers varies widely.

The 80 visitor center projects are funded chiefly by the Park Service's appropriated funds. Of the $542 million estimated cost for the visitor center projects, the Park Service expects that about $322 million, or almost 60 percent, comes from Park Service appropriated funds. The other major sources of funding come from private partnership and fee demonstration funds. Private partnership funding, which comes from such groups as an individual park's natural history association or other nonprofit entities established to raise funds for the park (e.g., Friends of Kennesaw Mountain National Battlefield Park in Georgia), are expected to provide about $97 million, or 18 percent, of the total estimated costs. Fee demonstration funds, which are additional fees that some individual parks are authorized to raise and keep for use in that park, are expected to provide almost $48 million, or 9 percent, of the total estimated costs of visitor center projects. Federal highway funds are estimated to provide another $35 million, or 6 percent, for the 80 projects and the remaining $40 million, or 7 percent, comes from many different sources, including federal and state government entities, Indian tribes, and others.

We provided the Department of the Interior with a draft of our report for review and comment. Overall, Interior said that the report provides useful information that will be beneficial to the Park Service in planning, programming, design and construction of visitor centers and associated facilities. Interior makes a general assertion that some of the cost data used in the report are incorrect. We disagree. The cost data included in

the report was obtained from park officials through a questionnaire. We then discussed and clarified this data with many parks after we received the completed questionnaires and as a further check on the validity of the data, we corroborated the data with regional budget staff. Interior also asserted that a cost-per-square-foot analysis of its visitor center buildings is more meaningful than data on total visitor center project costs. We disagree. Our objective was to develop data on overall project costs. Cost-per-square-foot data on visitor center buildings alone represent only one portion of the total project costs and do not reflect the cost to the taxpayer.

Background

Conserving the nation's natural and cultural resources and ensuring visitor enjoyment of these resources has been the primary mission of the National Park Service since its inception in 1916. The Park Service has long provided facilities for visitor use, but over time, the way that the Park Service has provided services has changed. In the 1920s and 1930s, the Park Service—building on the legacy of the railroad companies, who had built the great lodges in western natural parks such as Yellowstone in Wyoming, Glacier in Montana, and the Grand Canyon in Arizona—built basic infrastructure such as roads, wayside stops, administrative offices, campgrounds, and other basic visitor facilities, which were located in different buildings typically arranged as a village. From the 1950s through the 1970s, the Park Service centralized visitor services and adopted modern architecture with large, open spaces that allowed the increasing numbers of visitors to circulate more easily. The Park Service built many visitor centers in preparation for its 50th anniversary in 1966 and built another set of visitor centers in preparation for 1976, the nation's bicentennial year. The centers built during this time are referred to either as Mission 66 buildings or Bicentennial buildings. Figures 1 and 2 show examples of each.

Figure 1: Example of a Mission 66 Visitor Center

The old visitor center at the South Rim of the Grand Canyon, a classic Mission 65 structure.

Source: GAO photograph.

Figure 2: Example of a Bicentennial Era Visitor Center

The old visitor center at Independence National Historical Park built during the Bicentennial era.

Source: GAO photograph.

The building commonly thought of as a "visitor center" was created by the Park Service in the mid-1950s. Through a program called Mission 66, the Park Service invested over $600 million in park infrastructure in an effort to handle increasing numbers of visitors. In addition to roads, bridges, and offices, the program resulted in the construction of 111 visitor centers. These visitor centers, for the first time, grouped park interpretive presentations, auditoriums, administrative offices, restrooms, and various other services into a single building. According to the Park Service, the visitor center quickly became one of the most important facilities for helping the public see and enjoy a park, and continues today to be the center of park planning and building.

In fiscal year 2001, the Park Service received about $160 million for its construction program to renovate and build new facilities, including

visitor centers.[1] Other types of facilities included in the construction program are maintenance buildings, warehouses, utilities, and seawalls and other retaining walls. To construct a major project, such as a visitor center, about 5 to 6 years before construction begins, a park generally identifies the project scope, or needs, and a cost estimate. If the project is to receive appropriated funds, the project is ranked, along with other projects, by a service-wide assessment team and is placed on a 5-year construction program list, which serves as the basis for the Park Service's annual budget proposals that are reviewed by the Congress. If the project is not to be funded through the annual appropriations process, it receives funds according to the program under which it is being built. For example, projects built with fee demonstration funds will receive funds from regional fee demonstration accounts.

Design (including pre-design activities) for all construction projects generally begins 3 years prior to construction and includes the development of increasingly detailed designs and increasingly specific cost estimates for the project. The process includes analysis of different alternatives for the project and the "life-cycle" cost of the alternatives, or the costs of each alternative over its useful life. The Park Service generally contracts with an architecture and engineering firm to complete construction documents for a project, and when these documents are complete, the Park Service contracts for construction with qualified private construction companies. During construction, the Park Service typically contracts for a firm to inspect the construction site and the construction progress.

[1]The Park Service also received $80 million in facilities maintenance funds, some of which can be used for renovation purposes. Construction funds are used for new buildings and for renovations of existing buildings. In some cases, the newly constructed or renovated buildings fix or eliminate an existing maintenance problem on an existing building, and as a result, construction funds may contribute to eliminating some of the multi-billion dollar backlog of maintenance projects that the Park Service has identified for its 16,000 permanent structures.

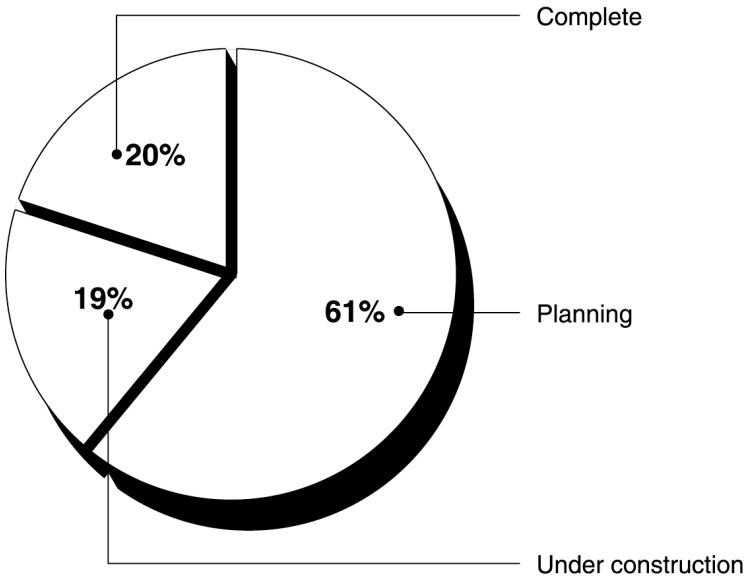
Eighty Visitor Center Projects Are Completed, Under Construction, or Planned

For the 10-year period from fiscal years 1996 through 2005, the Park Service estimates that it has 80 projects that involve construction, renovation, or remodeling of visitor centers. Of these 80 projects, 16 have already been completed, 15 are under construction, and 49 are being planned. The projects under construction and planned may be delayed or cancelled because of funding and scheduling uncertainties. Park officials gave several reasons for the 80 visitor center projects, including the need to replace obsolete or deficient facilities or exhibits, increase space, and address increasing visitation. Of the 80 projects, 43 involve the construction of a new visitor center building, while 37 others require the renovation of an existing building. The Park Service identified 53 priority construction projects, and the Congress identified an additional 27 projects as priority projects.

Nearly Two-Thirds of the Visitor Center Projects Are in the Planning Phase

The Park Service has completed or started over one-third of the 80 visitor center projects, and the remaining two-thirds are being planned and construction is expected to be completed in the next 4 years. Figure 3 shows the status of the 80 visitor center projects.

Figure 3: Visitor Center Projects Being Planned, Under Construction, or Completed Between Fiscal Years 1996 and 2005



Source: GAO survey data, n=80 visitor center projects.

Of the 80 visitor center projects, 16 have been completed and 15 are still under construction.[2] The remaining 49 visitor center projects, which were being planned as of April 2001, are expected to be completed by fiscal year 2005. Park projects that are being planned are in various stages of planning, ranging from those that are being conceptualized to those for which construction documents are being developed. For example, the concept for the visitor center project at Denali National Park in Alaska has been selected and the project is in the process of being designed. On the other hand, Badlands National Park in South Dakota has construction documents for its visitor center project and is awaiting a construction contract.

Of the 49 projects being planned, some are further along in the planning process than others, and thus have more precise cost estimates. The Park Service develops project designs and cost estimates at three points in the planning process. Twenty-eight of the 49 planned projects have a Class C estimate, which is the least exact design and cost estimate produced. It is based on the costs of similar buildings already constructed and is produced by the park when a project is first considered and requested. Thirteen of the 49 projects have a class B estimate, which is developed after a period of conceptual planning and development of a more detailed plan of the building. The remaining eight planned projects have a class A estimate, which is the final, most precise planning cost estimate that has been developed from construction documents.

Major Reasons for Building Visitor Center Projects

Parks identified several reasons why a visitor center project was needed. The major reasons given by park officials for building visitor center projects were to replace obsolete facilities or exhibits, to increase space, to handle increased visitation, to build a park's first visitor center, or to replace a visitor center that was not at an accessible location.

One major reason that parks said they needed a new or renovated visitor center is that either existing facilities were obsolete, their exhibits were

[2]The number of projects under construction includes projects that are substantially completed. To be completed, the construction of the project is done and the visitor center is open to the public. Substantially completed projects include projects that are open to the public, but have some remaining work to complete.

outdated, or both.[3] According to Park Service staff, visitor centers and other facilities are expected to last 40 to 50 years without major renovation or replacement. Before that time, however, certain functions in the building such as restrooms may need to be updated, and as the building ages, the maintenance and operation costs can become more expensive. The Park Service renovates buildings to prolong their lifespan, but at some point, analyzes whether to remodel and continue using the same building or to build a new one. Several parks, including Bryce Canyon in Utah, Cape Cod National Seashore in Massachusetts, Zion National Park in Utah, and Grand Canyon National Park, have buildings that have aged and need either extensive renovation or replacement. While buildings may last decades, park exhibits contain information that can become outdated, such as scientific information about natural or cultural resources, or contain items that need special protection, such as artifacts or historical documents. With increasing knowledge and technology, park exhibits can be improved to enhance the visitor experience. For example, both Manassas National Battlefield Park in Virginia and Kennesaw Mountain National Battlefield Park in Georgia have renovated their visitor centers in part to upgrade their exhibits. Each of the park's Civil War era artifacts are now housed in temperature-controlled cases with controlled lighting, both of which required upgraded utilities and connections. Figure 4 shows the addition to the Kennesaw Mountain visitor center.

[3] The Park Service does not replace a building simply because it has aged. The decision whether to replace a building with a new one is made when the Park Service determines that the existing building is functionally obsolete, structurally deficient, not in compliance with code, or is highly inefficient to operate and maintain. We use the term obsolete to refer to all of these conditions.

Figure 4: Addition to Kennesaw Mountain National Battlefield Park Visitor Center

Source: GAO photograph.

The parks also identified the need for increased space as another major reason for requesting a new visitor center. Park officials stated that the size of a park's staff and the number of visitors have increased since many of the visitor centers were built, requiring additional space to accommodate increased numbers of people. In addition, park officials identified the need to increase the space used to store collections or provide exhibits. Existing visitor centers ranged in size from 181 square feet to more than 79,000 square feet. The visitor center at Pinnacles National Monument in California—the visitor center with 181 square feet—shares space with another facility and has no room for exhibits. The new planned visitor center will be 1,500 square feet. In contrast, the current visitor center at Gettysburg has an area of 79,274 square feet, including a building that houses the famous "Cyclorama" painting (a circular painting). According to the park's superintendent, the current visitor center has no room to house the park's collection of Civil War items, nor the space to store them under appropriate climatic conditions. The new Gettysburg visitor center being planned will be 118,100 square feet.

A third major reason that parks gave for needing a new or renovated visitor center is increased visitation. For many parks, visitation has increased greatly since the visitor center first opened. Park officials project that visitation to their visitor centers will continue to increase for a variety of reasons, including the fact that the visitor center will be new, that the park is well-located, or that the long-term trend in visitation has been increasing. Of 53 parks that provided complete data, 51 expected visitation at their visitor centers to increase an average of about 25 percent by 2005, with three-quarters of the parks reporting an increase of about 10 to almost 100 percent.[4] For example, Everglades National Park in Florida expects visitation at its new center to increase from 194,000 in 2000 to 243,000 visitors in 2005.

Finally, several parks requested a new visitor center because they either had no visitor center or the existing center location was determined to have a negative effect on natural or cultural resources or was situated in a location that was not accessible to visitors. For example, Grand Portage National Monument in Minnesota—which was created in 1951—has never had a visitor center and instead has offered visitor services out of its administrative building. On the other hand, the visitor center for Palo Alto Battlefield National Historic Site in Texas is currently located in leased facilities eight miles from the park. According to the park's superintendent, the center is difficult to find and is closed on weekends—because of the hours of the building in which it leases space—the time when most visitors come to the park. The new visitor center, which will be located near the park entrance, will be more accessible and convenient for the park visitors.

Projects Are Split Between New Buildings and Renovations of Existing Buildings

Of the 80 visitor center projects to be completed by fiscal year 2005, 43 (54 percent) involve construction of a new building and 37 (46 percent) require the renovation of an existing visitor center or building.[5] Individual parks reach the decision to construct a new building or to renovate an existing building during the initial development of the scope of the visitor

[4]Of the 80 parks, 50 provided data for fiscal year 1995 and 53 provided visitation data for calendar year 2000 and a projection for calendar year 2005. Visitation data is difficult to gather; it is gathered by electronic eyes or mats at entrance doors, or by hand counters. For this reason, the data have potential errors such as double counting and should be interpreted carefully.

