1. NAME OF PROPERTY

Historic Name: **Wright Brothers National Memorial Visitor Center**

Other Name/Site Number:

2. LOCATION

Street & Number: State Highway 158 Not for publication:__

City/Town: Kill Devil Hills Vicinity:__

State: North Carolina County: Dare Code: 155 Zip Code: 27948

3. CLASSIFICATION

Ownership of Property		Category of Property	
Private:	___	Building(s):	X
Public-Local:	___	District:	___
Public-State:	___	Site:	___
Public-Federal:	X	Structure:	___
		Object:	___

Number of Resources within Property

Contributing	Noncontributing	
1	___	buildings
___	___	sites
___	___	structures
___	___	objects
1	__	Total

Designated a NATIONAL HISTORIC LANDMARK on JAN 0 3 2001 by the Secretary of the Interior

Number of Contributing Resources Previously Listed in the National Register: 1__

Name of Related Multiple Property Listing: Wright Brothers National Memorial (Additional Documentation)

4. STATE/FEDERAL AGENCY CERTIFICATION

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this ____ nomination ____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ____ meets ____ does not meet the National Register Criteria.

_____ _____
Signature of Certifying Official Date

_____
State or Federal Agency and Bureau

In my opinion, the property ____ meets ____ does not meet the National Register criteria.

_____ _____
Signature of Commenting or Other Official Date

_____
State or Federal Agency and Bureau

5. NATIONAL PARK SERVICE CERTIFICATION

I hereby certify that this property is:

___ Entered in the National Register
___ Determined eligible for the National Register
___ Determined not eligible for the National Register
___ Removed from the National Register
___ Other (explain): _____

_____ _____
Signature of Keeper Date of Action

6. FUNCTION OR USE

Historic:	Government	Sub:	Government Office
	Recreation & Culture		Museum
Current:	Government	Sub:	Government Office
	Recreation & Culture		Museum

7. DESCRIPTION

Architectural Classification:	Modern Movement
Other:	Park Service Modern
	Philadelphia School
Materials:	Concrete, steel, glass, aluminum
Foundation:	Concrete
Walls:	Concrete, steel, glass
Roof:	Concrete

Describe Present and Historic Physical Appearance.

The Outer Banks of North Carolina drew Orville and Wilbur Wright in 1900-1903 because of the remote situation, steady winds, and sand hills that offered points of elevation for their experiments in aviation. The Wright Brothers National Memorial today consists of 431 acres of sand hills and dunes, known as the Kill Devil Hills, about four miles south of Kitty Hawk, North Carolina. The park is within the town of Kill Devil Hills, North Carolina, 10 miles north of the Cape Hatteras National Seashore. The site has changed considerably since the Wright Brothers set up camp a century ago. Shifting dunes have been stabilized with grasses, and over the years memorials, roads, trails, and other facilities have been built. The towns of the Outer Banks have also grown as the area became a major resort destination. The general character of the barrier island landscape, however, remains treeless and windswept.

The site was initially set aside as a national monument in 1927, and the next year a granite marker was placed at the approximate takeoff site of the first flight. In 1932, a 60-foot high pylon was erected nearby, on the top of Big Kill Devil Hill, to commemorate the brothers and their achievement. In 1933 the national monument came under the jurisdiction of the National Park Service, which continued the process of memorializing the landscape and developing facilities for visitor access and convenience. Attention occasioned by the 50th anniversary of the first flight in 1953 helped make the site a high priority for Mission 66 once that program was initiated three years later.

The Wright Brothers National Memorial Visitor Center (Mitchell/Giurgola, 1960) was a major Mission 66 project, and was part of a complete reorganization of how visitors approached and experienced the Wright Brothers site. The building is located about 2,000 feet northeast of the Wright Brothers Monument, and about 600 feet southeast of the takeoff monument. The building was sited by the Park Service to become the new center of visitor arrival and orientation, with both earlier monuments and the site of the first flight easily viewed from the visitor center itself.

The visitor center is a single-story concrete and glass building, slightly elevated on a 128-foot square concrete platform. Two parallel, rectangular blocks with flat roofs occupy the east half of the platform. The easternmost block consists of restrooms and offices, and the other serves as entry lobby and display area. The display area joins directly to a large domed "assembly room," square in plan, that occupies the northwest quarter of the platform. The southwest quarter of the platform is an open "ceremonial terrace," and the southeast corner is open as well, functioning as a smaller "entry terrace."

Visitors arrive on an access road built for the building. The parking lot was also designed for the building, and orients visitors at a 45 degree angle to the entry terrace at the southeast corner of the building. Wood fences originally screened the views and directed visitors to the entry terrace. On the right of the main entry doors are the rest rooms (with their own outdoor entry) and the rectangular block of offices. The main entry brings visitors into the lobby area, where they have an immediate view directly through to the ceremonial terrace, with the takeoff monument and landing points in the landscape beyond. Turning right, visitors proceed to the interpretive display area, and finally to the large domed assembly room, which also features

views of the entire historic and commemorative landscape through large window walls on three sides of the room.

The main assembly room and its dome, a 40-foot square in plan, are the principal features of the visitor center. The concrete dome has clerestory 40-foot by 6-foot arched openings in three of its four sides, and is tied at its base by four tension rods. The dome rests on four sets of double columns. On the exterior of the dome, a "perimetral extension" extends up and away from the base, setting the dome in a larger square of projecting eaves that shade the clerestory openings. The effect is striking, reinforcing the overall horizontal feeling and massing of the building, while giving it a lightness that seems to defy gravity. Above all, critics have noted, the dome structure evokes a sense of flight, as well as technological daring and capability. If the symbolism of the architecture is appropriate to a site that commemorates technological achievement, the space created by the dome structure also serves as a dramatic and effective room for the display of a replica of the "1903 Flyer."

In their own marketing material, the firm of Mitchell/Giurgola described the "dome-like structure over the assembly area" as a "transitional thin shell concrete roof with opposed thin shell overhangs connecting the perimeter of the structure to form a complete monolithic unit." The roof structure design "admirably serves to allow light into the display area of the aircraft to give this area a significant character as well as forming a strong focal point on the exterior of the structure which stands above the low-lying landscape, in concert with the higher rising dunes and pylon."

The building structure consists of poured in place, reinforced concrete throughout. Deep piers and flat slab construction alternate with window walls that provide extensive and dramatic views of the landscape and memorials of the park. Pier faces are typically bush hammered finish. In the museum display area, interior finishing features vertical tongue-and-groove cypress boards. This interior treatment, combined with the lack of windows, results in an inward-looking museum space conducive to study. The assembly room, in contrast, is a double-height space full of light from the three clerestory windows. The assembly area substitutes for an audio-visual or auditorium space, and in their presentations, Park Service interpreters use the plane as a prop and point to the flight markers and other features of the landscape through the window walls.

Planting plans for the site were prepared by the EODC landscape architects assigned to work with Mitchell/Giurgola.

8. STATEMENT OF SIGNIFICANCE

Certifying official has considered the significance of this property in relation to other properties:
Nationally: X Statewide:_ Locally:_

Applicable National Register Criteria:	A X B_ C X D_
Criteria Considerations (Exceptions):	A_ B_ C_ D_ E_ F_ G X
NHL Criteria:	1 and 4 8
NHL Theme(s):	III. Expressing Cultural Values 5. Architecture, Landscape Architecture, and Urban Design
Areas of Significance:	Architecture
Period(s) of Significance:	1960
Significant Dates:	1959-1960
Significant Person(s):	N/A
Cultural Affiliation:	N/A
Architect/Builder:	Romaldo Giurgolo, Ehrman B. Mitchell, Jr., architects Hunt Contracting Company, Norfolk, VA, builders
Historic Context:	Sarah Allaback, Ph.D., *Mission 66 Visitor Centers: The History of a Building Type* (Washington, DC: GPO, 2000)

State Significance of Property, and Justify Criteria, Criteria Considerations, and Areas and Periods of Significance Noted Above.

Summary

The Wright Brothers National Memorial Visitor Center[1] is of extraordinary national importance under NHL Criteria 1 and 4. The property falls under the NHL Theme III (Expressing Cultural Values), Subtheme 5 (Architecture, Landscape Architecture, and Urban Design). The property is less than 50 years old, but qualifies under Criteria Exception 8 because of its extraordinary national importance.