[5] Of the 43 new buildings, 21 replace visitor center buildings the Park Service considers obsolete.

center project. As park officials plan a visitor center project, they analyze the value of each alternative—a process called a value analysis—before making the decision whether to renovate an existing visitor center or other building or construct a new building. Park officials consider factors, such as the existing building's age and condition, visitation, maintenance costs over the life of the alternative buildings, and historic significance. The parks also consider whether the visitor center needs to be moved away from a flood plain or the key natural or historic features of the park to prevent damage. For example, the project at Ulysses S. Grant Historical Site in Missouri will build a new permanent visitor center to replace the temporary facilities that are already located in a historic barn in a flood plain. On the other hand, Bryce Canyon decided to renovate its existing visitor center building because there was no other location in the park where a visitor center could be built without further endangering its protected prairie dog population—a valued resource. Figure 5 shows the renovation of the Bryce Canyon National Park visitor center in December 2000, as it was under construction.

Figure 5: Renovation of Bryce Canyon National Park Visitor Center

The old visitor center at Bryce Canyon National Park) portions of which can be seen on the right) will be renovated into a larger, two-story visitor center (portions of which can be seen on the left.

Source: GAO photograph.

In special cases, when a building has historic significance, the Park Service—because of its conservation mission and mandate not to impair park resources—must consider not only whether the building should be kept and maintained, but also how to rehabilitate and restore it. For example, the visitor center at Dinosaur National Monument in Utah, and one of three visitor centers at Rocky Mountain National Park, in Colorado, have both been designated National Historic Landmarks because of their architectural significance and association with the Mission 66 period. These visitor centers will be renovated to restore and maintain the buildings' original conditions, as well as to improve their usefulness as visitor centers.

Visitor Center Projects Are Identified by Both the Park Service and the Congress

In addition to projects that the Park Service identifies, the Congress can also identify—through legislation or through the appropriations process—projects for construction. Of the 80 visitor center projects, the Park Service requested 53 projects, or 66 percent, while the Congress concurred with these projects and requested an additional 27 projects, or 34 percent. In its annual budget request, the Park Service provides the Congress with a list of proposed construction projects for the upcoming fiscal year. As part of its review of the budget, the Congress may make revisions or additions to this list on the basis of its priorities. Congressional committees, and in some cases individual members, identify projects for construction that are not listed in the annual budget request. In some cases, projects identified by Congress are on the Park Service's 5-year list of projects to build, but they may not have been included in a particular fiscal year budget request. Park Service officials said that they work with congressional committees and members when the projects are added to the budget to get them ready for planning and construction. For example, in 1996, the Congress passed legislation authorizing the construction of a visitor center to interpret the battle of Corinth in Tennessee and other regional Civil War actions; since that time the Park Service has been planning the facility.

The 80 Visitor Center Projects Are Multifunctional and Cost an Estimated $542 Million

The National Park Service estimates that a total of $542 million will be needed for the 80 visitor center projects. The cost of the individual visitor center projects varies widely, ranging from $500,000 to $39 million. In general, a new building with an increased number of functions and additional square footage costs more than a renovated building with fewer functions and less area. For example, the visitor center project at Great Smoky Mountains National Park cost $500,000 and involved the renovation of the existing visitor center building and the addition of an auditorium,

which increased the total size of the building by 3,500 square feet to a total of 13,000 square feet. In contrast, the new 118,100 square foot visitor center building planned for Gettysburg National Military Park will contain the five basic functions and many others for an estimated cost of $39 million. The additional functions being planned for this private-park partnership project include a museum, an area for the historic cyclorama painting, restoration of the painting, the removal of the existing visitor center, and rehabilitation of the land where the existing visitor center stands. The number and type of functions and the size of the buildings varies widely because the functions and size of visitor center projects not only depend on the needs of the individual parks, but also the Park Service has no guidelines for what each visitor center project should include. Recognizing the need for such guidelines, the Park Service has contracted with two architecture and engineering firms to develop functions and square footage guidelines for key facilities including visitor centers. The Park Service plans to use these in its development and review of visitor center projects.

Visitor Center Project Costs Range from $500,000 to an Estimated $39 Million

As of April 2001, the average cost to build a visitor center project was $6.7 million, with the costs ranging from $500,000 to $39 million. Table 1 shows the range of costs of the 80 visitor center projects, the number and percentage of visitor center projects by cost range, and the share of total costs represented by each cost range.

Table 1: Number of Visitor Center Projects in Different Cost Ranges

Cost range	Number of visitor center projects	Percent of visitor center projects	Total visitor center project costs	Percentage of total project costs
Less than $2 million	14	17.5	$18,000,000	3.3
$2 million to less than $3 million	14	17.5	35,000,000	6.5
$3 million to less than $5 million	14	17.5	56,000,000	10.3
$5 million to less than $10 million	23	28.8	167,000,000	30.8
$10 million or more	15	18.8	266,000,000	49.1
Total	**80**	**100.0**	**$542,000,000**	**100.0**

Note: Totals may not add due to rounding.

Source: GAO survey data, n=80 visitor center projects.

When complete, 28 visitor center projects, or about 35 percent of the total projects, will likely cost less than $3 million each. For example, the visitor center at Big Thicket National Preserve in Texas, which is estimated to cost $1.4 million to build, includes the five basic functions and offers an

auditorium, ticket and permit area, and a parking lot. Combined, these 28 projects are expected to cost an estimated $53 million, or about 10 percent of the estimated costs for all 80 projects.

On the other hand, 15 visitor center projects, which represent about 19 percent of the total projects, are estimated to cost $266 million, or 49 percent of the estimated costs for all 80 visitor center projects. Each of these projects is estimated to cost more than $10 million. They include projects such as the Home of Franklin D. Roosevelt National Historic Site in New York, which will rehabilitate part of the library and build a conference center and a Park Service visitor center in cooperation with the National Archives for an estimated cost of $18 million, and Brown v. Board of Education National Historic Site in Kansas, which will build a new visitor center for an estimated $11.5 million. Other planned projects are estimated to cost more than $20 million each, including Gettysburg and Independence. Some projects that have already been completed or almost completed for more than $10 million include the Grand Canyon, Zion, and Fort Sumter National Monument, which is in South Carolina. Appendix III lists the total project costs for each project with a visitor center.

Variation in Project Costs Depends on Project Type, Functions Included, and Size

Visitor center project costs vary depending on whether the projects require new construction or renovation of existing visitor centers, the number and type of functions included in the visitor center building, and the size of the building. Almost half of the 80 visitor center projects involve renovation while the remainder involve the construction of new visitor center buildings, which are generally more expensive. Table 2 compares the average costs of renovation and new construction and the cost ranges for each.

Table 2: Average Cost and Range of Costs of Visitor Center Projects With New and Renovated Buildings

Type of visitor center project	Average total cost	Range of costs
Projects with new construction	$8,826,000	$639,000 to $39,000,000
Projects with renovation	$4,392,000	$498,000 to $11,464,000

Source: GAO survey data, n=80 visitor center projects.

On average, projects that involve new construction cost twice as much as projects that involve renovation. According to Park Service officials, construction of new buildings involves more work, including preparing the

building site and foundation, hooking up utilities, and construction. Renovations may not involve as much work and are generally less expensive. Some renovations can be costly, however, particularly if they involve historical rehabilitation of a building or if they involve a large building with multiple functions. Of the 80 projects, at least 6 involve rehabilitation of historic buildings or adaptation of buildings for use as visitor centers. For example, the visitor center at Dinosaur National Monument has been designated a National Historic Landmark for its architectural significance and association with the Mission 66 period. The project, which will cost an estimated $7.7 million, will correct foundation weaknesses to protect the visitor center from collapsing and will create a larger area inside when the museum collections are moved to a new curatorial building. Another project, which involves restoration of the Kelso Depot at Mojave National Preserve in California, will cost $6 million to preserve one of two remaining train stations built in the 1920s for use as a visitor center.

The cost of a visitor center project also varies according to the number and type of functions each includes. The number and types of functions a visitor center project has depends on the individual needs of a park, and can include parking lots, transportation facilities, landscaping, headquarters space, maintenance space, and rehabilitation of areas where existing visitor centers are demolished. With few exceptions, the 80 visitor center projects included the five basic functions of a visitor center—information, exhibits, publication sales, restrooms, and administrative space for center personnel. In addition, several parks identified a number of additional functions, such as auditoriums, curatorial areas, and transportation facilities, to be included in visitor center projects that had a direct bearing on the cost of the projects. Table 3 shows the average number of functions for the 80 visitor center projects by cost range. The five basic functions are not included, as nearly all visitor center projects contain them.

Table 3: Average Number of Functions Per Visitor Center Project in Addition to the Five Basic Functions

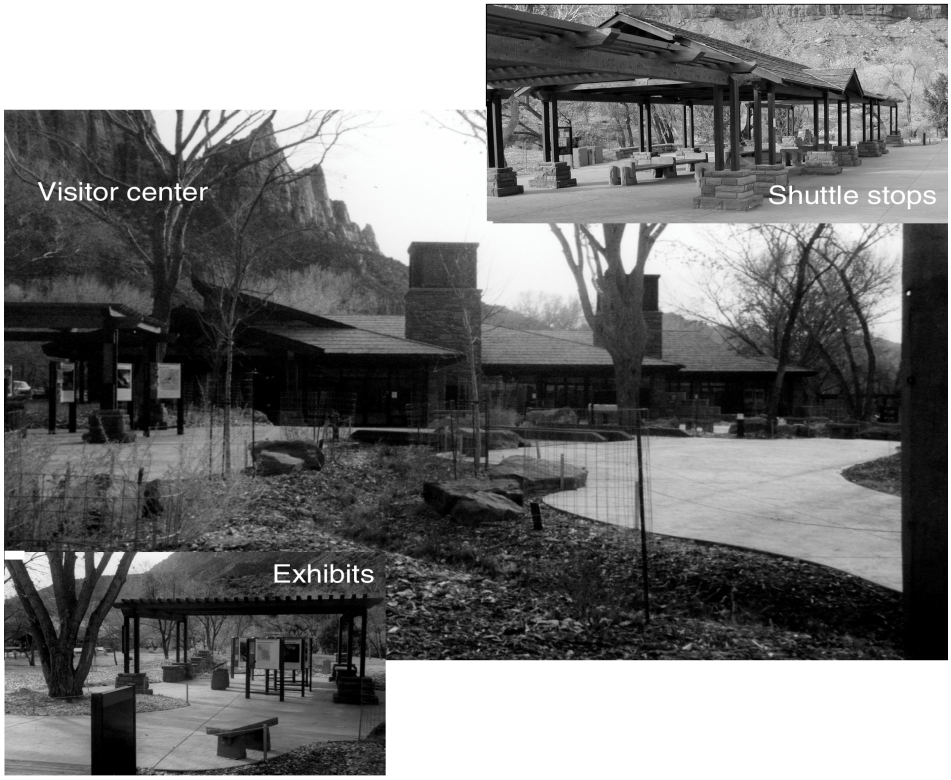
Cost range	Average number of functions	Number of projects
Less than $2 million	1.7	14
$2 million to less than $3 million	3.2	14
$3 million to less than $5 million	4.4	14
$5 million to less than $10 million	4.6	23
$10 million or more	5.9	15
Total	**4.1**	**80**

Source: GAO survey data, n=80 visitor center projects.

The 14 visitor center projects with cost projections below $2 million have an average of 2 additional functions over the 5 basic functions, whereas the 15 visitor center projects with cost projections above $10 million average 6 additional functions or triple the number of additional functions included in the projects costing less than $2 million.

The type of function included in the project also affects a project's costs. Several parks have included transportation facilities in their projects, which can be costly. For example, the Grand Canyon and Zion national parks each have a form of bus service with shuttle stops, buses, and related maintenance buildings. At Zion National Park, the new visitor center project cost about $24 million, and includes the construction of the visitor center, a bus maintenance center, shuttle stops, and the purchase of over 30 buses for the park's new shuttle system. Figure 6 shows several different parts of the new visitor center project, including a large outdoor exhibit area that can accommodate large number of visitors during peak season.

Figure 6: New Visitor Center at Zion National Park



The new visitor center at Zion National Park has large, outdoor areas; shaded exhibits; and a shuttle system with several shuttle stops.

Source: GAO photographs.

Fort Sumter National Monument, which is located on an island, required the construction of a unique transportation system—a boat dock from which visitors will travel to the site. The visitor center is currently being built on a dock that will provide boat rides to the site. Figure 7 shows the frame of the visitor center in November 2000, as well as the dock, all of which are expected be completed in August 2001.

Figure 7: Fort Sumter Boat Dock and Visitor Center

A—Frame of the Fort Sumter visitor center.

B—Dock from which concession tour boats will leave for Fort Sumter in Charleston Harbor.

Source: GAO photographs.

Depending on a park's needs, parks have also added other functions, including headquarters space; space for the concessioners operating services in the parks, such as hotels, guided tours, gift shops, or restaurants; curatorial space; and museum space. For example, the

Gettysburg project will house its Civil War collection in a new visitor center museum. Appendix II presents detail information on the 80 visitor center projects and the functions included in them.

Finally, the size of the visitor center, measured by the square feet contained in the visitor center building, influences the total cost of the visitor center project.[6] Table 4 shows the average square footage of the visitor center buildings by the cost ranges of the projects.