Under NHL Criterion 1, the property is associated with events that have made significant contributions to the broad national patterns of American history. Specifically the property is associated with the Park Service's "Mission 66" program, which transformed the American national park system to meet postwar conditions. The park "visitor center" was the central planning and design element of the Mission 66 program. The visitor center was the most significant architectural expression of national park development in the postwar period and subsequently became the centerpiece of park planning of all types both nationally and abroad. The Wright Brothers National Memorial Visitor Center was one of the four most significant and successful examples of the new building type. Because of its significance within the Mission 66 program, and therefore within the history of American parks, the property possesses extraordinary national importance under NHL Criterion 1.

The Wright Brothers building was a high profile project for Mission 66, in part because of the recent 50th anniversary of the first flight in 1953. But the outstanding critical acclaim that greeted the building probably took many by surprise. At the time, Ehrman Mitchell and Romaldo Giurgola had only been in business two years, and had never had a commission that attracted national attention. The Wright Brothers National Memorial Visitor Center did attract national attention, in contemporary design magazines, among other architects, and within the Park Service. The building became a national showcase for the Mission 66 program and an important factor in legitimizing the use of modern architecture in the national parks. It also launched the firm of Mitchell/Giurgolo, which went on to become one of the most important American architectural firms of the 1960s and 1970s. Since then, numerous publications and

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[1]This nomination is one of four that have been presented in the historical theme of "Mission 66 Visitor Centers." These four buildings have been nominated as National Historic Landmarks because of they are the four most significant architectural designs of the Park Service's " Mission 66" program, an initiative that transformed the American national park system to meet the new conditions and demands of the postwar era. Each of the four visitor centers is one of the original and most influential examples of a new building type—the visitor center—which was at the heart the new planning and design direction at the National Park Service in the postwar period. The visitor center subsequently became a central feature of park planning in park systems all over the United States and the world. Besides this distinction, each of these four buildings also possesses another dimension of significance that relates to their place in the history of American modern architecture. Each building was a pivotal commission in the history of an architectural firm of national importance in the history of American modernism. In this case, the Wright Brothers National Memorial Visitor Center was the commission that brought the firm of Mitchell/Giurgola national attention for the first time. The building was their first work of Philadelphia School architecture to receive national critical acclaim, and launched the firm of Mitchell/Giurgola into prominence.

surveys on American architecture have remarked on the significance of the Wright Brothers building as a seminal commission for the Mitchell/Giurgola firm. Scholars have noted, as well, the high quality of the building's design and construction. The Wright Brothers building was the first major success for Mitchell/Giurgola, and influenced their later work, and as a result the course of American architecture.[2]

Under NHL Criteria 4, the property embodies distinguishing characteristics of an architectural type specimen exceptionally valuable for the study of a period and style. Specifically the property one of the four most significant examples of Park Service Modern architectural style. This style relates to contemporary American modernism, and Mitchell/Giurgola were among the most important American modern architects of the era. The Wright Brothers National Memorial Visitor Center was this firm's most important early commission.

The property is also a significant example of the Philadelphia School of modern architecture. In the late 1950s and early 1960s, a small group of architects in Philadelphia, inspired in part by the teaching and work of Louis I. Kahn, began to move away from the strict formalism and objectivism of the International Style, as it was being advocated by Walter Gropius and Mies Van der Rohe. The Wright Brothers National Memorial Visitor Center is one of the most important examples nationally of the emerging style of this school.

The Wright Brothers National Memorial Visitor Center was also an early, precedent-setting example of modern style embraced by the Park Service as part of Mission 66. The critical and popular success of the building legitimized modern architectural style for use in national parks. Advanced building technology, efficient materials, and labor saving construction were also showcased by this benchmark project. The Wright Brothers National Memorial Visitor Center was a powerful and influential early example of how modern construction techniques and architectural style could be appropriate and successful for national park development.

The Wright Brothers National Memorial Visitor Center is one of the four most significant examples of the particular strain of American modern architecture that can be described as Park Service Modern. Because of its significance as an example of American modern architecture of the period, the property possesses extraordinary national importance under NHL Criterion 4.

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[2] In 1982, Giurgola was awarded the A.I.A. Gold Medal, the highest honor bestowed upon individual architects. Sources describing the importance of the Wright Brother's Visitor Center include: "A View of Contemporary World Architecture," Japan Architect (July 1970): 65-78; Robert E. Koehler, "Our Park Service Serves Architecture Well." *AIA Journal* 1 (January 1971): 18-25; William Marlin, "On Trying to Understand the Significance of Mitchell/Giurgola." *Architectural Record* (April 1976): 117-118; Phoebe Stanton, "Mitchell/Giurgola Architects." *Process: Architecture 2* (October 1977): 153; and, Lois Craig, et al. *The Federal Presence*. Cambridge: MIT Press, 1979. The firm was also included in the Macmillan Encyclopedia of Architects (Vol. 3, New York: Macmillan Publishing Co., 1982). See also: Ehrman B. Mitchell and Romaldo Giurgola. *Mitchell/Giurgola Architects*. New York: Rizzoli International Publications, Inc., 1983.

Historic Context[3]

The Origins of Mission 66

In 1949, Newton B. Drury, Director of the National Park Service, described the national parks as "victims of the war."[4] Neglected since the New Deal era improvements of the 1930s, the national parks were in desperate need of funds for basic maintenance, not to mention protection from an increasing number of visitors. Between 1931 and 1948, total visits to the national park system jumped from about 3,500,000 to almost 30,000,000, but park facilities remained essentially as they were before the war. Meeting the increased need for visitor services required significantly larger appropriations from Congress. Throughout his tenure, however, Drury remained unable to obtain adequate appropriations to change the situation.[5] In 1951, Conrad L. Wirth took over as director of the Park Service, but at least at first, funding levels continued to lag behind the perceived need for new, enlarged, or renovated park facilities.

The conditions Drury had described in 1949 soon became a subject of public concern, not to mention ridicule. Social critic Bernard DeVoto led the crusade for park improvement with an article in his *Harper's* column, "The Easy Chair," entitled "Let's Close the National Parks," which suggested keeping the parks closed to the public until funds could be found to maintain them properly.[6] The story caught the attention of John D. Rockefeller, Jr., a longtime national park supporter, who wrote to President Eisenhower of his concern over this potential "national tragedy." Eisenhower's staff responded with a standard apology, but Rockefeller's letter did cause the President to request a briefing from Secretary of the Interior Douglas McKay on conditions in the parks.[7] As the need for massive "renovation" of the Park Service entered the public forum and reached the President's desk, the Park Service's pressing maintenance problems continued to mount.[8]

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[3] The following text is extracted from Sarah Allaback, *Mission 66 Visitor Centers: The History of a Building Type* (Washington, DC: GPO, 2000).

[4] Newton Drury, "The Dilemma of Our Parks," *American Forests* 55 (June 1949): 6-11, 38-39.

[5] President Truman also tried to obtain additional funds for the national parks in 1949, but his efforts were thwarted by a democratic Congress. See Elmo Richardson, *Dams, Parks and Politics* (Lexington, Kentucky: University Press of Kentucky, 1973), 40.

[6] Bernard DeVoto, "Let's Close the National Parks," *Harper's* 207 (October 1953): 49-52. Many popular magazines featured stories warning the public of the dangers of visiting the parks and the slum-like conditions encountered within park boundaries. See Jerome Wood, "National Parks Tomorrow's Slums?" *Travel* 101 (April 1954): 14-16; Charles Stevenson, "The Shocking Truth About Our National Parks," *Reader's Digest* 66 (January 1955): 45-50. "Twenty-Four Million Acres of Trouble," in the *Saturday Evening Post*, took a slightly more sympathetic approach by featuring Conrad Wirth and his ceaseless efforts to improve the Park Service despite inadequate funding. See *Saturday Evening Post* 3 (July 3, 1954): 32, 78-80.

[7] Dwight D. Eisenhower, *Mandate for Change* (Garden City, New York: Doubleday & Co., Inc., 1963), 549-550.

[8] William Nelson Noll, "Mission 66, the National Park Service Program for the Revitalization of America's National Parks, 1955-1966," (Master of Arts Thesis, Kansas State University, 1997), 11-12.