Table 4: Average Area of Visitor Center Buildings by Cost Range (in square feet)

Cost range	Average square feet in visitor center building	Number of projects
Less than $2 million	6,747	14
$2 million to less than $3 million	9,288	14
$3 million to less than $5 million	11,409	14
$5 million to less than $10 million	18,271	23
$10 million or more	28,228	15
Average/total	**15,348**	**80**

Source: GAO survey data, n=80 visitor center projects.

On average, the visitor center projects in the higher cost ranges have much larger buildings. The 15 most costly projects have buildings with an average area of 28,228 square feet, while the 14 least costly projects average 6,747 square feet.[7]

The variation in visitor center project functions and size is partially due to the fact that the Park Service has not developed specific guidelines for what should be included in a visitor center project. Under the current Park Service policy on park facilities, visitor center projects may be constructed when necessary to provide visitor information and interpretive services. The policy generally describes what may be included in a visitor center, such as information services, sale of educational materials, museums, museum collections storage, exhibits, and other programs and spaces to

[6]We ran statistical tests to determine the partial correlation association among the cost of the visitor center projects, the number of functions in the projects, and the size of the visitor centers. The results for the relationship between each pair of variables were significant at the $P < .05$ level.

[7]The square footage figures include headquarters space for those projects that have joint visitor center and headquarters buildings.

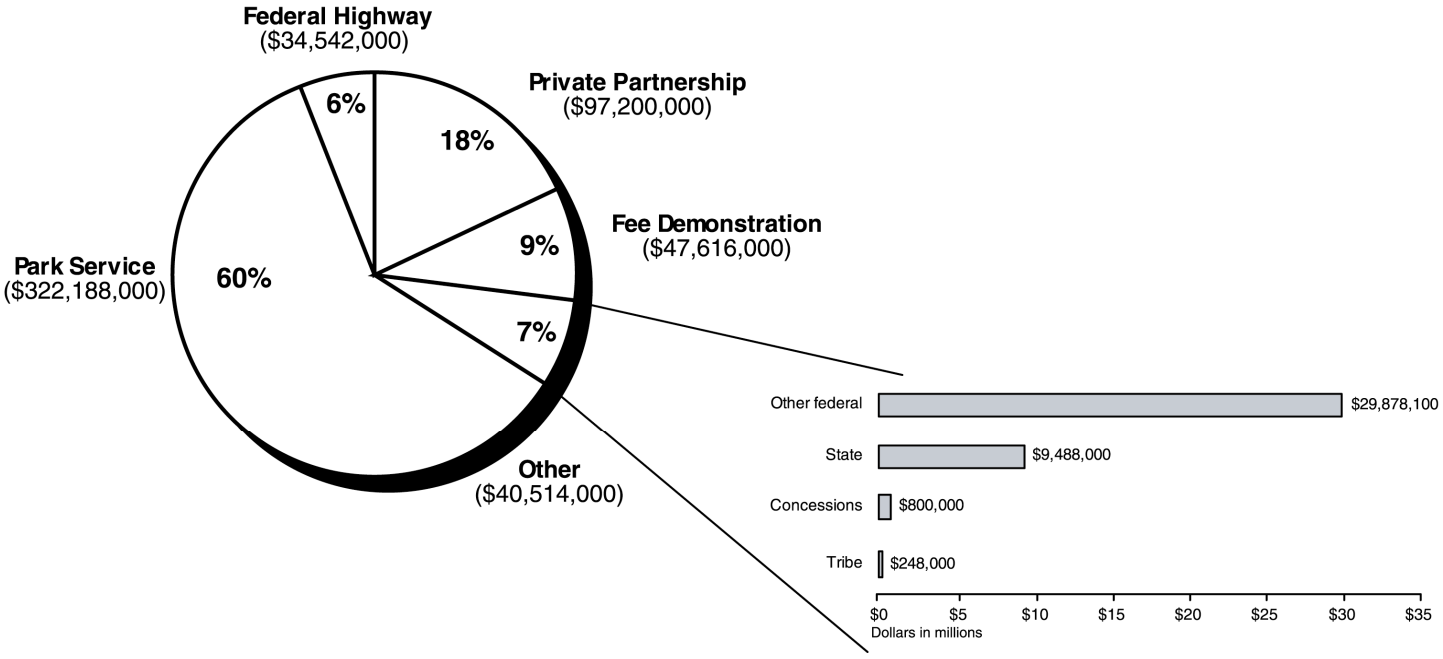
create a quality visitor experience. The determination of the functions and size for a particular visitor center project is made initially by the park superintendent and is then subsequently reviewed and analyzed by the appropriate regional office and the construction program. Since 1996, the Park Service has also relied on an advisory board called the Development Advisory Board to review all construction projects over $500,000. Of the 80 projects, the Board has reviewed 37 and needs to review 30 projects. The remaining 13 projects predated the review process. The board reviews proposed project plans and cost estimates for projects, hears presentations from the park's employees, and either forwards the project for Director approval or requests additional analyses. Projects that require additional analyses are sent back to the parks for revisions and additional work before returning to the board for review.

To provide specific guidelines for the Development Advisory Board and the parks, the Park Service contracted with two architectural and engineering firms to develop construction planning criteria and preliminary cost guidance for Park Service facilities, including functions, square footage, and cost. One of the contractors is expected to provide guidelines for maintenance facilities to the Park Service in August 2001 and will continue working on guidelines for the other facilities, including visitor centers, in the upcoming year. When the guidelines are complete, the Park Service plans to have park staff use them to develop the scope of projects and the initial cost estimates, and plans to provide the guidelines to the Development Advisory Board for use in its future review of projects.

Funding for Visitor Center Projects Include Park Service Appropriations, Private Funds, Fee Demonstration Funds, and Other Sources

The Park Service receives appropriations for planning, construction, and repair and rehabilitation, all of which can be used in the construction or renovation of visitor center projects. In addition, the Park Service has successfully generated supplemental funding from other sources, such as private partnerships, fee demonstration funds, federal highway funds, various other government entities, and others. Figure 8 shows the total funding for the 80 visitor center projects that has been or will be provided by source.

Figure 8: Total Funding for Visitor Center Projects by Source, Fiscal Years 1996-2005



Source: GAO survey data, n=80 visitor center projects.

Park Service funds represent the largest funding source for the 80 visitor center projects, contributing an estimated $322 million of the total estimated cost of $542 million. Private partnerships are the second largest source of funding for the visitor center projects, providing $97 million for visitor center projects. The Park Service can receive donations—including buildings—from private individuals or groups. Many parks have "Friends" groups or natural history associations that are interested in supporting the park by raising funds and developing important projects. After private partnerships, the third largest source of funds for visitor center projects is estimated to be fee demonstration funds, which are raised through additional or new fees charged by individual parks. For example, a park can adjust its entrance fees based on use or charge additional fees during peak seasons. Of the funds collected, the park can keep 80 percent, and the remaining 20 percent is put into a pool for which other parks can compete. Some parks received authority to raise fee demonstration funds in fiscal year 1996 and can spend these funds through 2005. The Park Service estimates that $48 million, or 9 percent, of the total funding for the 80 visitor center projects will be fee demonstration funds.

Additional funding for visitor center projects comes from a number of different sources. Road construction funds from the Federal Highway Administration's Federal Lands Highway Program provide an estimated $35 million, or 6 percent, of the total project funding. The highway program provides discretionary funding that can be used for, among other things, visitor center projects located on major roads. For example, funding for the visitor center project at Big Cypress National Preserve in Florida, which will cost $2.1 million, was provided from highway funds. Finally, funding for visitor center projects also comes from other federal agencies, state governments, concession owners, and Indian tribes. In total, other funding sources provide an estimated $40 million, or 7 percent, of funding for the 80 projects. For example, the largest single source of funding for the Home of Franklin D. Roosevelt project—$8.2 million—will come from the National Archives for the library portion of the project.

Alternative sources of funding—such as private partnership funds, fee demonstration funds, or highway funds—can significantly benefit some projects, allowing them to be constructed perhaps several years before they would have received Park Service construction appropriations. Some projects receive small amounts of these alternative sources of funding, while other projects receive almost their entire funding from alternative sources. For example, Kennesaw Mountain received $520,000 for its renovation from its Friends group and the Kennesaw Mountain Historical Association, which represented about 25 percent of its total costs. On the other hand, the new visitor center project at the Grand Canyon used over $16 million, or 68 percent of its total construction costs, in fee demonstration funds raised by the park.

Observations

The Park Service is experiencing increased activity in building projects that include visitor centers, and faces the challenge of constructing buildings that simultaneously serve the purposes of the individual parks and are built efficiently and in a cost-effective manner. The National Park Service has made efforts—through the establishment of the Development Advisory Board and the development of facility guidelines—to move the agency toward achieving these goals. The variation in the costs, size, and functions of projects that include visitor centers supports the Park Service's efforts.

Agency Comments and Our Evaluation

We provided the Department of the Interior with a copy of our draft report for review and comment. Overall, Interior said that the report provides useful information that will be beneficial to the Park Service in planning, programming, design and construction of visitor centers and associated facilities. Interior said the report presents information in a "non-interpreted" way, but asserts that some of our data is incorrect and that some relevant information has not been included in the report.

First, Interior believes that some of the data gathered with our survey and used in portions of the report are incorrect. We disagree. Our objectives were to provide information on the cost, functions, and funding for visitor center projects. Because Interior does not maintain a database with this information, it was necessary for us to first identify visitor center projects and then to gather specific information using a questionnaire to answer the study's specific objectives. As we pointed out in our scope and methodology, we designed our questionnaire with the Park Service's input and we discussed the questionnaire in detail with officials from 11 parks. To address potential inconsistencies or misinterpretations in responses from the parks, we followed up, as is our normal practice, with all parks that provided data that appeared to be inconsistent or misinterpreted. As a further check on the validity of the data, we corroborated the project cost and funding data with regional budget staff. We believe the data upon which the report is based are accurate. Other data which we gathered as part of the questionnaire and to which Interior is referring—data on the visitor center building costs—were not used in the report. We attempted to gather this data because Interior did not maintain the data. However, in discussing visitor center building costs with the parks and with Interior construction staff, we found that the data were subject to different interpretations and assumptions about what specific costs should be included. For example, parks used different interpretations on whether or not to include site development costs, which in its comments Interior points out can be a major cost in the overall visitor center project costs. Given that collecting specific data on visitor center building costs was not part of our overall objectives, and that the data are subject to different interpretations and assumptions, the data need to be clarified and studied in more detail as part of a separate review.

Interior also believes that providing costs per square foot of the individual visitor center buildings is more meaningful than providing the overall costs of visitor center projects. We strongly disagree that information on visitor center building costs is more meaningful than the cost of the projects. As stated above, our purpose was to discuss the cost, functions, and funding sources for visitor center projects and not just visitor center buildings. The requesters asked that we gather data on overall visitor

center projects because the total project costs reflect all costs related to developing and constructing a visitor center, which represent the cost to the taxpayer. Also, only in this way can the full range of visitor center project functions, including transportation facilities, be addressed. Although Interior states that cost-per-square-foot data is more meaningful than project costs, the Park Service has not developed a database containing this information. Furthermore, Interior asserts that the data could have been easily developed from data already accumulated. We disagree. We gathered, as part of our study, data that could be used to calculate the cost per square foot of individual visitor centers. However, because of various interpretations and the assumptions used in calculating the square foot costs of visitor center buildings, we ultimately decided not to report these data. We agree that cost-per-square-foot data on visitor center buildings are important and question why the Park Service has not yet developed the data.

Interior notes that trends in visitor center costs and costs per square foot can be identified and that our report could have identified trends but did not do so. We disagree that trends can be identified. The trends that Interior says that it has identified are not trends, but are comparisons of average costs at two points in time. We attempted to develop trends by plotting total and average project costs by the year projects were completed, and as we stated in the report, were unable to discern a trend in costs because of the wide variation in projects.

Finally, Interior asserts that parts of our discussion of its planning, design and construction processes are incomplete or incorrect. We believe that for the purpose of this study, general background information is needed to interpret the data and that we have provided complete information for this purpose. We did make technical changes, as appropriate, to address Interior's specific comments on incorrect information related to these processes. Interior's comments are presented in their entirety in appendix V.

We conducted our review from November 2000 through June 2001 in accordance with generally acceptable government auditing standards. We are sending copies of this report to the Honorable Gale A. Norton, Secretary of the Interior; the Director of the National Park Service; and other interested parties. This report will be available on GAO's home page at http://www.gao.gov.

If you or your staff have any questions about this report, please call me at (202) 512-3841. Key contributors to this report were Fran Featherston, Cliff Fowler, Susan Iott, Chet Janik, and Bill Temmler.

Barry T. Hill
Director, Natural Resources
and Environment

Appendix I: Scope and Methodology

Our study included all National Park Service visitor center projects that had either been completed, were under construction, or were planned to be completed between fiscal year 1996 and fiscal year 2005 (as identified by January 2001). We selected fiscal year 1996 as a starting point because changes in the Park Service's accounting and regional organization prior to 1996 made data difficult to obtain. We used fiscal year 2005 as our cutoff because projects that the Park Service is planning to complete beyond that year are less certain than projects that will be completed prior to that year as the projects have not been reviewed or prioritized by the agency. The Park Service's 5-year construction plan, which extended through fiscal year 2005 at the time we were gathering information, includes the agency's prioritized construction projects.

First, to answer all three objectives—the number, reasons, costs, functions and sources of funding for the identified projects—we developed a questionnaire. To gather background data and to develop and pretest the questionnaire for our study, we visited or talked to officials at 11 national parks in Georgia, Tennessee, South Carolina, Utah, Arizona, Colorado, Virginia, and Pennsylvania. We chose parks that had visitor center projects in various stages of construction and that had a variety of functions. A copy of the questionnaire is included in appendix IV.