During the summer of 1954, Department of the Interior Undersecretary Ralph Tudor began a reorganization of his department. According to historian Elmo Richardson, the reorganization allowed Conrad Wirth to focus attention on the crisis within the Park Service. Once the door was open, Wirth had an opportunity to begin to press ambitious proposals for increased funding to redress long-standing inadequacies within his agency.[9] Director Wirth's own recollection of his initial idea for what became known as "Mission 66" is fittingly more dramatic. In his memoir, *Parks, Politics and the People*, Wirth remembers one "weekend in February, 1955" when he conceived of a comprehensive program to launch the Park Service into the modern age.[10] Rather than submit a yearly budget, as in the past, Wirth would ask for an entire decade of funding that would total hundreds of millions of dollars. Inspired perhaps by other multi-year federal initiatives (particularly in public housing and highway construction), Mission 66 would allow the Park Service to repair and build roads, bridges and trails, hire additional employees, construct new facilities ranging from campsites to administration buildings, improve employee housing, and obtain land for future parks. The new program would result in a fully modernized national park system in time to celebrate the 50th anniversary if the Park Service in 1966.

Early in 1955, Wirth organized two Park Service committees to plan the Mission 66 program: a steering committee to develop and oversee the planning process, and a Mission 66 committee to make the specific proposals for the program. Representatives from several branches of the Park Service devoted themselves full-time to the project. Lemuel Garrison put aside his new appointment as chief of conservation and protection to act as chairman of the steering committee. In his memoirs, Garrison captures the energy behind the mission and its fearless confrontation of park problems. Each superintendent was asked to write a list of "everything needed to put 'his' park facilities into immediate condition for managing the current visitor load, while protecting the park itself."[11] They were also to estimate the number of visitors ten years in the future. The Mission 66 staff derived a list of priorities for determining park needs to assist superintendents in their assessments. One result of the project was the development of standards throughout the system. Each park was to have a uniform entrance marker listing park resources, a minimum number of employees, paved trails to popular points of interest, and other basic amenities. Visitors could expect the same basic facilities in every park.[12]

Wirth's preliminary planning of the Mission 66 program was geared towards promotion and, by necessity, selling his idea to Congress and the Eisenhower Administration. The Mission 66 staff was to produce a basic outline of the program for the Public Service Conference at Great Smoky Mountains on September 18, 1955. Since a meeting with Eisenhower had been scheduled for May, Wirth hoped to keep details of "Mission 66" confidential until then; but news of the

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[9] Richardson, *Dams, Parks and Politics*, 111

[10] Conrad L. Wirth, *Parks, Politics, and the People* (Norman: University of Oklahoma Press, 1980), 238.

[11] Lemuel A. Garrison, *The Making of a Ranger* (Salt Lake City, Utah: Howe Brothers, 1983), 255-56.

[12] Roy E. Appleman, *A History of the National Park Service Mission 66 Program* (Washington, D.C.: Department of the Interior, National Park Service, 1958), 2-32. Pilot studies were also conducted for Yellowstone, Chaco Canyon National Monument, Shiloh National Military Park, Adams Mansion National Historic Site, Fort Laramie, Everglades, and Mesa Verde.

program leaked out after the Great Smokies conference, which only increased public interest in the program. After several dry runs and administrative delays, Wirth introduced Mission 66 to the President and his cabinet on January 27, 1956. The program received immediate approval, and Mission 66 was officially introduced to the public at an American Pioneer Dinner held at the Department of the Interior on February 8th. Highlights of this event included a presentation by Wirth, a Walt Disney movie entitled "Adventure in the National Parks," and the circulation of *Our Heritage*, a promotional booklet describing the Mission 66 program. Wirth himself was involved in every detail of the carefully orchestrated publicity that followed.[13]

Modern Architecture and the National Parks

Even before Mission 66 planning began, the Park Service planners and architects were moving away from the traditional "rustic" construction that had characterized prewar park development. There were many reasons for this shift, which mirrored national trends in architectural style, construction technology, and planning policies.

Mission 66 reached the drawing boards in the mid-1950s, at a time when modern architecture had reached the mainstream of American architectural design. Conrad Wirth was trained as a landscape architect in the 1920s, and in the 1930s he had been responsible for the Park Service's state park development program. His chief of planning and design, Thomas C. Vint, had been chief landscape architect since 1927 and was one of the originators of the Park Service rustic style. Other Park Service designers active in the 1950s, such as architect Cecil Doty, had been principal Park Service designers during the rustic era. But if in many ways this group continued the tradition of park planning and design that they had created over the previous decades, in other ways, postwar conditions, changing ideas about nature, and new practices in the construction industry necessitated new approaches. Mission 66 designers needed to find new ways for park development to "harmonize" with park settings.

As the negative effects of larger numbers of visitors and their vehicles began to be better understood, for example, Mission 66 planners responded by centralizing services and controlling visitor "flow" in what were called "visitor centers." In some cases, planners proposed removing some park facilities and relying on motels and other businesses springing up in gateway communities to serve visitors. Enlarging parking lots and widening roads encouraged this trend, since faster roads made access in and out of parks quicker; but under Mission 66, parking lots, comfort stations, gas stations, and other visitor services were bound to proliferate, in any case. Conrad Wirth remained firmly committed to the idea that the parks were "for the people." Mission 66 planning proceeded under the long-standing assumption at the Park Service that increased numbers of visitors (and their cars) should be accommodated. Modernized and expanded park development, usually restricted to existing road corridors within the parks, was therefore proposed as the essential means of preserving nature to the greatest degree possible, while making sure visitors were not turned away.

[13] Appleman, "A History of the National Park Service," 33-95.

But if Mission 66 continued traditional assumptions, it also exploited the functional advantages offered by postwar architectural theory and construction techniques. Mission 66 architects (whether in-house or consultants) employed free plans, flat roofs, and other established elements of modern design in order to create spaces in which large numbers of visitors could circulate easily and locate essential services efficiently. The architects also used concrete construction and prefabricated components for buildings, highways, and other structures. Development was often sited according to new criteria, as well. Visitor centers were located according to functional concerns relating to park circulation, and so were not calculated as components of larger landscape compositions. Although Mission 66 park development was no longer truly part of the landscape, in this sense, in many cases this meant that buildings could be sited less obtrusively, near park entrances or along main roads within the park. Stone veneers, earth-toned colors, and low, horizontal massing also helped continue the tradition of reducing visual contrasts between building and site. Mission 66 architecture was not or picturesque or rustic, but it did "harmonize" with its setting (at least in more successful examples), although in a new way. Stripped of the ornamentation and associations of rustic design, Mission 66 development could be both more understated and more efficient than rustic buildings.

Park Service designers were following a nearly universal, international trend in postwar architecture. Changing styles, changes in architectural training, and perhaps above all, changes in the technology and economics of construction fueled the new trend. But the prospect of abandoning traditional "rustic" architectural design in national parks still provoked an outcry from critics. One of the most outspoken critics of modern architecture in national parks was Devereux Butcher of the National Parks Association. As early as 1952, Butcher wrote of his horror at finding contemporary buildings in Great Smokey Mountains and Everglades national parks and criticized the Park Service for abandoning its "long-established policy of designing buildings that harmonize with their environment and with existing styles." Among the eyesores he discovered were a curio store with "blazing red roof and hideous design," a residence "ugly beyond words to describe," and a utility building that he felt might as well have been a factory. Later in the decade, David Brower and Ansel Adams joined Butcher in condemning such park development, although these critics focused more on issues of resource conservation than architectural style.[14]

Despite the criticism of Butcher and others, the Park Service felt it had remained consistent with its tradition of architectural design in harmony with the surrounding landscape. In fact, the design methodology behind the use of rustic architecture was adapted to explain contemporary design decisions. According to Director Wirth, Mission 66 buildings were intended to blend into the landscape, but through their plainness rather than by identification with natural features. Even the qualities that defined rustic architecture might draw attention to a building intended to

[14] Devereux Butcher, "For a Return to Harmony in Park Architecture," *National Parks Magazine* 26, no. 111 (October-December 1952). See also David Brower, "'Mission 66' is Proposed by Reviewer of Park Service's New Brochure on Wilderness," *National Parks Magazine* 32, no. 132 (January-March 1958); Weldon F. Heald, "Urbanization of the National Parks," *National Parks Magazine* 35, no. 160 (January 1961); Ansel Adams, "Yosemite--1958, Compromise in Action," *National Parks Magazine* 32, no. 135 (October-December 1958). That Butcher's opinions remained unaltered over the decade is indicated by his article, "Resorts or Wilderness?" in *Atlantic Monthly* 207, no. 2 (February 1961).

serve a practical function.[15] The Park Service communicated this architectural philosophy in its early promotional literature, as well as in its relations with the national media. In August 1956, *Architectural Record* reported that Mission 66 would produce "simple contemporary buildings that perform their assigned function and respect their environment."[16] The magazine also emphasized that while this policy had traditionally led to the use of stone and redwood, "preliminary designs for the newer buildings show a trend toward more liberal use of steel and glass."

Within the Park Service, architects appear to have embraced the opportunity to modernize facilities and experiment with new design concepts. For example, Cecil Doty had designed a rustic masterpiece, the Santa Fe Headquarters building, in 1937. By the early 1950s, however, he recalled "a change in philosophy. . . . That's why you started seeing [concrete] block in a lot of things. We couldn't help but change. . . . I can't understand how anyone could think otherwise, how it could keep from changing."[17] Doty's statement provides a key to understanding the legacy of Mission 66 architecture, the purpose of which was not to design buildings for atmosphere, whimsy or aesthetic pleasure, but for change: to meet the demands of an estimated eighty million visitors by 1966, to anticipate the requirements of modern transportation, and to exercise the potential of new construction technology. As Director Wirth explained, the Park Service not only had to serve greater numbers of visitors, but to understand their increased need for appropriate facilities. The "stress and restless activity of this machine age, when man is sending satellites spinning into orbit around the sun and our own earth" required more frequent renewal in "the peace and solitude offered by nature."[18] Even critics agreed that some kind of efficient action was necessary to bring the parks up to contemporary standards.

Mission 66 planners and administrators were also clearly caught up in the enthusiasm of the modern movement. Wirth told his steering committee to be "as objective as possible. Each was to be free to question anything if he thought a better way could be found. Nothing was to be sacred except the ultimate purpose to be served. Man, methods, and time-honored practices were

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[15] Wirth issued a memorandum to the Washington Office and all field offices announcing that field officials attending the Public Services Conference at Great Smoky Mountains (September 1955) "recommended that structures be designed to reflect the character of the area while at the same time following up-to-date design standards." He added that "park structures are to conform, to some extent, with the trend toward contemporary design and the use of materials and equipment accepted as standard by the building industry. However, restraint must be exercised in the design so that the structures will not be out of character with the area and so that the structures will be subordinated to their surroundings." See Conrad Wirth Papers (CWP), Box 6, American Heritage Center (AHC), Laramie, Wyoming.

[16] Ernest Mickel, *Architectural Record* 120, no. 2 (August 1956), 32. *The New York Times* also picked up the story, reporting Park Service officials stating that "....the national parks were maintained as showcases for natural attractions," and therefore "Mr. Wright's 'modernized type' of building would be out of place among Yosemite's trees and glacier-cut rock cliffs..." See *The New York Times* (December 1, 1954).

[17] Jonathan Searle Monroe, "Architecture in the National Parks: Cecil Doty and Mission 66," (Master of Architecture thesis, University of Washington, 1986), 82.

[18] "Address by Conrad L. Wirth, Director of National Park Service, at the Dedication of Badlands National Monument and Mission 66 Facilities on Wednesday, September 16, 1959," "Speeches, 1959," CWP, AHC, Laramie, Wyoming.

to be accorded no vested deference."[19] A writer for *Architectural Record* expressed this sense of limitless potential for park architecture in 1957: "Let us not decide, just because we cannot draw it on the back of an envelope, that the great and sympathetic architecture cannot exist...The whole habit of thinking in the parks is the other way. We have not dared to let man design in the parks; we have not asked to see what he might do. We have slapped his hand and told him not to try anything."[20]

But the acceptance of modernism and its use in the parks was also a matter of urgency and economics. The Park Service needed to serve huge numbers of people as quickly as possible, and, despite increased funding, it had to do so on a limited budget. The often less expensive materials that composed modern buildings (steel, concrete, glass) allowed more facilities to be built for more parks. In its publication, *Grist*, the Park Service praised concrete as "low-cost, long-lived beauty treatment for parks." Asphalt was "nature's own product for nature's preserves," and asbestos-cement products "building materials for beauty, economy, permanence."[21]

Despite the general acceptance of modernism, Americans were still unfamiliar with modern architecture in national parks. When, in the mid 1950s, *The New York Times* reported on the controversy surrounding Gilbert Stanley Underwood's Jackson Lake Lodge, the reporter emphasized the contrast between the new concrete building and the area's wild west tradition, noting that "sheepmen," "naturalists," and "gamblers...now heatedly discuss the pros and cons of modern architecture." Nevertheless, the *Times* clearly admired "the artful blend of comfortable modern with western" even as critics called it "a slab sided concrete abomination." The *Virginian Pilot* was more conservative in its coverage of the "modern trend in architectural ideas" exhibited in the shade structures at Coquina Beach, Cape Hatteras National Seashore. Although Park Service architect Donald F. Benson received a *Progressive Architecture* award citation for the design, the paper warned that, "until people get used to the modern trend," the new shelters would "cause as much comment as three nude men on a Republican Convention

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[19] Appleman, "A History of the National Park Service," 16-17. Wirth reprinted this statement in his memoirs. See *Parks, Politics and the People*, 242.

[20] Emerson Goble, "Architecture (?) for the National Parks," *Architectural Record* 121, no. 1 (January 1957), 184.

[21] *Grist*, a publication of the National Conference on State Parks in cooperation with the National Park Service, Dept. of the Interior (September-October 1957; July-Aug. 1958; November-December 1958). The story on concrete was written by the Portland Cement Association and that on asphalt by the Asphalt Institute.

Program."[22] The Coquina facilities (destroyed by a storm in the early 1990s) soon became among the most widely praised designs of the Mission 66 era.[23]

The Park Service accepted modernism at a time when the new tradition had aged, and its post-modern backlash not yet emerged. The visitor center designed by Mitchell/Giurgola for the Wright Brothers Memorial was featured in a "news report" in *Progressive Architecture* suggesting that the Park Service had finally caught up with the standard required by the modern visitor. "The design of visitors' facilities provided for national tourist attractions seems to be decidedly on the upgrade, at least as far as the work for National Park Service is concerned. Disappearing one hopes, are the rustic-rock snuggery and giant-size 'log cabin' previously favored."[24] That the progressive periodical chose two visitor centers to "exemplify new park architecture" was not surprising. The Park Service intended for the new visitor center buildings to represent the values and results of its system-wide development campaign.

Developing a New Building Type: The "Visitor Center"

Even before the commencement of the Mission 66 building program, the Park Service had begun to develop a new type of visitor facility, eventually known as the "visitor center." *Our Heritage* described the visitor center as "one of the most pressing needs, and one of the most useful facilities for helping the visitor to see the park and enjoy his visit." Visitor centers were lauded as "the center of the entire information and public service program for a park."[25] One hundred and nine visitor centers were slated for construction over the ten-year period. This new type of park facility would not only embody new park visitor management policies, but also the spirit of Mission 66, which looked forward to an efficient Park Service for the modern age.

During the early 1950s, Park Service architects and planners began developing a centralized service facility that would help manage increased visitation. The updated facility, equipped with basic services and educational exhibits, was known in its early stages as an "administrative-museum building," "public service building," or "public use building." As this range of labels suggests, the Park Service was struggling not only to combine museum services and administrative facilities but to develop a new building type that would supplement old-fashioned

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[22] Jack Goodman, "Controversy Over Lodge in the West," *The New York Times* (August 7, 1955); Dan Morrill, "No Daub, No Wattles: Coquina Beach at Nags Head to Feature Modern Trend in Architectural Ideas," *Virginian-Pilot* (July 22, 1956); *Progressive Architecture* 37, no. 1 (January 1956): 92. Donald F. Benson (1921-) grew up in Ottawa, Illinois, and graduated from the University of Illinois with an architectural degree in 1951. Benson's work for the Park Service began in 1953, when Charles Peterson hired him as an architect in the Philadelphia office. During Mission 66, Benson worked for EODC under John B. Cabot, designing and supervising the design of visitor centers at Everglades National Park, Saratoga and Hopewell Village (now Hopewell Furnace), among other locations. Benson is now retired and living in Lakewood, Colorado. Interview with Donald F. Benson by the author, March 9, 1999, Lakewood, Colorado.