Second, to determine the number of visitor centers built, renovated, and planned from fiscal year 1996, we worked with National Park Service officials to develop a current definition of a visitor center project. This was necessary because the Park Service did not have a specific definition of a visitor center project, but rather, has general guidance on what constituted a visitor center. We agreed with the Park Service that a visitor center project (1) must have a staffed facility that provides general information on the park, (2) must include administrative space for visitor center personnel plus four of the basic functions included in the guidance—an information desk, exhibits, publication sales, and restrooms, and (3) can include a number of other functions, including an auditorium, ticket sales and permits, transportation facilities, and other specialized uses, depending on the needs of the individual park. In addition, it was agreed that visitor contact stations that are not staffed by personnel or specialized facilities such as education centers or beach houses, would not be counted as visitor center projects.

Third, using this definition, we reviewed Park Service budget and planning documents and interviewed Park Service construction officials to identify an initial set of visitor center projects. We then sent to each Park Service regional office a list of projects at parks in the respective regions for

review. Through this process we identified 106 visitor center projects that were either completed, under construction, or planned to be completed during the period of fiscal year 1996 through fiscal year 2005.

Fourth, we mailed questionnaires—one for each of 106 visitor center projects—to the 94 parks that had visitor center projects built or planned during our time frames. Some parks had more than one project built or planned. To corroborate that the visitor center projects met our specifications, we requested documentation for each project. One park identified a second project that fell within the study's time frames and completed a questionnaire for that project, bringing the total number of identified projects to 107. However, 27 of the 107 projects were subsequently dropped from the study because the parks stated these projects did not fit into our universe for several different reasons, including the fact that the bulk of the visitor center project had been completed prior to 1996, the project had been redesigned and the visitor center portion eliminated, or the project would not be completed by 2005. This left 80 projects in the survey. We mailed the questionnaires on January 10, 2001 and obtained completed questionnaire responses for all 80 projects by March 16, 2001.

Finally, to corroborate that we had received consistent funding and cost information for each project, we asked the budget staff from each of the Park Service's seven regions to ensure that the parks in the region had reported costs and funding data in the same way. Specifically, we asked the regions to ensure that the funds included contingency and supervision costs and that the cost and fund data were in constant fiscal year 2000 dollars. We received corrections for our data through April 2001. Finally, we coordinated our work with the architecture and engineering contractor that the Park Service had hired to develop square footage and function standards for key park facilities, including visitor centers.

We conducted our work from November 2000 through June 2001 in accordance with generally accepted government auditing standards.

Appendix II: Functions Included in Visitor Center Projects

The following figure shows the functions, in addition to the five basic functions, that are included in the 80 visitor center projects that the Park Service has either completed, has under construction, or is planning to complete between fiscal years 1996 and 2005. The projects are grouped by whether or not they involve new construction or renovation of an existing building, and by the status of the project construction.

Figure 9: Functions Included in Visitor Center Projects

Name of Park	Headquarters	Concessions	Auditorium	NPS Library	Curatorial space, storage	Transportation facilities	Tickets and permits	Wayside trails, landscaped areas	Parking lot	Utilities	Other[a]
Projects with New Construction											
Planned Projects											
Arches	●		●	●			●		●	●	
Badlands (Lakota Cultural Center)		●	●		●		●	●	●	●	●
Big Cypress			●					●	●	●	
Chikasaw			●				●	●	●	●	
Cumberland Island			●	●		●	●	●	●	●	
Denali			●					●	●		
Fort Necessity			●	●	●			●	●	●	
Fort Stanwix	●		●	●	●	●	●			●	
Gateway (Wildlife Refuge)				●					●	●	
Gettysburg	●	●	●	●	●	●	●		●	●	●
Grand Portage	●		●	●	●				●		
Great Basin			●	●	●		●	●	●	●	
Home of Franklin D. Roosevelt			●				●	●	●	●	●
John Day Fossil Beds			●	●	●				●	●	●
Lava Beds				●	●				●		●
Mississippi River								●			
New River Gorge			●	●				●	●	●	
Palo Alto Battlefield			●						●	●	
Perry's Victory			●						●		
Pinnacles									●	●	
Puukohola Heiau	●			●	●		●	●	●	●	
Shiloh		●						●	●	●	
Ulysses S. Grant	●		●					●	●	●	
Upper Delaware River			●					●	●	●	●
Washita Battlefield	●		●	●	●			●	●	●	
Western Arctic National Parklands	●		●	●	●				●		
Projects Under Construction											
Big Thicket			●				●		●		
Congaree Swamp	●		●	●	●		●	●	●	●	
Fort Sumter		●				●	●	●	●	●	
Grand Canyon						●		●		●	
Hovenweep		●						●	●	●	
Independence		●	●				●	●		●	
Wrangell-St. Elias	●		●	●	●	●	●	●	●	●	
Completed Projects											
Andersonville			●	●				●	●	●	
Biscayne		●	●				●	●	●	●	
Black Canyon of the Gunnison			●				●		●	●	
El Malpais			●				●		●	●	
Everglades		●	●					●	●		
Martin Luther King Jr.	●	●	●	●	●				●	●	
Natchez	●	●	●			●	●	●	●	●	●
Rocky Mountain (Fall River)									●	●	
San Antonio Missions			●						●		
Zion						●	●	●	●	●	

Name of Park	Headquarters	Concessions	Auditorium	NPS Library	Curatorial space, storage	Transportation facilities	Tickets and permits	Wayside trails, landscaped areas	Parking lot	Utilities	Other[a]
Projects with Renovations											
Planned Projects											
American Memorial	●	●	●		●		●	●	●	●	
Badlands (Park Visitor Center)	●		●	●	●		●	●	●	●	●
Brown v. Board of Education	●		●	●	●					●	
Cape Cod			●					●		●	●
Carlsbad			●	●			●			●	
C&O Canal (Great Falls)								●		●	
Craters of the Moon	●	●	●	●	●					●	
Dayton Aviation Heritage			●	●	●					●	
Dinosaur				●			●				
Grant-Kohrs Ranch			●	●			●		●		
Great Sand Dunes	●			●	●					●	●
Great Smoky Mtns (Oconaluftee)			●	●	●	●	●	●	●	●	
Kenai Fjords	●		●	●	●		●		●		
Mammoth Cave		●		●		●	●	●		●	
Manzanar	●		●	●					●	●	
Mojave		●	●					●	●	●	
North Cascades	●		●	●	●					●	
Petrified Forest	●				●					●	
Pipe Spring	●			●			●	●			
Rocky Mountain (Beaver Meadow)	●		●				●	●	●		
San Francisco Maritime			●		●					●	
U.S.S. Arizona Memorial	●	●		●	●				●		
Yellowstone							●				
Projects Under Construction											
Acadia						●			●	●	
Bryce Canyon	●			●	●					●	
Gateway (Ryan)	●			●			●				
Kennesaw Mountain		●	●	●				●	●		
New Bedford Whaling										●	
Sequoia						●		●	●	●	
Shenandoah			●								
Sitka	●		●		●	●		●	●	●	
Completed Projects											
C&O Canal (Cumberland)											
Fort Smith	●		●	●				●	●	●	●
Great Smoky Mtns (Sugarlands)			●								
Manassas			●				●		●	●	
Olympic		●								●	
Richmond			●					●	●	●	●

● = Function included in project

[a] Other functions include classrooms, recreational vehicle areas, and museums

Appendix III: Funding Sources and Total Costs of Park Service Visitor Center Projects

The following table provides details on the funding sources for the 80 visitor center projects that the Park Service has completed, has under construction, or is planning. The projects are grouped by new construction or renovation of an existing building, and by the status of the project construction. We worked with the regional office budget staff to corroborate the funding data provided in the questionnaires and to ensure that funds were reported in constant fiscal year 2000 funds.

Table 5: Total Costs of Project and Funding Sources

Name of Park with Visitor Center Project[a]	Total Costs for Project[b,c]	Total NPS Funds[c]	Fee Demonstration Funds[c]	Federal Highway Funds[c]	Private Partnership Funds[c]	Other Sources of Funds[c]
Projects with New Construction						
Planned Projects						
Arches[d]	$9,176,000	$9,176,000	$0	$0	$0	$0
Badlands (Lakota Center)[e]	$27,703,000	$27,703,000	$0	$0	$0	$0
Big Cypress	$2,100,000	$0	$0	$2,100,000	$0	$0
Chickasaw	$2,698,000	$2,698,000	$0	$0	$0	$0
Cumberland Island	$3,557,000	$3,557,000	$0	$0	$0	$0
Denali[d]	$5,557,000	$5,557,000	$0	$0	$0	$0
Fort Necessity	$11,176,000	$3,676,000	$0	$0	$3,000,000	$4,500,000
Fort Stanwix	$5,126,000	$2,209,000	$0	$2,000,000	$0	$917,000
Gateway (Wildlife Refuge)[d]	$2,933,000	$2,933,000	$0	$0	$0	$0
Gettysburg[d]	$39,000,000	$0	$0	$0	$39,000,000	$0
Grand Portage	$6,413,000	$6,413,000	$0	$0	$0	$0
Great Basin	$4,792,000	$0	$0	$514,000	$4,278,000	$0
Home of Franklin D. Roosevelt	$18,400,000	$6,800,000	$0	$0	$3,400,000	$8,200,000
John Day Fossil Beds[d]	$9,010,000	$9,010,000	$0	$0	$0	$0
Lava Beds	$4,420,000	$4,420,000	$0	$0	$0	$0
Mississippi River	$2,252,000	$252,000	$0	$0	$0	$2,000,000
New River Gorge	$10,871,000	$0	$0	$10,841,000	$30,000	$0
Palo Alto Battlefield	$2,439,000	$1,744,000	$0	$0	$695,000	$0
Perry's Victory[d]	$2,796,000	$2,422,000	$253,000	$0	$111,000	$10,000
Pinnacles[d]	$3,399,000	$3,399,000	$0	$0	$0	$0
Puukohola Heiau[d]	$1,740,000	$1,740,000	$0	$0	$0	$0
Shiloh	$9,734,000	$9,734,000	$0	$0	$0	$0
Ulysses S. Grant[d]	$9,711,000	$9,711,000	$0	$0	$0	$0
Upper Delaware River	$6,350,000	$5,560,000	$0	$791,000	$0	$0
Washita Battlefield	$4,920,000	$4,920,000	$0	$0	$0	$0
Western Arctic National Parklands[d]	$7,253,000	$7,253,000	$0	$0	$0	$0
Subtotal	**$213,526,000**	**$130,887,000**	**$253,000**	**$16,246,000**	**$50,514,000**	**$15,627,000**

Name of Park with Visitor Center Project[a]	Total Costs for Project[b,c]	Total NPS Funds[c]	Fee Demonstration Funds[c]	Federal Highway Funds[c]	Private Partnership Funds[c]	Other Sources of Funds[c]
Projects Under Construction						
Big Thicket[d]	$1,414,000	$168,000	$944,000	$0	$230,000	$72,000
Congaree Swamp[d]	$2,452,000	$2,182,000	$0	$166,000	$104,000	$0
Fort Sumter	$14,078,000	$12,683,000	$0	$0	$477,000	$918,000
Grand Canyon[d]	$24,017,000	$0	$16,280,000	$6,674,000	$1,063,000	$0
Hovenweep[d]	$1,344,000	$1,304,000	$40,000	$0	$0	$0
Independence	$27,106,000	$0	$0	$0	$27,106,000	$0
Wrangell-St. Elias[d]	$10,077,000	$9,322,000	$0	$754,000	$0	$0
Subtotal	$80,488,000	$25,659,000	$17,264,000	$7,594,000	$28,980,000	$990,000
Completed Projects						
Andersonville[d]	$8,428,000	$3,728,000	$0	$0	$3,409,000	$1,291,000
Biscayne[d]	$3,127,000	$3,127,000	$0	$0	$0	$0
Black Canyon of the Gunnison[d]	$639,000	$0	$319,000	$0	$112,000	$208,000
El Malpais	$5,109,000	$3,167,000	$0	$0	$1,740,000	$202,000
Everglades[d]	$4,309,000	$0	$0	$0	$0	$4,309,000
Martin Luther King Jr.	$10,800,000	$10,800,000	$0	$0	$0	$0
Natchez	$10,872,000	$3,223,000	$0	$4,103,000	$1,198,000	$2,348,000
Rocky Mountain (Fall River)	$2,422,000	$0	$0	$0	$2,117,000	$305,000
San Antonio Missions[d]	$15,829,000	$15,829,000	$0	$0	$0	$0
Zion[d]	$23,990,000	$21,752,000	$0	$2,238,000	$0	$0
Subtotal	**$85,525,000**	**$61,626,000**	**$319,000**	**$6,341,000**	**$8,576,000**	**$8,663,000**
Total, New Construction	**$379,539,000**	**$218,172,000**	**$17,836,000**	**$30,181,000**	**$88,070,000**	**$25,280,000**
Projects with Renovations						
Planned Projects						
American Memorial Park	$4,060,000	$45,000	$0	$0	$15,000	$4,000,000
Badlands (Park Center)	$3,741,000	$3,416,000	$325,000	$0	$0	$0
Brown v. Board of Education	$11,464,000	$11,464,000	$0	$0	$0	$0
Cape Cod	$3,744,000	$3,744,000	$0	$0	$0	$0
Carlsbad Caverns	$5,497,000	$450,000	$4,947,000	$0	$100,000	$0
C&O Canal (Great Falls)	$1,852,000	$1,852,000	$0	$0	$0	$0
Craters of the Moon	$1,340,000	$1,340,000	$0	$0	$0	$0
Dayton Aviation Heritage	$5,867,000	$5,521,000	$0	$0	$126,000	$220,000
Dinosaur	$7,749,000	$7,749,000	$0	$0	$0	$0
Grant-Kohrs Ranch	$6,259,000	$6,259,000	$0	$0	$0	$0
Great Sand Dunes	$838,000	$838,000	$0	$0	$0	$0