[23] Wolf Von Eckardt, "The Park Service Dares to Build Well," *Washington Post* (March 29, 1964); Lois Craig, et al, *The Federal Presence* (Cambridge, Massachusetts: MIT Press, 1979): 493.

[24] "Two Visitors' Centers Exemplify New Park Architecture," *Progressive Architecture* 40, no. 2 (February 1959): 87.

[25] U.S. Department of the Interior. *Our Heritage, A Plan for Its Protection and Use: "Mission 66"* (Washington D.C.: Government Printing Office, 1956).

museum exhibits with modern methods of interpretation. In February 1956, Director Wirth issued a memorandum to help clarify the use of terminology applied to the new buildings, explaining that "there are differences in the descriptive title, although most of the buildings are similar in purpose, character and use."[26] From then on, Wirth expected park staff to use "visitor center" for every such facility, even "in place of Park Headquarters when it is a major point of visitor concentration." As late as 1958, however, the matter remained unclear to many park visitors. When the topic was raised at a design conference, it was noted that "the term 'Visitor Center' is sometimes confusing to the public as it is an unusual and specialized facility which may be associated with shopping centers with which the general public is familiar."[27] If still puzzling to some, the building's label emphasized the novelty of the visitor center and bolstered the Park Service's image with high-profile examples of Mission 66 progress.

The Custer Battlefield museum & administration building, designed by Daniel M. Robbins & Associates of Omaha, demonstrates the transition from early Park Service museum buildings to standard Mission 66 visitor centers. The building was constructed in 1950, the first year since World War II that congressional appropriations for the parks included museum funding.[28] A lobby space and offices were incorporated into the new museum, but orientation areas remained small; no audio-visual or auditorium space was included and restrooms were relegated to the basement. Visitor circulation between the various areas does not appear to have been a major consideration. The Department of the Interior *Annual Report* for 1953 announced the commencement of "the first major public use development at Flamingo, on Florida Bay," which would consist of "a boat basin and other developments...camping and picnic facilities, dock and shelter building, roads, and water and sewer systems." At this time, "public use" was still a general term, applicable to a marina or an interpretive facility. The report also noted "administration and public-use buildings at Joshua Tree and Saguaro National Monuments, and utility buildings in Potomac Park, Washington, DC, and at Death Valley National Monument."[29] Other early precedents for visitor centers included the public information centers at Yorktown and Jamestown.

The public use building planned for Carlsbad Caverns in July, 1953, underwent the transition to visitor center during its design and construction. Preliminary drawings for the building were produced by the Office of Design and Construction in Washington, D.C., before the creation of the eastern and western design offices. Thomas C. Vint, chief of the Washington office, signed off on the proposal for a streamlined, two-story public use building with steel and glass facade. It featured a central lobby area and, on the left side, a coffee shop/fountain/dining room, curio store, and kitchen. The museum and auditorium were entered from the right side of the lobby, which included the women's restroom. Park Service offices were in the basement, along with

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[26] Conrad Wirth to Washington Office and field offices, memorandum, "Visitor Centers; Park Roads," February 10, 1956.

[27] "Summary of General Discussions of Visitor Center Design Problems," WODC, February 4, 1958, 7.

[28] Lewis, *Museum Curatorship*, 128.

[29] *Annual Report of the Secretary of the Interior*, 1953.

the men's restroom, and on the second floor, where they overlooked the double-height lobby.[30] By December 1954, a more detailed preliminary design for the Carlsbad Caverns facility had been drafted in which the entrance lobby was attached to a lounge area on the right side surrounded by restrooms, an exhibit space, and a ticket booth. The concession area was further defined as a curio shop, coffee shop, nursery, playroom, kitchen, and offices. This design incorporated an existing elevator building constructed in 1932, and one wing of the new facility was built by the concessioner, the Cavern Supply Company, with guidance from the Mission 66 staff.[31] The 1955 *Annual Report* called it "a public use building and elevator lobby, museum and naturalists' offices."[32] By January 1956, "the Public Use Building was in the final stage of preparation," but when bids for construction were opened in March, the building was referred to as a visitor center.[33] In his dedication speech nearly three years later, Conrad Wirth praised the Carlsbad Caverns Visitor Center for its use of "modern design" and "modern high-speed passenger elevators."[34]

Early proposals for the public use building at Grand Canyon suggest a similar struggle with programmatic aspects of the new facility. Preliminary drawings of the building were produced in 1954, with several proposals designed by Cecil Doty. Despite variations in plan, the front facade of the various proposals remained remarkably similar. The entrance area was mostly glass framed in decorative brick. The exhibit wing to the left was cement stucco, and the wing to the right either additional brick or stucco. The building was long and low, with little to attract attention except the flagpole and sign. By 1955, a courtyard scheme had been chosen for the floorplan, perhaps because its plan allowed for more flexible circulation. Visitors entered a lobby and were confronted with an information desk on their right, directly in front of the rangers and superintendents' offices. The library and restrooms were straight ahead, and the exhibit space, lecture room, study collection/workshop, and offices arranged in clockwise procession around the courtyard. The public use building was an immediate source of pride for the Park Service, which praised this "visitor center" as "a one-stop service unit" in 1956. An information desk complete with uniformed ranger, lobby exhibits, an illustrated talk, and a park museum "where a great variety of exhibits, arranged in orderly and effective fashion" were among the many conveniences for the visitor. The presence of the park superintendent and naturalist was also considered remarkable, as were the study collection, workshop, and library. According to the Park Service, the new building provided much-needed efficiency and economy.[35]

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[30] These drawings are available on microfiche at the Technical Information Center, Denver Service Center

[31] Building Maintenance Records, "Elevator Bldg. Carlsbad Cavern's N.P.," n.d., Carlsbad Cavern archives.

[32] *Annual Report of the Secretary of the Interior*, 1955.

[33] Superintendent's Monthly Reports [R. Taylor Hoskins, Superintendent], Carlsbad Caverns National Park, January 1, 1956, and March 3, 1956.

[34] "Address by Conrad L. Wirth, Director, National Park Service, Dedication of Visitor Center, Carlsbad Caverns National Park, New Mexico, June 12, 1959," "Speeches, 1959," CWP, AHC.

[35] *Annual Report of the Secretary of the Interior*, 1956.

The use of the word "center" to describe these early visitor centers indicated the planners desire to centralize park interpretive and museum displays, new types of interpretive presentations, park administrative offices, restrooms, and various other facilities. The underlying theory relates to contemporary planning ideas such as shopping centers, corporate campuses, and industrial parks, all of which sought to give new civic form to emerging patterns of daily life and urban expansion in the late 1940s and 1950s. Like the shopping center, the visitor center made it possible for people to park their cars at a central point, and from there have access to a range of services or attractions. Earlier "park village" planning had typically been more decentralized, with different functions (museum, administrations building, comfort station) spread out in an arrangement of individual, rustic buildings. The Mission 66 visitor center brought these activities together in a single, larger building intended to serve as a control point for what planners called "visitor flow," as well as a more efficient means of serving far larger numbers of visitors and cars in a more concentrated area. Centralized activities created a more efficient pattern of public use, and assured that even as their number grew to unprecedented levels, all visitors would receive basic orientation and services in the most efficient way possible.

Considering the commitment of Mission 66 era planners to accommodating the growing numbers of people who wanted to visit the parks, the centralized visitor center was an essential approach to park preservation. The visitor center facilitated, yet concentrated, public activities and so helped prevent more random, destructive patterns of use. The siting of visitor centers was determined by new considerations in park master planning that involved the circulation of unprecedented numbers of people and cars. While on the one hand the Park Service remained committed to making the parks accessible to all who wanted to use them, on the other agency planners also felt it was desirable to continue to concentrate automotive access in relatively narrow areas and road corridors, most of which were already developed for the purpose. As a result, Mission 66 development plans (at least in older parks) usually called for the intensification of development in existing front country areas, rather than opening back country areas to new uses. This implied road widenings, the expansion of campgrounds and parking lots, and often, the construction of a new visitor center. The visitor center was therefore sited in relation to the overall park circulation plan, in order to efficiently intercept visitor traffic. These criteria for siting Mission 66 visitor centers differed significantly from the criteria for siting and designing the rustic park villages and museums of the prewar era.

The Visitor Center and Mission 66

The planning and design of visitor centers began in the Park Service offices of design and construction in San Francisco (WODC) and Philadelphia (EODC). Both offices had been established as part of the Park Service's reorganization in 1954, and both were overseen by the central planning and design office in Washington, DC. Neither the WODC nor the EODC was prepared for the quantity of work Mission 66 would bring to the drawing boards. Rather than hire additional architects and landscape architects who would have to be laid off at the conclusion of Mission 66, the Park Service planned to contract out work to private firms on a project by project basis. In most cases, the Park Service furnished contract architects with preliminary drawings, which the consultants would then use as the basis for the developed design and contract drawings. In some cases, consultants simply provided the contract drawings for designs that had been fully developed in-house. Visitor centers were typically the most

expensive new buildings in the parks, as well as high-profile commissions, and therefore attractive to private consulting firms.[36]

Whether or not consulting architects were employed, in all projects the Park Service retained control over the location of buildings and, in many cases, significant aspects of the consulting firm's design. The planning of early visitor centers reflected the Mission 66 concern with protection and use, the idea that park development provided the key to preservation. According to the 1955 *Annual Report*, the Park Service decided to locate administration offices, warehouses, shops, and residences away from areas devoted to visitors, creating separate "zones" for maintenance, employee housing, administration, and visitor services. Location within the park was also an important interpretive issue. Planners debated whether visitor centers provided better visitor orientation from a location near the entrance to the park, or were more effective near a significant feature that visitors would want to see and know more about. In some cases, this issue was resolved by creating secondary visitor centers, which were usually little more than a single exhibit space equipped with restrooms.

Throughout the Mission 66 period, the Park Service's overriding goal for its visitor centers was to improve interpretation and stimulate public interest in the park. To do this, the park's "story" was to be told as clearly and effectively as possible. Historians and interpreters played crucial roles in the Mission 66 planning process. According to Robert Utley, chief historian for the Park Service beginning in 1964, historians such as Roy Appleman and Ronald Lee favored siting visitor centers "right on top of the resource" so that visitors could "see virtually everything from the visitor center."[37] The location of visitor centers in sensitive areas often occurred at cultural sites and battlefields, where the purpose of the visitor's trip to the site was to gain a fairly comprehensive understanding of an important historic event. The preservation of cultural and natural resources sometimes became a concern, but was rarely articulated, according to Utley. The siting of a visitor center among the ruined structures at Fort Union, for example, was deemed advantageous for interpretation. During the Mission 66 period, the Park Service strove to educate the public, sometimes even at the expense of encroaching on the historical or natural environment. Mission 66 historians and planners believed that more effective public education justified such encroachments, and that resulting understanding of sites would lead to greater support for preservation. But if this priority meant sometimes siting visitor centers in sensitive areas, it did not extend to other types of development. Director Wirth emphasized that "definite steps were taken to move as many of the administrative, government housing, and utility buildings and shops as possible out of the national parks to reduce their interference with the enjoyment of park visitors."[38]

Within the visitor center building, Park Service designers faced the challenge of orienting visitors and directing them to desired services. These design decisions also affected visitor

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[36] The Design and Construction Division benefitted from student trainee and assistant programs that provided the WODC with 90 student architects, engineers, and landscape architects during the summer of 1956; EODC was supplied with 75 students. See *Annual Report of the Secretary of the Interior*, 1956.

[37] Utley in Sellars and Webb, "An Interview with Robert M. Utley."

[38] Wirth, *Parks, Politics and the People*, 278.

impacts on park resources. The visitor center was considered "the hub of the park interpretive program," and a method of orienting park visitors who "lacking these services, drive almost aimlessly about the parks without adequate benefit and enjoyment from their trips."[39] Not only was the visitor center a signpost intended to attract the aimless visitor within, but also a method of distributing information and other services in the most efficient and significant manner. Park Service architects confronted such issues in the development of building "circulation" or "flow" diagrams. Visitor circulation patterns were particularly important in this type of building, because people were expected to use the building in different ways; while some would study the exhibits and watch the films, others were only interested in visiting the restrooms or purchasing a park map. At this early date, Park Service architects had no precedents for use patterns, and, therefore, only a vague idea of how the new buildings would function.

The Park Service design and construction staff and interpretation staffs held joint meetings on visitor center planning in November 1957 (EODC) and February 1958 (WODC), and distributed their general findings in a summary. The discussions focused on participants' experience at early visitor centers, particularly those at Colonial National Historic Park and Grand Canyon. Conference participants discussed the desirability of open design, the need for outdoor rest rooms, the importance of determining anticipated numbers of visitors, and the consideration of administrative requirements. Planning visitor center interpretation in conjunction with roadside and trailside interpretation was also encouraged. Individual spaces were to be designed with environmental factors in mind. If the lobby served as "a transition area for the harassed visitor between the crowded highway and the park atmosphere," it should "convey a mood and invite a relaxed frame of mind." Assembly rooms had actually become multiple use spaces and, as the example at Jackson Lake Lodge demonstrated, were more effective with flat rather than sloping floors. These spaces also played a role in the visitor's "transition from 'outside' into the park atmosphere." Exhibits might require artificial light for curatorial purposes, but they also benefitted from a little daylight "to avoid claustrophobia." Finally, information counters could only function effectively at the minimum height requirements suggested, and portable counters were often most useful.[40]

In his discussion of visitor center placement, John B. Cabot, supervising architect for the EODC, described three potential locations. An entrance visitor center established the mood of the park and introduced the visitor to "the total interpretation of park values." The "en route" center posed the problem of simultaneously introducing the visitor to the park and providing information about the site to be visited. Most common was the "terminal visitor center," located at a popular destination, which supplied the visitor with a summary of park values while incorporating relevant information about the area; architects of these centers were encouraged to make use of surrounding views in their designs. According to Cabot, the location of the visitor center influenced the development of the building program because placement "affects how, in what sequence, the story is told, as well as how much or how little." This narrative depended, to a great extent, on the type of park under consideration. Whereas any of dozens of locations on

[39] U.S. Department of the Interior, *Mission 66, To Provide Adequate Protection and Development of the National Park System for Human Use* (Washington, D.C.: Department of the Interior, National Park Service, 1956).
[40] U.S. Department of the Interior, *Visitor Center Planning," Notes on Discussions Held in EODC November 18-22, 1957 and WODC February 4-6, 1958* (Washington, D.C.: Department of the Interior, n.d).

the edge of natural areas might serve to orient visitors in wilderness parks, most historical parks could only be adequately understood with the help of interpretation presented in close proximity to the commemorative site. In a January 1960 report on visitor centers, the chief of interpretation commended the "desirable" siting of Colonial (Yorktown), which featured an "excellent view of the battlefield from the Siege Line Lookout on the roof of the visitor center," but criticized that of Grand Canyon, which stood midway between Mather Point and Grand Canyon Village, as "too far removed (1/3 mile) from the Canyon Rim . . .". Park Naturalist Shultz commented that "a visitor center should be 'in touch' with the feature it interprets."[41]

Once planners had chosen a building site, architects considered the park's story on a more intimate level. Cabot demonstrated how "visitor sequence diagrams" (flow diagrams) showed alternatives for visitor travel through a series of spaces; a typical example placed reception/information (lobby) in the center, with the assembly (auditorium), toilets, administration and interpretation (museum exhibits) areas grouped around it. In the diagrams, spaces were represented by circles of varying sizes. One alternative placed a circulation terrace between the various areas, allowing the visitor to choose his or her route. Cabot suggested that architects develop a sequence analysis, flow diagram and estimates of spatial dimensions before beginning preliminary drawings. Such planning required a close working relationship between museum professionals and architects, as indicated by Cabot's lengthy outline for visitor center design.[42] The "architectural treatment" of assembly or audio-visual rooms depended, in part, on mechanical systems and park programs. Funding for certain "audio-visual devices" became available in 1956, too late for incorporation into early visitor center plans, such as the Fort Frederica Visitor Center on St. Simons Island, Georgia. In the future, Ronald Lee recommended supplying architects with audio-visual related information, including descriptions of the devices, whether accommodations were needed for slide or film projectors, the audience's seating requirements, and the possibility of dividing auditorium space for several smaller presentations. Architectural consideration of such factors would lead to the development of "rooms which open from the lobby and which are separated from the exhibit rooms in order to keep the devices from distracting the visitor in his enjoyment of the exhibits."[43] Both Cabot and Lee encouraged architects to work closely with the interpretive branch and to contact consultants at the Washington Office for assistance in designing suitable spaces.