Name of Park with Visitor Center Project[a]	Total Costs for Project[b,c]	Total NPS Funds[c]	Fee Demonstration Funds[c]	Federal Highway Funds[c]	Private Partnership Funds[c]	Other Sources of Funds[c]
Great Smoky Mountains (Oconaluftee)	$9,391,000	$9,391,000	$0	$0	$0	$0
Kenai Fjords	$10,909,000	$9,245,000	$0	$0	$0	$1,663,000
Mammoth Cave	$6,590,000	$0	$6,536,000	$0	$54,000	$0
Manzanar	$5,862,000	$5,862,000	$0	$0	$0	$0
Mojave	$6,031,000	$731,000	$0	$2,100,000	$0	$3,200,000
North Cascades	$2,660,000	$2,660,000	$0	$0	$0	$0
Petrified Forest	$3,466,000	$3,041,000	$425,000	$0	$0	$0
Pipe Spring	$936,000	$0	$688,000	$0	$0	$248,000
Rocky Mountain (Beaver Meado)	$2,084,000	$0	$1,273,000	$660,000	$0	$151,000
San Francisco Maritime	$3,400,000	$0	$0	$0	$0	$3,400,000
U.S.S. Arizona Memorial	$6,485,000	$1,355,000	$0	$0	$5,130,000	$0
Yellowstone	$8,712,000	$0	$7,949,000	$0	$0	$763,000
Subtotal	**$118,937,000**	**$74,963,000**	**$22,143,000**	**$2,760,000**	**$5,425,000**	**$13,645,000**
Projects Under Construction						
Acadia	$1,887,000	$559,000	$447,000	$683,000	$102,000	$97,000
Bryce Canyon	$4,560,000	$0	$4,060,000	$0	$500,000	$0
Gateway (Ryan)	$2,635,000	$2,635,000	$0	$0	$0	$0
Kennesaw Mountain	$2,236,000	$1,352,000	$364,000	$0	$520,000	$0
New Bedford Whaling	$1,165,000	$1,165,000	$0	$0	$0	$0
Sequoia	$9,389,000	$9,389,000	$0	$0	$0	$0
Shenandoah	$2,592,000	$367,000	$2,213,000	$0	$12,000	$0
Sitka	$4,126,000	$4,126,000	$0	$0	$0	$0
Subtotal	$28,590,000	$19,593,000	$7,084,000	$683,000	$1,134,000	$97,000
Completed Projects						
C&O Canal (Cumberland)	$1,160,000	$1,160,000	$0	$0	$0	$0
Fort Smith	$7,235,000	$7,100,000	$120,000	$0	$15,000	$0
Great Smoky Mountains (Sugarlands)	$498,000	$0	$0	$0	$498,000	$0
Manassas	$1,460,000	$715,000	$0	$0	$52,000	$692,000
Olympic	$1,718,000	$485,000	$433,000	$0	$0	$800,000
Richmond	$2,924,000	$0	$0	$918,000	$2,006,000	$0
Subtotal	**$14,995,000**	**$9,460,000**	**$553,000**	**$918,000**	**$2,571,000**	**$1,492,000**
Total, Renovations	**$162,522,000**	**$104,016,000**	**$29,780,000**	**$4,361,000**	**$9,130,000**	**$15,234,000**
Grand Total, All Projects	**$542,061,000**	**$322,188,000**	**$47,616,000**	**$34,542,000**	**$97,200,000**	**$40,514,000**

[a]The data presented in this table are for projects that include visitor centers because that allowed us to capture all the functions that are included in such projects and because the Park Service maintains funding and cost data on a project basis.

[b]This table contains both actual and estimated costs. If a project is completed the costs represent total obligations, otherwise the costs represent total estimated costs for the projects.

[c]Totals do not add due to rounding.

[d]These projects replace existing visitor centers that the Park Service has determined are obsolete, structurally deficient, do not meet code, or require high maintenance and operation costs.

[e]This project is a unique project in that the majority of the project involves a cultural center and the visitor center is part of the project.

Appendix IV: Copy of Visitor Center Project Questionnaire

United States General Accounting Office

GAO Survey of Visitor Center Construction Projects

Introduction

We are conducting a survey to collect funding, facility, visitation, and other information on National Park Service visitor centers that have been constructed, significantly rehabilitated, are under construction or significant rehabilitation, or are being planned for construction or significant rehabilitation since fiscal year 1996. The following is the definition of a visitor center:

> **Visitor Center:** A staffed facility with the primary purpose of providing the public with general information on a park. A visitor center does not include facilities solely for backcountry passes, beach houses, educational centers, or other specialized services.
>
> A visitor center generally contains the following:
> - Information desk
> - Restroom
> - Interpretive or exhibit area
> - Publications sale area
> - Administrative space for personnel who staff the center
>
> A visitor center may also—but does not have to—contain an auditorium, museum, library, outdoor/trail space, curatorial space, transit facilities, or other specialized facilities. It may be one building or a group of buildings.

Your response within 3 weeks will help us avoid costly follow-ups. Without your response, we will not be able to accurately report to the Congress on the recent construction of National Park Service visitor centers. If you have any questions about the study or this survey, please call Susan Iott at (202) 512-8767 or e-mail her at iotts@gao.gov. If the envelope is missing, please mail your questionnaire to:

U.S. General Accounting Office
Attn: Ms. Susan Iott
441 G St. NW Room 2T23
Washington, DC 20548

Please provide the following information in case we need to contact you:

Park contact

Name: _____

Phone: _____

Regional or other contact

Name: _____

Phone: _____

Please answer the questions in this survey relating to the following visitor center project at your park:

Background

1. Is this project the only visitor center for your park? *(Check one.)*

   1. [ ] Yes
   2. [ ] No → a. In total, how many operating visitor centers are there?

      _____ visitor centers
   3. [ ] Other *(Please describe.)*

1

2. Which of the following best describes the number of projects used for this visitor center project (see label on page 1)? *(Check one.)*

   1. [ ] One project, single phase
   2. [ ] One project with multiple phases
   3. [ ] Several projects
   4. [ ] Other *(Please describe.)*

3. Does this visitor center project include a new building(s) or is it a significant rehabilitation/expansion project? *(Check one.)*

Significant rehabilitation/expansion: The adaptation of another building to make it a visitor center or the renovation of an existing one.

- A significant rehabilitation or expansion should improve the function or efficiency of the building, for example, by increasing the square footage or rearranging existing space.
- A significant rehabilitation or expansion does not include individual capital improvement projects, such as redoing a roof or sewer system.
- If a building has been demolished to build the center, then it should be considered new.

   1. [ ] New construction
   2. [ ] Significant rehabilitation/expansion *(See definition in box above.)*
   3. [ ] Other *(Please describe.)*

4. In what year was this project first identified? For example, when was it first identified in the park's general management plan or other plan? *(Enter year below.)*

   Year: _____

5. Is this project a congressional add-on? That is, was the visitor center added to the budget by the Congress. *(Check one.)*

   1. [ ] Yes
   2. [ ] No
   3. [ ] Other *(Please describe.)*

2

6. What are the major reasons for constructing a new visitor center, or rehabilitating the old one? *(Check one for each row.)*

	Major reason (1)	Moderate reason (2)	Minor reason (3)	Not a reason (4)	*No basis to judge/ Uncertain* (5)
a. Increased visitation					
b. Never had a visitor center at this location					
c. Poor location of old visitor center					
d. Inadequate space in old visitor center					
e. Facilities old					
f. Needed to add or upgrade restrooms					
g. Additional bookstore space needed					
h. Exhibits old or inadequate					
i. Needed to add information desk space					
j. Needed to add administrative space for visitor center personnel					

k. Please list any other reasons below.

7. Please briefly describe the visitor center facility(ies):

3

8. In what month and year was this visitor center project "initiated?" For park projects, when was an architecture and engineering contract (A&E) or when did a park architect begin work? For private partnership projects, when was an agreement with the partner signed? *(Enter month and year below.)*

_____ Month _____ Year

9. What is the current status of this project according to the definitions in the box below? *(Check one.)*

Definitions:
1. A project is in planning and design when it has been approved by the Department of the Interior but is not yet under construction. These may include projects that have class A, B, or C cost estimates.

2. A project is under construction when a contract has been awarded and construction of any part of the facility is underway. The facility is not open.

3. A project is substantially complete when construction is nearly done and portions of the visitor center are open to the public.

4. A project is complete when all phases of the construction are done and the center is open to the public. The contract may or may not be closed and the punch list may still be pending.

1. [ ] Planning and design
2. [ ] Under construction
3. [ ] Substantially complete
4. [ ] Complete
5. [ ] Other *(Please describe.)*

10. In what month and year was this visitor center completed—with all phases of the project open to the public? If not completed yet, please specify when you expect it to be completed. *(Enter month and year below.)*

_____ Month _____ Year

11. ***If the visitor center is in the construction phase,*** what percent of it is completed? Please consider multiple-phase and multiple projects as one large project in answering this question. *(Enter number. If a contract has been awarded but construction has not begun, enter "0.")*

[ ] Not in the construction phase

_____%

12. ***If the project is in the planning and design phase,*** what is the most recent class of cost estimate? *(Check one.)*

1. [ ] ***Not in planning phase***
2. [ ] Class A
3. [ ] Class B
4. [ ] Class C
5. [ ] Other *(Please describe.)*

4

13. Was this project reviewed by the Development Advisory Board (DAB)? If so, how long did the review take? *(Check one.)*

    1. [ ] ***Not reviewed by DAB***
    2. [ ] Less than 3 months
    3. [ ] 3 to 6 months
    4. [ ] 7 to 9 months
    5. [ ] 10 to 12 months
    6. [ ] Over 12 months
    7. [ ] Other *(Please describe.)*

Square footage

14. What is the total square footage of the ***old visitor center*** (the facility being replaced or rehabilitated/expanded)? If no previous visitor center, check the box below and go to the next question. *(You may round to the nearest 100 square feet.)*

    [ ] No previous visitor center

    _____ sq. ft.

15. How many total square feet will be inside the ***new visitor center building***? If the project is a rehabilitation/expansion, then please report only the new area below. *(You may round to the nearest 100 square feet.)*

    _____ sq. ft.

16. How many additional square feet are there (or will be) included in ***outdoor exhibits areas*** that are integrally connected to the visitor center? Do not report footage for outside features such as landscaping or wayside trails. *(If none, enter "0." You may round to the nearest 100 square feet.)*

    _____ sq. ft.

5

Visitation data

17. Based on ***visitor center*** counts, how many visitors did this center receive in the following years? If data are not available, please indicate "NA." *(You may round to the nearest 1,000 visitors.)*

	Old visitor center (if replaced by new visitor center)	**New visitor center**
1990		
1995		
2000		

If the data are not available, please explain:

18. If you provided visitor center counts for 2000 for the new center, was the visitor center open to the public for a full operating season? *(Check one.)*

    1. [ ] Yes
    2. [ ] No
    3. [ ] Other *(Please describe.)*

19. What is the operating season for this visitor center?

    Begins: _____ Month

    Ends: _____ Month

20. How many visitors do you anticipate will visit this center in 2005? *(You may round to the nearest 1,000 visitors.)*

    _____ visitors

21. What assumptions did you make to arrive at your answer in question 20? *(Please explain.)*

6

Visitor center functions

22. Please identify whether each of the functions below is included in this visitor center project. By project, we mean all activities/phases that are included in this construction project or plans for the project. Check "Does not apply" if the function is not appropriate for this visitor center. *(Check one for each row.)*

> For ***significant rehabilitation and expansion projects***, if the function is retained as part of the old visitor center (but not significantly modified), please check "No."

Is this use or function included in the total project or in the plans for the project?	**Yes** (1)	**No** (2)	**Does not apply** (3)
a. Information desk			
b. Restrooms			
c. Exhibits or interpretive area (include external exhibits that are an integral part of the center			
d. Administrative space for visitor center personnel			
e. Headquarters space			
f. Publication sales (including cooperating association)			
g. Concessions (other than book sales)			
h. Auditorium			
i. NPS Library			
j. Curatorial space, fossil area, or secure storage			
k. Transportation facilities			
l. Ticket sales or permits			
m. Wayside exhibits, trails, or major landscaped areas			
n. Parking lot and/or access road			
o. New or upgraded utilities (e.g., capital improvements such as electric or gas lines)			

p. Please list other functions below.

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Funding information

23. Please provide funding information for this visitor center project on the next page. Please include planning and design funds in this table. Examples are provided on the next page to help you. By project, we mean all activities/phases that are consistent with its A&E plan.

If your answer to Question 9 was:	**Please use this definition for total estimated funding:** Definition: "Funded amount" means the funds already appropriated, fee funds, federal highway funds, donations, or any combination of these.
1. Planning and design	Report either the project's "funded amount" ***or*** its gross estimate from the NPS 5-Year Plan. Do not adjust for time and inflation.
2. Under construction or 3. Substantially complete	Report either the "funded amount" through 9/30/00 ***or*** the "funded amount" plus the estimated gross for later phases. Adjustments to these estimates should be included if it is clearly known that the total costs will be substantially different than these amounts.
4. Complete	Report actual obligations as of 9/30/00.
5. Other	Select the definition above that most closely matches the status you described in question 9.

Project funding sources	**(A)** **Total estimated funds** **(to nearest $1,000)** *(Use the definitions above.)*	**(B)** **Actual obligations** **as of 9/30/00** **(to nearest $1,000)**
Total project funding	$_____	$_____
a. National Park Service **planning** funds	$_____	$_____
b. National Park Service **line-item construction** funds	$_____	$_____
c. National Park Service **rehabilitation** funds	$_____	$_____
d. Fee demonstration funds *(Check one.)* 1. [ ] 20% 2. [ ] 80%	$_____	$_____
e. Federal highway funds (including T-21 funds)	$_____	$_____
f. Private partnership and/or donated funds	$_____	$_____
g. Other funding source *(Please specify.)*	$_____	$_____

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Examples for reporting data for Question 23

A visitor center in the ***planning phase*** is estimated to cost $2 million in line-item construction funds. This park should report $2,000,000 under column A, row b.

A visitor center ***under construction*** will need $4 million in line-item construction funds. The park has already obligated $1 million for the project. This park should report $4,000,000 under column A, row b, and $1,000,000 under column B, row b.

A visitor center is ***complete*** and the park has obligated $3 million in line-item construction funds. This park should report $3,000,000 under column B, row b. It should not report estimated funding since the project is now complete.

Example row from table on previous page

Project funding sources	**(A) Total estimated Funding needed (to nearest $1,000)** *(Use the definitions above.)*	**(B) Actual obligations as of 9/30/00 (to nearest $1,000)**
b. National Park Service **line-item construction** funds	$_____	$_____

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Cost information

For questions 24-27, please provide the following cost information, if it is available. The numbers need not add to the total estimated funding provided in question 23.

If the costs are not broken down to this level, please check the box, "Information is not available."

24. What are the costs of planning and design for this visitor center project? *(You may round to the nearest $1,000.)*

    $_____

    [ ] Information is not available (e.g., used a Park Service architect and don't know costs)

25. What are the costs of the exhibits for the visitor center project (include outdoor exhibit areas that are integral to the visitor center)? *(You may round to the nearest $1,000.)*

    $_____

    [ ] Information is not available

26. What are the costs of any parking lots or access roads? *(You may round to the nearest $1,000.)*

    $_____

    [ ] Information is not available

27. What is the total cost of the visitor center building(s) excluding the costs of exhibits and parking lots or access roads? *(You may round to nearest $1,000.)*

    $_____

    [ ] Information is not available

Partnership agreements

28. Which of the following best describes this project's involvement in a private/partnership agreement or agreement with other governments? *(Check one.)*

    1. [ ] No involvement—solely a park project
    2. [ ] Private/park partnership
    3. [ ] A portion of the project is a private/park partnership
    4. [ ] Park partnership with other government(s)
    5. [ ] Both private and other governmental partnership with park
    6. [ ] Other *(Please describe.)*

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Documents requested

29. If you have a private partnership agreement, do you have a Memorandum of Agreement or other signed document for this specific partnership agreement that you can provide to us? *(Check one.)*

    1. [ ] Yes *(Please include a copy in your survey package.)*

    2. [ ] No

30. Do you have a copy of the most recent justification for the visitor center project covered in this survey that you can provide to us? *(Check one.)*

    1. [ ] Yes *(Please include a copy in your survey package.)*

    2. [ ] No

31. Please provide us any other comments or clarifications. *(Please include the question number for clarifications.)*

Thank you very much for taking the time to complete this survey.

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Appendix V: Comments From the Department of the Interior

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

JUL 1 0 2001

Mr. Barry T. Hill
Director, Natural Resources
and Environment
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Hill:

The Department of the Interior has reviewed the General Accounting Office's (GAO) draft report entitled "Park Service: Visitor Center Project Costs, Size, and Functions Vary Widely" (GAO-01-781) (GAO code 141496).

The National Park Service appreciates the General Accounting Office's initiatives in the development of this report and has welcomed this review of a variety of issues associated with its visitor centers. The Associate Director for Professional Services has taken the lead on making improvements in the design and construction of visitor centers, and has, therefore, drafted the enclosed detailed comments on the draft report.

We appreciate the opportunity to comment on your draft report.

Sincerely,

Joseph E. Doddridge

Assistant Secretary for
Fish and Wildlife and Parks

Enclosure

AGENCY COMMENTS
OFFICE OF THE
ASSOCIATE DIRECTOR FOR PROFESSIONAL SERVICES

The National Park Service is appreciative of the General Accounting Office's initiatives in the development of this report, and has welcomed the opportunity for a review of a variety of cost and scope issues associated with its premier facility, the Visitor Center.

Summary of Comments

The GAO report presents information and data in a non-interpreted way and, for the most part, allows the readers to interpret the information in their own way. This approach is acceptable if information provided is correct, and if all relevant information is provided. In the cast of this report, and as addressed in the following comments, we believe information, significant to the reader's understanding of scope and cost issues associated with Visitor Centers, has been omitted. Without this added information, some readers could reach the conclusion that the Park Service has its act together and we build Visitor Centers appropriately scoped and in a cost effective and responsible manner. However, another reader of the report could reach a conclusion that this is not the case, and that the Park Service's planning, design and construction of Visitor Centers is inefficient with respect to cost.

Our detailed comments generally fall into four areas, and are summarized below:

See comment 1.

- Some of the information gathered by means of the GAO questionnaire, and upon which portions of the report are based, is incorrect. As discussed in detail below, this resulted from an inconsistent use of both Park Service terminology and standard building industry terminology within the questionnaire, and from an inconsistent interpretation of this terminology on the part of parks and others completing the questionnaire.

See comment 2.

- The report, while perhaps presenting information consistent with a narrow interpretation of the original tasking, fails to develop and present much more meaningful information that would allow the reader to better understand the scope and cost issues to which the report was originally targeted. Most glaring is the failure of the report to develop cost per square foot data that could have been easily gleamed from the data already accumulated. Such data would have facilitated comparisons between Park Service Visitor Centers and similar facilities, as constructed by other agencies and organizations. Such comparisons would seem to be a natural desire on the part of the reader; yet, this cannot occur utilizing the data contained in the report, as explained in detail later.

See comment 3.

- The report notes "an inability to identify trends," a request in the original tasking from the Congress. Trends can be identified. The Park Service was able to identify a number of trends, especially after our own extrapolation of the square foot cost data referred to above. These trends are favorable to the Park Service, and are noted in the detail comments that follow.

See comment 4.

- While there was no specific tasking for the GAO team to document or evaluate planning, design and construction processes utilized by the Park Service, the

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report contains many references to these process steps and phases, and the products produced thereby. Unfortunately, portions of this discussion are incorrect, while other portions are incomplete. Recognizing that the ultimate use of the final GAO report may be broader than simply notation of the data of the original tasking, corrections and elaborations have been provided where essential to the understanding of the processes used by the Park Service.

Based on the above, it is extremely important that the reader and user of this report understand and incorporate the comments below into their evaluation and conclusions. When this occurs, the reader is better able to draw the following conclusions:

- The scopes of Visitor Center projects vary widely, but this is by design, and based on widely varying needs within individual parks.
- The costs of Visitor Centers, especially the square foot costs of buildings, are appropriate, and well within industry norms when Park Service facilities when benchmarked against those of other public agencies.
- The inclusion on non-Visitor Center functions in a project leads to cost and management efficiencies.
- The full implementation of the NAPA recommendations of 1998, plus significant additional improvements in process, some already implemented and others under development, have created a highly efficient and cost effective planning, design and construction program within the Park Service.

NAPA and Other Roots for Change

In the past, and as reflected in the conclusions drawn by the National Academy of Public Administration (NAPA) in their report, "Strengthening the National Park Service Construction Program," published in June 1998, there were previously problems associated with selected aspects of the Park Service's design and construction operations.

Although the Park Service had already started in 1996 to address many of these problems through its own initiatives, such as the creation of the high management level Development Advisory Board to review all construction projects over $500,000, the NAPA Report provided for a focused and accelerated rate of change.

As briefed to the Office of Management and Budget (OMB) and reported to the Congress in early 2001, all recommendations of the NAPA report essentially have been implemented, and improvements in design and construction operations are already being realized within the National Park Service. More significantly, however, numerous additional initiatives have been or are being implemented that go far beyond the NAPA recommendations for improving the Park Service's programs. Some of these are creating improvements in areas not addressed in the NAPA Report; others have taken the NAPA recommendation as a starting point for improvement rather than an end to attain.

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Examples include:

- The adoption of totally electronic commerce for cradle-to-grave contracting activities.
- The adoption and increased use of innovative contracting methods, such as "Design-Build."
- A merging of the Denver Service Center automated project management tracking system with the financial management system.
- The development of "Planning Criteria" to govern the scooping of projects from their very outset, and long before projects are placed in a given Line Item Construction Program.
- The development of "Preliminary Cost Guidance" to set appropriate ceilings for square foot costs of various facility types, with adjustments for geographical location.

See comment 5.

These last two items are addressed in greater detail later in these comments, as they have a direct bearing on the GAO report and the data presented.

We are pleased that the GAO team has acknowledged various positive initiatives on the part of the Park Service of the type noted above. These have resulted in continuing improvements in project quality, cost control, and customer responsiveness.

Site Development as a Major Cost in Visitor Center Projects

See comment 6.

As stated in the GAO report, one of the concerns generating the need for the study was the cost of Visitor Center projects. Implied is the perception, on the part of some, that these facilities may be costing more than they should. Site development is a major, sometimes dominating factor in the cost of Visitor Centers. This aspect of project cost needs increased understanding beyond that provided in the GAO report.

The National Park Service often builds Visitor Centers in undeveloped and even remote areas. In many instances, these locations are not already serviced by existing or adequate road systems, or existing or adequate utilities. Additionally, most projects require extensive site development to include not only roads and utilities, but also landscaping, sidewalks, exterior lighting, security measures, signage, exhibitry, and sometimes ancillary buildings.

The site selection process takes into consideration all of these factors, and especially the costs associated with them. "Value Analysis" of potential sites is a routine practice within the Park Service. But, in addition to these more practical considerations, site selection must also be based on convenience to visitors, adjacency to visitor attractions, including trails, land use compatibility, accessibility for the handicapped, the protection of cultural and natural resources, and many other factors. As a result, significant portions of many Visitor Center project costs, of necessity, and especially in non-urban areas, are for site development. In some instances, the site development costs exceed the costs of the Visitor Center Building itself, and on occasion, by a factor of two or three.

3

Every site where a Visitor Center is located is truly unique. Therefore, the establishment of cost guidelines for total site costs is not possible. Neither is cost comparisons between sites at this overall cost level. The emphasis, therefore, must be on the process by which sites are selected. Through the "Value Analysis" process, the Park Service has established a highly responsible methodology for accomplishing this. The ongoing initiative to develop comprehensive "Planning Criteria" for Visitor Centers, addressed later in these comments, is strengthening this process, as is a sister initiative to require "Site Development Assessments" for all major projects.

It is possible to establish cost guidelines and monitor comparisons at a component level, such as linear feet of 8" sewer line, linear feet of a given class and size of road, or square feet of paved parking lot. In the Park Service, as elsewhere, these detailed costs are monitored throughout the design and construction process. But, when all components of site development are put together, there is no common ground for the comparison of site development costs between projects other than on an overall cost basis.

Importance of Square Foot Cost Comparisons

This nature of site development costs must be highlighted because it essentially prevents project comparisons on a total cost basis, and requires that any cost comparison be of the Visitor Building itself on a square foot cost basis. It is common practice throughout the building industry to compare building costs in this manner, and then recognize that site development costs (along with other costs, to include land costs where applicable, design costs, and others) must be added to this to identify a total project cost.

This dependence on square foot cost by facility type, with adjustments for geographical location, is so common that any building or design publication one might pick up will refer to costs in this manner. Additionally, nearly all federal agencies develop their construction programs and manage project costs in this manner. Most have established cost-per-square-foot guidelines that act as a ceiling during the planning and programming phases of project development – the direction the Park Service is currently headed.

See comment 7.

The previous discussion has been provided because, while providing lots of data, the GAO report has completely failed to provide this single most significant perspective on the cost of Visitor Centers within the National Park Service – square foot costs. Had these been provided, meaningful comparisons between the cost of Park Service Visitor Centers and similar facilities of any other governmental body or private entity would have been possible.

Problems with the GAO Survey Process

See comment 8.

From the outset of the study, the Park Service anticipated that the final GAO report would incorporate cost per square foot data on the building portions of Visitor Center projects. This is the industry standard approach to making meaningful cost comparisons between facilities. While such evaluations were not a specific part of the GAO tasking, per se, it was presumed by the Park Service that this would likely be one of the principal uses of the report. To that end, Park Service staff saw square foot costs to be the only meaningful basis upon which to make comparisons between projects over time, and the only effective way to benchmark Park Service projects

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against similar facilities of other agencies and organizations. To that end, the Park Service observed during its early review of the GAO questionnaire that the questions proposed appeared to provide the required data to facilitate development of unit costs in the final report.

See comment 9.

The Construction Program Management (CPM) Division, functioning under the Associate Director for Professional Services, has the lead responsibility within the National Park Service for oversight of service-wide planning, design and construction programs, to include program development and funds management. Staff in the CPM Division reviewed the draft questionnaire and provided detailed comments concerning the inconsistent use of terms such as "Planning," "Design," and "Total Building Cost," and the inconsistent use of general building industry terminology.

See comment 10.