The professional partnership between Park Service designers and planners and interpreters and curators dated back at least to the creation of the Museum Division in 1935. During the planning stages of the Jefferson National Expansion Memorial, the Museum Division developed exhibits for the future museum and catalogued significant architectural fragments from the site as it was cleared for construction. In the early 1940s, architect Lyle Bennett wrote up a "Checklist for Museum Planning," addressing issues that would become relevant in his Mission 66 visitor

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[41] "A Report on Visitor Centers" (Washington: U.S. Dept. of the Interior, ca. January 1960), National Park Service History Collection, Harpers Ferry Center.

[42] "Visitor Center Planning," 13-40.

[43] Ronald L. Lee, Chief, Division of Interpretation to Chief, Eastern Office of Design and Construction, memorandum, "Audio-Visual Space Requirements in Visitor Center Buildings," ca. November, 1956, Box 29; "WASO Design and Construction Correspondence," 1954-56, Regional Archives, Philadelphia, Pennsylvania.

centers designs. The close relationship between exhibit and architectural designers was strengthened by Tom Vint during the early years of Mission 66. Vint discussed exhibits at Grand Canyon with architect Cecil Doty, and it was typical for him to consult with Ralph Lewis or another museum expert on interpretive aspects of visitor center design.[44] Ten years after the official conclusion of Mission 66, Lewis published *Manual for Museums*, a technical handbook for curators on collections management. Although visitor centers are beyond the scope of the work, its frontispiece is a color photograph of the Mission 66 visitor center at Wright Brothers National Memorial. This "characteristic example of museums in the National Park System," was still a suitable representation of current Park Service curatorial standards nearly twenty years after its construction.[45]

Mission 66 caused a surge of activity in the museum branch of the Park Service that led to the re-opening of the Western Museum Laboratory in San Francisco's Old Mint building.[46] Within months of its organization, the laboratory began work on exhibits for Quarry Visitor Center at Dinosaur National Monument, the Mission 66 building slated for a grand opening June 1, 1958.[47] Correspondence between the Division of Interpretation and the director indicates that Park Service exhibit professionals influenced the design of the center. The contract architects, Anshen & Allen, drew up exhibit plans based on the Western Museum laboratory's requirements. In April, the laboratory corrected some circulation problems in the construction drawings.[48] Since the laboratory must have provided preliminary designs, other alterations may have taken place during the planning process.

The development of the visitor center not only increased the demand for museum work, but also opportunities to supplement traditional dioramas and displays with more innovative "hands on" exhibits and audio-visual productions. The Mission 66 report of 1956 noted that museums were frequently part of the administration building or visitor center and emphasized the great importance of museum collections in preserving "priceless national legacies." Audio-visual presentations were also seen as a means of reducing costs and presenting interpretive material more quickly and effectively. Improvements in mechanical systems and the production of high-quality 16 mm films were the wave of the future. This technology would replace more traditional museum exhibits--and change the role of museum professionals--in later visitor

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[44] Ralph H. Lewis, *Museum Curatorship in the National Park Service, 1904-1982* (Washington, D.C.: Department of the Interior, National Park Service, 1993), 108-142.

[45] Lewis, *Manual for Museums* (Washington, D.C.: Department of the Interior, National Park Service, 1976).

[46] "The Eastern Museum Laboratory increased its exhibit construction staff to about 30 and the Western Laboratory reopened with a staff of fifteen." In anticipation of over a hundred new visitor centers and the rehabilitation of exhibits in about forty existing museums, the Museum Division "planned laboratory facilities to maintain a permanent production rate of 250 exhibits per year." Another one hundred and fifty exhibits were to be obtained through contractors. See R.H. Lewis, draft, "Reexamination of the Museum Phases of Mission 66," National Park Service History Collection, Harpers Ferry Center.

[47] Lewis, "Museum Curatorship," 153-4.

[48] John W. Jenkins to Director, May 6, 1958 in "Dinosaur Interpretive Plans, vol. I, Quarry Visitor Center Exhibit Plan," library, Denver Service Center.

centers, such as the headquarters at Rocky Mountain National Park, Colorado. Even the 1963 preliminary designs for this building featured an enlarged audio-visual room rather than exhibit space, demonstrating the transformation from museum-administration building to visitor center within the decade.[49]

The cover of "Mission 66 in Action," a 1958 brochure promoting the program, features a streamlined, modern visitor center and viewing terrace dotted with visitors.[50] Another drawing of a simple, rectangular visitor center building is pictured inside. Thirty-four of these new "focal points of park activity" had already been completed and twenty were under construction. By this time, the Park Service was on its way towards establishing standards for visitor centers, at least in terms of in-house examples. The design conference offered park architects important tips on early planning and guidelines for developing appropriate buildings. Park publications promoted modern materials for design, and during the early 1960s, Park Service personnel could look at their own publications for guidance.

Park Practice Design, a joint publication of the Park Service and the National Conference on State Parks, featured a rustic wood museum building in 1957, but qualified its praise with the observation that it had "limited application because of its architectural character and the fact that it would be relatively expensive to construct." These issues were no longer applicable in 1962, when the publication emphasized the centralization of functions, circulation of visitors, and presence of modern utilities in visitor centers at Pipestone, George Washington Carver, and Everglades. Writing for the Park Service newsletter *Guidelines*, Howard R. Stagner, chief of the Division of Natural History and a member of the original Mission 66 planning staff, compared visitor centers to modern businesses. The overwhelming purpose was luring people inside. Stagner noted the absence of any standard plan for visitor centers, since each varied according to its reason for being. Taken out of context, the visitor center had no inherent value, but placed near a point of interest, it became indispensable to the curious park visitor. By 1963, museum professionals described how the visitor center allowed the Park Service to "orient the public according to its own objectives." This was achieved through what had already become a standard set of experiences: approaching the information desk, discovering one's location on a map, watching a narrated slide production, visiting the museum, taking in a view and then proceeding down the road to a major attraction.[51]

During the last few years of Mission 66, both the EODC and the WODC experimented with visitor center plans that moved away from the centralized, single building model. The new designs were of two basic types--an entry lobby with distinct wings for other services and a series of independent buildings grouped around a courtyard or terrace. The visitor center and administration building at Saratoga, New York, designed by Don Benson and the EODC staff in

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[49] David D. Thompson, Jr., "Visitor Centers," 4.

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This conceptual design was never executed.

[51] Howard R. Stagner, "Making the Visitor Center Work," *Guidelines* (National Park Service, November 1963): 75-77; Charles W. Warner, "The Interpretation of an Historic Area through the Original Environment and the Visitor Center," *Guidelines* (National Park Service, November 1963): 79-81.

1960-1962, is an early example of this effort to clarify services and the circulation between them. Offices are housed in a hut-like space adjacent to a similar form containing a lobby and roofed terraces. These six-sided "huts" are connected by a corridor to the assembly/museum area, which is similar in plan and outward appearance. The exterior walls of all three areas are covered with beveled wood siding and the six-sided pointed roofs are protected by hand-split wood shingles. Although the Salt Pond Visitor Center (1964), Cape Cod National Seashore, Massachusetts, was based on a different plan and aesthetic treatment, it also effectively dispersed services into three distinct areas. EODC Architect Ben Biderman designed the visitor center with a central entrance lobby between an audio-visual room and museum. The elevation reads as three separate buildings, but the two wings are connected to the lobby with glassed-in corridors. In contrast to the Saratoga Visitor Center, Salt Pond emphasized the character of each area with distinctive roof designs and wall treatments.

The WODC also began experimenting with alternatives to the centralized, single- building visitor center during the later years of the program. Cecil Doty produced a visitor center on the "three hut model" with pointed shake roofs for Curecanti Visitor Center (1965) in Colorado, but the building was completely re-designed by a contract architectural firm. The reverse situation occurred at Cabrillo Visitor Center, San Diego, for which Doty chose a more centralized plan that contract architect Frank L. Hope reconfigured as three completely separate buildings in 1965. In this case, the administration building, exhibits/auditorium, and viewing/sales buildings were grouped around an open-air courtyard. Roughly contemporary with this design were the plans for the headquarters at Fort Raleigh, Cape Hatteras National Seashore (1964-65), and the Kalapana Visitor Center at Hawaii Volcanoes (1965-66; destroyed by a lava flow in 1989). The visitor center portion of Fort Raleigh was completely separate from the headquarters, a series of "pod-like" buildings. The Hawaiian structure featured an office building, comfort station, and exhibit room with attached lanai (porch). Both of these buildings, and perhaps not coincidentally most of these later visitor centers, made extensive use of wood shingles, built-up roofs, and decorative wood siding. Although "classic" visitor centers were still designed in the late 1960s, this move towards decentralizing visitor services appears to have been both a response to visitor circulation issues and a reaction to a design trend that would appear in school buildings and other public facilities during the late 1960s and 1970s.