Subsequent to providing these review comments, the contents and wording of the revised questionnaire were unknown to anyone in the CPM Division or the Office of the Associate Director for Professional Services until after the questionnaire had been mailed to the parks for their responses. The GAO team indicates in the report that the revised questionnaire had been tested with a few parks, but the responses received from these parks were never shared or discussed with staff in the CPM Division, or any other Park Service personnel as we can determine, to ascertain whether or not the questions were being correctly understood by park personnel, and the responses provided valid.

See comment 11.

The final questionnaire was sent to the parks on January 11, 2001, with responses due back on February 7th. The full set of responses from all 80 parks involved in the survey has never been shared with anyone in the Park Service. However, our review of copies of the questionnaire, as completed by a few parks and recently provided to us, has confirmed that there was misunderstanding on some questions, and confusion on how to answer others. At least one park superintendent resorted to handwritten comments in the margin of the questionnaire in an attempt to make sure her answers were understood.

Determination of Correct Cost Data on Visitor Centers

The Park Service believes that the inclusion of square foot cost data on the building portions of Visitor Center projects is essential to the understanding of the GAO report for the following reasons:

See comment 12.

- This data is the most significant information to present in that it provides for comparisons and benchmarking with projects of other agencies and organizations constructing similar facilities, and

See comment 13.

- This data reflects very favorably on the Park Service with respect to progress made in cost control areas, and especially a lowering of Visitor Center square foot costs, as discussed later in these comments, but not mentioned in the GAO report.

See comment 14.

Because of the problems perceived by the Park Service with the data obtained through the GAO questionnaire, a team of planners from the CPM Division of the Park Service, over a three-week period, gathered new data directly from the parks, from contract documents, and from available programming data.

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This data was independently analyzed, including a separation of "Total Facility Cost" figures (not the same as "Total Project Cost") into their major categories of "Visitor Center Building Cost," "Site Development Cost," and "Exhibitry Cost." We have also determined the "Building (Visitor Center) Square Footage" figures for the Visitor Center portion of the project (not the same as the "Total Square Footage" figures for the overall "Project"). Dividing the "Visitor Center Building Cost" by the "Building Square Footage" provides a "Cost per Square Foot" figure for each project.

See comment 15.

Of the 80 projects included in the survey, 37 involved new construction and had cost data available. Of these 37, 24 projects are in various stages of planning and design. The average square foot cost for these 24 projects is $262 per sq. ft. For the projects under construction, the average is $284 per sq. ft. While individual projects vary widely, from a high of $500 per sq. ft. for the Visitor Center at Western Artic National Parklands to a low of $84 per sq. ft. at Big Thicket, the composite average in both categories is well within recognized norms for these facility types. Additionally, there is a downward trend in square foot costs – $22 per sq. ft. on the average.

The average cost for the 32 projects involving renovations, for which cost data was available, was $146 per sq. ft. The meaning of this number is less significant than that for new construction, as explained elsewhere in these comments.

Additional Observations of Major Significance

See comment 16.

Now on pp. 1-10.

- The GAO report states on pages 1 through 6 that the NPS replaces "old" facilities. In actuality, the Park Service does not replace "old" facilities with "new" facilities; we replace functionally obsolete facilities that do not meet current visitor demands, have severe structural deficiencies, are not in compliance with codes and laws, such as the Americans with Disabilities Act, or are highly inefficient to maintain or operate. Attempts to have this perspective woven through the report were unsuccessful. The overall perspective, unfortunately not conveyed in the report, it that whenever it is cost effective to do so, the Park Service will adaptively reuse and expand an existing building. New construction is not automatically the first choice, although some superintendents may start out taking that position. However, processes currently in place, such as the "Value Analysis" process, consistently address these choices early in the planning for meeting Visitor Center needs.

See comment 17.

- The GAO report categorizes construction as either "New" or "Rehabilitation." Normally, construction is broken into 3 categories: "New," "Replacement," and "Renovation." This is the standard practice in most federal agencies and the building industry. Early discussions with the GAO team on this subject were unsuccessful in this regard. Identifying a "Replacement" category would substantially reduce the number of Visitor Centers listed as "New" – Visitor Center projects that are really replacements for existing, but functionally obsolete buildings. To the casual reader, the number of "New" Visitor Centers might appear excessive, potentially leading to the question, "Why is the Park Service building so many new Visitor Centers?" Again, this is a problem of the GAO team's development of a questionnaire with undefined terminology, or terminology inconsistent with industry standards. Had the report classified buildings as "Replacement" when that was the case, the report would parallel the initiatives by the current administration to reduce the maintenance backlog within the National Park System. By identifying Visitor Center buildings that are

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functionally obsolete, and then building a replacement facility, two objectives are attained: (1) the Park Service meets the current and future visitor needs by providing the correct facility to meet visitation, providing for a safe environment, or improving services; and (2) the functionally obsolete facility is remodeled and used in an appropriate fashion or removed, either way reducing the maintenance backlog.

See comment 18.

Now on p. 3, line 4.

- On Page 3, Line 3, and elsewhere in the report, the GAO team notes their inability to discern whether or not Visitor Centers have become more costly over time, and an inability to identify trends. Both of these were requests in the original tasking from the Congress. We disagree that these cannot occur! It is easily possible to identify and include in the report a reference point for Visitor Center cost. The report states that the Park Service invested $600 million in the Mission 66 Visitor Center Program, and built 111 Visitor Centers. Approximately half of these funds were expended on projects and initiatives other than Visitor Center Buildings. Approximately $300 million was expended on the buildings themselves. In 1960 dollars, this averages $2.7 million per Visitor Center. Using a 4% per year inflation figure, this $2.7 million per Visitor Center, in 2000 dollars, would be $13.3 million per Visitor Center. If we assume the hypothesis is correct that Visitor Centers constructed as part of the Mission 66 Program have withstood the test of time, and are at least a barometer to gauge today's Visitor Centers, we have a reference point against which to compare our costs today. Since the GAO report lists current average costs for "new" Visitor Centers at $8.821 million, and lists current average costs for "renovated" Visitor Centers at $4.392 million, the reader can easily draw the conclusion that Park Service costs for Visitor Centers have not been increasing, and in fact, are quite likely lower than was previously the case. The GAO report could have documented this information in this manner. A second opportunity was to compare the overall size of Visitor Centers on a functional basis. A third opportunity would be to compare square foot costs of recent visitor centers with those of a few years ago, adjusted for functions contained therein.

See comment 19.

Now on p. 17.

- The information beginning on page 21 of the GAO report leads the reader to the conclusion that it is less expensive to renovate a Visitor Center than to construct a new one. This is generally incorrect. A renovated facility will often have a space configuration that is somewhat inefficient and not ideally suited for the functions to occur in the facility. Compromises are made in this regard when an existing facility is reused. Over time, Visitor Center space requirements have changed, especially a trend to more open space layouts. Another major factor causing the statement in the GAO report to be incorrect centers around the project scope. For a renovated project, the overall projects costs may be less; however, major costs that typically would be included in the scope of a project for new construction are often not incorporated into a renovation project. These include access roads, parking, utilities, landscaping, signage, and other site-based improvements. This work, even if required, is often accommodated through alternative funding sources. Consequently, the comparison of renovation costs to new construction costs in the GAO report are significantly misleading, and should not be the basis for drawing any conclusions between the cost of new facilities vs. the cost of renovated facilities.

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See comment 20.

Now on p. 15, line 14.

- Projects added by the Congress to a given fiscal year program are not necessarily "ready for planning and construction," as stated by the GAO team on page 14, line 14 of the report. Often, these projects have not undergone the appropriate "Planning" and "Concept Design." The normal Park Service process calls for all projects included in a given fiscal year program to have the "Planning" phase complete, with "Design" complete through the "Concept Design" phase (typically 30% complete). This assures that projects included in a given fiscal year program have already been reviewed by the Development Advisory Board, which seeks to assure that projects scopes and cost estimates are appropriate and accurate, among other functions, and have been approved by the Park Service Director.

  Projects added by the Congress are generally selected from "lower down" on the Park Service's priority list. If within the Park Service's 5-Year Program, some planning is likely to have started, but the levels of accuracy of the project scope and estimated cost are nearly always less defined than for those projects making up the originally submitted Park Service program. In a few cases, particularly when a project added by the Congress is not within the 5-Year Program, the prior development of scope and cost can be very minimal. In these instances, Park Service staff does what it can in a very limited time to develop the best scope and cost estimate possible. But generally, these products are significantly less reliable with respect to scope and cost than those that have progressed through the normal Park Service program development process. It is these projects that are most likely to encounter problems later. As a generalized observation, they are more likely to be over-scoped and under-funded than their counterparts.

See comment 21.

- The current Park Service process for developing project scopes for all facility types is cumbersome and time consuming; it relies on staff memory for consistency from project to project and over time; and it fails to capture lessons learned on one project and apply these to future projects on a consistent basis. It can, and is being improved.

  The previously identified initiatives to develop "Planning Criteria" and "Preliminary Cost Guidance" will overcome these shortcomings and create a model project planning and programming process. Language in the recently released Congressional report on the FY 2002 Line Item Construction Program for the National Park Service is complementary regarding this initiative, and instructs the Park Service to fund its continued development. Provisions for this are already occurring. Also, as previously noted, the shortcomings of the current process are magnified many times over when projects are inserted into a program by Congress ahead of their anticipated schedule. In these cases, project scopes and cost have a higher likelihood of being incorrect.

  The Park Service is aggressively solving this problem through the "Planning Criteria" and "Preliminary Cost Guidance" initiatives. Their availability will significantly improve the process for all projects, but especially for those projects added by Congress.

Now on pp. 15, 16, 21, and 22.

  These two initiatives deserve a more detailed discussion than provided in the GAO report on pages 14 and 21. The first, the development of "Planning Criteria," defines the required spaces to accommodate a set of functions for

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which a facility is needed. For a Visitor Center, these functions may include exhibition, sales, food service, administration, and many others. There are factors that determine what functions should be accommodated in a facility, and at what scope. In the case of a Visitor Center, levels of peak visitation and purchasing habits may determine requirements for the amount of sales space needed, whereas the type and extent of items to be exhibited, not visitation levels, may determine requirements for exhibition space.

The planning criteria under development, when complete and implemented by policy, will assist a park superintendent and others in determining which functions need to be accommodated, and the associated amount of space needed. In conglomerate, the accommodation of all programmed functions, plus adjustments for such items as circulation and utilities, will determine the total size of facility needed.

The second initiative underway, the development of "Preliminary Cost Guidance," will provide projected square foot costs for a given facility at a given park. For more complex facilities, a square foot cost will be matched up against each potential functional space that might be located in a facility, because spaces to accommodate certain functions (e.g., toilet facilities) traditionally have higher unit costs (square foot costs) than areas accommodating other functions (e.g., general storage). By matching up the unit cost for a given function with the projected square footage for that function, a reasonably accurate cost estimate can be developed before design even starts. These unit costs will be "ceilings," and will vary for each geographical area to reflect prevailing costs in that area. Area factors, reflecting these variations, will be updated yearly based on industry information plus park specific experience. Site development costs will still need to be developed uniquely for each project, as these cannot be standardized.

See comment 22.
Now on p. 20, line 3.
Now on p. 21, line 5.

- At numerous points throughout the GAO report, such as on page 19, line 3, and on page 20, line 14, it is noted that the functions included in a Visitor Center vary widely from project to project. It is implied that this is a problem. In one instance, the GAO team has concluded that "The variation in visitor center functions and size has to do with the fact that the Park Service has not developed specific guidelines for what should be included in a visitor center." This is an incorrect conclusion.

  As already pointed out above, the lack of guidelines ("Planning Criteria") does not result in inappropriately scoped projects when projects go through the existing Park Service planning and design process. There are processes in place whereby the appropriate project scopes are developed; they're just cumbersome and time consuming. These variations in scope and size are, in fact, intentional, and are typically the best, most cost effective approach to take to meet a given park's needs.

  For many parks, especially smaller ones, the accommodation of additional facility needs within a single project, and perhaps within a single building, can offer efficiencies, both with respect to scope and cost. Two examples demonstrate this. If a park needs both a Visitor Center and an Administration Building, combining these into a single structure would result in a requirement for only one toilet facility and a single heating/cooling system. Separate

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buildings, especially if not located adjacent to each other, would require each building to have its own toilet facility and heating/cooling system. These separate facilities would result in a higher end cost for the two separate buildings than would a single building. Additional areas where these types of savings could occur would include roads, utility lines, parking, site lighting, and others.

The other area where savings would result would be in the management of a single contract as opposed to managing two or more contracts for multiple facilities. Many steps in the delivery of a completed project, such as contracting with an A-E, requires the same level of effort regardless the size of the project. Therefore, a single project that combines different facility needs can be highly efficient. The "Value Analysis," conducted early in the planning phase of a project, would typically make these determinations.

See comment 23.

Now on p. 7.

- The Park Service does not receive "$80 million in maintenance fees, some of which can be used for renovation purposes," as noted in Footnote 1 on page 6. It is unclear what was intended; there are no "Maintenance Fees." This statement could be referring to the annual budget for maintenance and repair, a portion of which is used for building renovation purposes, or, it could be referring to the fees collected for admission to parks and use for park facilities, a portion of which is subsequently used for facilities purposes. Also, on page 16, the high expense of renovations is addressed. Many renovations have been expensive due to hazardous materials abatement and the need to make the existing structure code compliant, for instance, compliant with the Americans with Disabilities Act. These issues do not occur with new construction.

See comment 24.

Now on p. 7.

- Parks do not develop "Concept Designs," at any stage of a project, as noted on page 6. At this early formulation stage of a project, parks will develop a generalized project scope to include functions to be accommodated, their respective space requirements, and associated planning parameters. "Concept Design" occurs years later, accomplished typically by the A-E hired to product the Construction Documents. The industry standard identification of the process by which Construction Documents are developed includes three stages: "Concept Design," "Schematic Design," and "Working Drawing Preparation."

See comment 25.

Now on p. 7.

- "Planning for all construction projects" does not begin "3 years prior to construction," as indicated on page 6. Planning starts 5 to 6 years prior to construction on the typical project, and usually includes: (a) decisions on building a new facility or utilizing an existing facility, as applicable; (b) site selection; (c) development of a generalized project scope; (d) identification of preliminary cost; (e) initiation of pre-compliance and/or compliance activities; and (f) entry of the project data into the Park Service PMIS (Project Management Information System) to facilitate subsequent evaluation and prioritization. "Pre-Design" typically starts 3 years prior to construction.

See comment 26.

Now on p. 8, line 13.

- The statement on page 7, line 11, conveys the impression that the Park Service and the Congress are on completely different wave lengths, identifying completely different sets of project needs. That is not the case. The Park Service, through its normal process of determining project needs, identified 53

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projects of the 80 projects included in the GAO report; outside the normal Park Service process, the Congress identified an additional 27 projects. The statement, as written, implies that the Congress did not go along with the 53 projects, and created its own alternative list of 27. In reality, the Congress did concur with the 53 projects, as they were funded, and simply added an additional 27 projects of its own. This is a common and normal part of the program development process. The vast majority of the 27 projects added were projects that the Park Service had already identified as a need, but which, for various reasons, had not been included in that particular year's program as it went forward from the Park Service.

See comment 27.

Now on p. 10.

- Typical life cycle cost analyses do not support the statements ". . . visitor centers and other facilities are built to last 40 to 50 years without major renovation or replacement. Beyond that 40 to 50 years, however, the maintenance and operation costs can become expensive . . ." These statements on page 8 are incorrect. The physical structure itself may have an expected life of 40 - 50 years (30 years is actually more reasonable), but elements within the Visitor Center, such as concession operations, restrooms, and exhibits, generally have a much shorter life span. Additionally, without renovation, operational and maintenance costs will typically become excessive long before 40 or 50 years.

See comment 28.

Now on p. 12.

- Individual parks do not "reach the decision to construct a new building or to renovate an existing building during the initial conceptualization and design of the visitor center project," as stated on page 11. This typically occurs years prior to the start of "Design." The actual point in time when this decision is made will vary. It may occur 2 to 3 years prior to the start of design, when the project is first entered into the PMIS, or, it may evolve after entry into the PMIS. Such a decision is basic to determining initial project scope and cost and, of necessity, must occur earlier than the start of design, as the project's insertion into a given fiscal year program is, in part, based on this decision.

Acknowledgements

The Office of the Associate Director for Professional Services thanks the GAO team for providing highly useful information that will be beneficial to the National Park Service in its planning, programming, design and construction of Visitor Centers and associated facilities. It additionally thanks the GAO team for acknowledging the merits of the numerous ongoing initiatives to better manage cost within the Park Service, including those specifically targeted toward Visitor Centers. And finally, we thank all the park staff that took the time to work with the GAO team in the data gathering for this report.

Terrel M. Emmons, FAIA
Associate Director for Professional Service
National Park Service
July 8, 2001

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The following are GAO's comments on the Department of the Interior's letter dated July 10, 2001.

GAO's Comments

1. We disagree. Our objectives were to provide information on the cost, functions, and funding for visitor center projects. Because the Park Service does not maintain a database with this information, it was necessary for us first to identify visitor center projects and then to gather specific information using a questionnaire to answer the study's specific objectives. As we pointed out in our scope and methodology, we developed the questionnaire with input from the Park Service and discussed the questionnaire in detail with officials from 11 parks. To address potential inconsistencies or misinterpretations in responses from the parks, we followed up, as is our normal practice, with all parks that had provided data that appeared to be inconsistent or subject to misinterpretation. As a further check on the validity of the data, we corroborated the project cost and funding data with regional budget staff. Based on this, we believe that the data upon which the report is based are accurate. Visitor center building cost data, which we gathered as part of the questionnaire and to which Interior makes reference, were not used in the report. We gathered this data because the Park Service did not have them available. However, in discussing visitor center building cost data with the parks and with the Park Service construction staff, we found that the data are subject to different interpretations and assumptions about what specific costs should be included. For example, parks used different interpretations on whether or not to include site development costs, which Interior points out in its comments can be a major cost in the overall visitor center project costs. Given that the visitor center building cost information did not pertain to our overall objectives, and that the data are subject to different interpretations and assumptions, we decided that this data would need to be studied in more detail and included as part of a separate review.

2. We strongly disagree that information on visitor center building costs is more meaningful than the total cost of the projects. As stated above, our objectives were to discuss the cost, functions, and funding sources for visitor center projects, not buildings. Our purpose was not to provide data to allow comparisons with other agencies' or organizations' facilities, as Interior asserts would be possible if cost-per-square-foot data were available. The requesters asked that we gather data on overall visitor center projects because the total project costs reflect all costs related to developing and constructing a visitor center, and represent the cost to the taxpayer. In addition, in

reviewing visitor center projects, the requesters are concerned that visitor center projects have an increasing number of functions. Although Interior states that the cost-per-square-foot data are more meaningful than project costs, it has not developed a database containing this information. Furthermore, Interior asserts that the data could have been easily developed from data already accumulated. We disagree because, as we pointed out above, the data are subject to interpretation and need to be clarified and studied in a separate review.

3. We believe that trends in visitor center project costs cannot be identified. Our attempt to develop trends by plotting total and average project costs by the year projects were completed, left us unable to discern a trend because of the wide variation in projects. Our comments regarding the trends that the Park Service says that it identified can be found in comment 18.

4. We disagree. We believe that for the purpose of this study, general background information is needed to interpret the data and that we have provided complete information for this purpose. We did make technical changes, as appropriate, to address Interior's specific comments on incorrect information related to these processes.

5. We recognize that the Park Service's planning criteria and preliminary cost guidance initiatives have a direct bearing on our report and as such, our draft report to Interior included a discussion of these initiatives.

6. We disagree. Our objectives were to discuss overall project costs and functions. The Park Service told us that costs could not be broken out by functions, such as transportation facilities, and therefore we could not provide costs by individual function. We decided that the selective reporting on one type of cost, such as site development cost was not warranted.

7. As part of our study, we attempted to include cost-per-square-foot data for visitor center buildings early on and were told that the Park Service does not maintain this data. We then attempted to collect data as part of our questionnaire that could be used to calculate the cost per square foot of individual visitor centers. However, because of various interpretations and the assumptions used in calculating square foot costs, we did not use the data that we developed. We agree that cost-per-square-foot data is important information and question why the Park Service has not yet developed the data.

8. See comment 7.

9. We coordinated with the Park Service in the development of our questionnaire and incorporated its changes where appropriate. Further testing also resulted in modifications to the questionnaire that provided as much consistency and clarity as possible to the terms used in the questionnaire.

10. We disagree that the Park Service was not kept informed of the development of our questionnaire. Based on our discussions with the Park Service, we were told that much of the data that we needed was available from the parks or the regions, as the park superintendents and regions are ultimately responsible for the completion and development of projects. As we point out in our scope and methodology description in appendix I, we discussed the questionnaire with officials at 11 parks, not a few parks as Interior indicates. We used our professional judgment and input from our professional survey design staff to make changes that were necessary to improve the questionnaire's clarity. We do not typically share the respondents' reactions while we are developing the questionnaire.

11. We agree that a full set of responses has never been shared with anyone in the Park Service. It is our policy not to share questionnaire responses and data with agencies until after we have completed our analysis and final report. In the questionnaire itself, we deliberately provide space for explanations of any unique circumstances and for any other information the respondents felt it necessary to convey. As a matter of practice, we follow up on questionnaire responses when we determine that it is necessary to clarify data. It is not unusual for respondents to provide handwritten comments on a questionnaire, even when they understand the questions, because respondents may want to further explain their answers.

12. While the Park Service says this information is the most significant data on visitor centers, it has not developed a database with this information. The Park Service was only able to calculate the data contained in its comments after we identified the 80 visitor center projects. Until the Park Service develops such a database, it will be unable to compare and benchmark its costs against those of other agencies and organizations. As previously stated, our objectives were not to provide data for comparisons and benchmarks with projects of other agencies and organizations.

13. The data to which Interior is referring are not GAO's data and we cannot comment on their validity or make assertions about them because they were not available to us during the 8-month period of our review.

14. We disagree with the assertion that the data obtained have problems because they were gathered through a questionnaire. The data to which Interior is referring are data on visitor center building costs. We gathered data on visitor center building costs through a questionnaire to individual parks because the Park Service does not maintain a database of these costs. We noted that the calculation of these costs depends on certain assumptions, such as how much site development cost to include and whether to include management and contingency costs. Because of the inherent difficulties and the need for these assumptions to be clarified, we ultimately decided not to report these data.

15. As previously mentioned, the Park Service only developed the data in this section after we had completed our audit work. In our discussions with the Park Service about the cost-per-square-foot data included in the comments, the Park Service made certain assumptions about what costs to include or not to include. For example, the costs related to management, contingencies, or site development costs were not included in the calculations. The inclusion or exclusion of these costs can have a major impact on the cost per square foot of the facilities. As previously stated, because of these interpretations and assumptions, we believe that further study of this data is warranted.

16. We disagree. We have provided this perspective in other areas of the report, including a discussion of the park's decision to renovate or replace a visitor center building. We used the term "old" to describe general conditions that could lead to the construction of a new building, including a new building to replace an existing building. We added, in response to the comments, a footnote with this technical definition.

17. We reported on the projects for which new buildings were being built. We did not make specific reference to projects for which a visitor center was the first in the park or in an area within a park. The construction of a new building is significantly different—and poses different challenges in the construction process—than the renovation of an existing building. We added a footnote to the report and to the table in appendix III that identifies the projects that are replacing

existing visitor centers as opposed to providing a new building for a park.

18. We disagree. We do not find the Park Service's comparison of the average cost of Mission 66 visitor centers with the average we estimated for the 80 visitor center projects in our report to be an acceptable trend analysis. An appropriate trend analysis would involve a time series—that is, data over a number of years—of comparable data. We do not believe that a comparison of two points, each an average of approximately 10 years of data, accurately demonstrates a trend. Also, we do not believe that data from Mission 66 visitor centers and our data on visitor center projects are comparable because our data consists of projects that include both construction of new buildings and renovation of existing buildings, while the Mission 66 visitor centers were all newly constructed. We attempted to develop trend information using the cost data for the projects for the 10-year period of this study, but as stated in the report, because of the variation in the projects, we were unable to discern a trend. Interior also asserts that we had a second and third opportunity to identify trends by comparing the size of visitor center on a functional basis and costs per square foot. As pointed out in the report, the Park Service has recently contracted for specifically this type of analysis and we did not want to duplicate these efforts.

19. We disagree. As shown in the report, the cost of a project to renovate a building is on average $4,392,000 while the cost of a project to construct a new building is on average $8,826,000. We also show in appendix II of the report that projects with renovations generally do not have as many functions as projects with new buildings. We do point out in the report that renovations are not always less expensive than projects with new construction, and we have highlighted instances when a visitor center renovation may be more costly than the construction of a new building.

20. Interior has misinterpreted what we wrote. We do not state that projects added by the Congress are ready for construction. Our point is that when the Congress identifies a project for construction, the Park Service works with the Congress to get the project ready for planning and construction. To avoid confusion, we clarified this language.

21. We believe that our discussion of these two initiatives is sufficient for the purposes of this report. Because we were not asked to review the process that the Park Service has in place to construct its facilities, nor

the improvements that it is planning, we did not discuss these in detail. We do discuss the Park Service's policy on park facilities, the responsibilities of the Development Advisory Board, and the initiatives underway by the Park Service to develop construction planning criteria and preliminary cost guidance for facilities, including visitor centers. As we point out in our observations, we believe that the initiatives the Park Service is undertaking, if implemented efficiently, are a step in the right direction.

22. We disagree that this is an incorrect conclusion. The variation in visitor center projects occurs in part because many of the projects are still in the stages of initial development and the Park Service relies on review of the projects after their development to correct scoping problems. The Department states that a lack of guidelines for parks does not result in inappropriately scoped projects because the Park Service has processes in place to ensure that the scope and size of visitor centers are appropriate. While it may be true that processes are in place to review visitor center projects and their scopes, without guidelines on the type and size of functions that can be included, projects can be overscoped or underscoped. If the Park Service had guidelines for what should be included in a visitor center project, there could be limits on the scope of the initial projects proposed by parks.

23. We agree and have changed the language of the report.

24. We agree and have added language to clarify that the parks identify a general project scope, meaning that they consider what functions they need and develop an estimate of their square footage needs.

25. We agree. We were referring to the predesign process and changed the text to reflect this.

26. We did not intend to say that the Park Service and the Congress identified completely separate groups of projects. We changed the language of the report to say that the Congress concurred with the Park Service's projects and added its own projects.

27. We noted that the Park Service buildings are expected to have a long lifespan because the Park Service policy is to renovate and reuse buildings before they are replaced. We agree that elements may need to be renovated and that maintenance costs may become more expensive as the buildings age. We clarified the text to indicate that before 40 or 50 years elapse, maintenance and operation costs could

become expensive and elements of the building may need to be updated.

28. We agree and clarified this section of the report to more clearly reflect the different stages of the planning and design process and to reflect the time at which the park makes this decision.

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