The Mission 66 visitor center combined old and new building programs and served as the centerpiece of a new era of planning for American national parks. The influence of the Mission 66 visitor center was profound. New visitor centers (and the planning ideas and architectural style they implied) were used in the development or redevelopment of scores of state parks in the United States, as well as nascent national park systems in Europe, Africa, and elsewhere. The visitor center is still the core facility of park development programs for parks of various sizes and in various contexts all over the world.

"Park Service Modern"

The Mission 66-era visitor center also embodied a distinctive new architectural style that can be described as "Park Service Modern." By the late 1930s, Park Service architects had become aware that American architecture was changing fundamentally, and that the situation had also changed in the national parks. Park Service Modern architecture responded to the new context

of postwar social, demographic, and economic conditions. The new style was an integral part of a broader effort at the Park Service to reinvent the agency, and the national park system, for the postwar world.

The new style was evident, above all, in the design of visitor centers. These showcase facilities exploited the functional advantages offered by postwar architectural theory and construction techniques. The larger, more complex programming of the visitor center encouraged Park Service architects to take advantage of free plans, flat roofs, and other established elements of modern design in order to create spaces in which larger numbers of visitors could circulate easily and locate essential services efficiently. Such planning implied the use of concrete construction and prefabricated components, and was further complemented by unorthodox fenestration and other aspects of contemporary modern design. At the same time, Park Service Modern also built on some precedents of earlier rustic design, especially in the use of interior courtyards and plain facades, which Cecil Doty had used, for example, in Pueblo revival structures of the 1930s.

The architectural elevations of Park Service Modern visitor centers reflected a new approach to designing what was, after all, a new building type. Stripped of most overtly decorative or associative elements, the architects typically employed textured concrete with panels of stone veneer, painted steel columns, and flat roofs. These were established formal elements of the modern idiom, but they also often allowed the sometimes large and complex buildings to maintain a low, horizontal profile that remained as unobtrusive as possible. Many visitor centers were sited on a slope, so that the public was presented with a single-story elevation, while the rear (service/administrative façade) dropped down to house two levels of offices. Stone and textured concrete could also take on earth tones that reduced visual contrast with landscape settings. The Park Service Modern style developed by the Park Service during the Mission 66 era was a distinctive new approach to park architecture. The style was quickly adopted and expanded upon by Park Service consultants, notably Mitchell/Giurgola and Neutra. The Park Service Modern style soon had a widespread influence on park architecture not only in the United States, but internationally as well.

Park Service Modern architecture also reinterpreted the long-standing commitment to "harmonize" architecture with park landscapes. The Park Service Rustic style had been essentially picturesque architecture that allowed buildings and other structures to be perceived as aesthetically harmonious elements of larger landscape compositions. The pseudo-vernacular imagery and rough-hewn materials of this style conformed with the artistic conventions of landscape genres, and therefore constituted "appropriate" architectural elements in the perceived scene. Rustic buildings harmonized with the site not just by being unobtrusive, but by being consistent with an aesthetic appreciation of the place. Park Service Modern buildings were no longer truly part of the park landscape, in this sense, since they were not sited or designed to be part of picturesque landscape compositions. But in many cases this meant that buildings could be sited in less sensitive areas, near park entrances or along main roads within the park. At times, the new, larger visitor centers could be even less obtrusive than rustic buildings often had been. Park Service Modern architecture, at its best, did "harmonize" with its setting, but in a new way. Stripped of the ornamentation and associations of rustic design, Mission 66 development could be both more understated and more efficient. If the complex programs and extensive floor areas of the new visitor centers had been designed in a rustic idiom, the buildings probably would have

taken on the dimensions and appearance of major resort hotels. Park Service Modern offered a new approach that, when successful, provided more programmatic and functional space for less architectural presence.

During the Mission 66 era, the Park Service Modern style (epitomized by the Mission 66 visitor center) led the way in establishing what was considered an appropriate approach to planning and designing the built environment in national and state parks. The new, modern image became widespread, and was adopted by many different park and public land management agencies all over the United States. As the national park movement spread worldwide in the postwar era, visitor center planning and the Park Service Modern style were often exported as well. Mission 66 and Park Service Modern became as influential in shaping postwar park planning as the New Deal and Park Service Rustic had been between the wars.

Wright Brothers National Memorial Visitor Center, Kill Devil Hills, North Carolina

Background

The site of the first successful powered flight, the wind-swept dunes of Kill Devil Hills, North Carolina, offered a unique context and opportunity for the Mission 66 program. The landscape of the Wright Brothers National Memorial itself suggested the clean lines of Park Service Modern design. And the new Mission 66 visitor center for the site, completed in 1960 according to plans by the firm of Mitchell/Giurgola, would come to embody a celebration of technology and technical achievement that was appropriate to the nature and purpose of the memorial site.

The first organized preservation effort at the Wright Brothers site was launched in 1927 by the newly formed Kill Devil Hills Memorial Association. During its early planning stages, the association imagined a future museum at the site, but a more immediate concern was the construction of an appropriate memorial. Congress authorized the Kill Devil Hill Monument National Memorial in March, 1927, and the cornerstone for the structure was laid during the next year's anniversary celebration. Rodgers and Poor, a New York architectural firm, designed the 60-foot-high Art Deco granite shaft in 1931-1932.[52] Crowned with a navigational beacon accompanied by its own power house, the tremendous pylon was ornamented by bas-relief wing designs.[53]

Kill Devil Hill was not itself the site of the Wright Brothers' achievement, but the launching point for earlier glider experiments and a location closer to the heavens than the Wrights' primitive airstrip on the flat land north of the dune. When the Wrights set up camp here from 1901-1903, this land was constantly shifting sands. The Quartermaster Corps used sod and other plantings to stabilize the sand hill when the area was still under the jurisdiction of the War

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[52] Robert Perry Rodgers (1895-1934) and Alfred Easton Poor (1899-1988), both received their undergraduate architectural education at Harvard University. Rodgers went on to earn a degree from the Ecole des Beaux Arts in 1920 and work in Bertram Goodhue's New York office. Poor continued his education at the University of Pennsylvania, joining Rodgers in the late 1920s for collaboration on an office building.

[53] "Mission 66 for Wright Brothers National Memorial," (National Park Service, Dept. of the Interior, n.d.), Wright Brothers National Monument archives.

Department.[54] In addition, the Kill Devil Hills Association marked the location of the first flight with a commemorative plaque. During the 1930s, plans for the Memorial included a park laid out in the Beaux-Arts tradition, with a formal mall leading to a central garden flanked by symmetrical hangers and parking lots.[55] Although this scheme was never implemented, the system of trails and roads constructed by the Park Service in 1933-36 formed the basis for today's circulation pattern. A brick custodian's residence (1935) and maintenance area (1939) were built south of the hill.

When the monument was planned in the late 1920s, Congressman Lindsay Warren imagined a museum "gathering here the intimate associations," and "implements of conquest."[56] Almost twenty years later, an "appropriate ultra-modern aviation museum" was proposed for Wright Brothers during the effort to obtain the original 1903 plane, but funding was not forthcoming.[57] Such an ambitious construction project began to seem possible in 1951, when the memorial association reorganized as the Kill Devil Hills Memorial Society, and prominent member David Stick established a "Wright Memorial Committee." Stick realized that a museum could only succeed with assistance from the National Park Service, local boosters, and corporate sponsors. Among the committee members recruited for the development campaign were Paul Garber, curator of the National Air Museum in Washington; Ronald Lee, assistant director of the Park Service; and J. Hampton Manning, of the Southeastern Airport Mangers Association in Augusta. In preparation for the first meeting, the Park Service drafted preliminary plans for a museum facility dated February 4, 1952.[58] Regional Director Elbert Cox introduced the project as a "group of buildings of modern form" to be located off the main highway northeast of the monument.[59]

Although it could not provide adequate funding for the museum, the Park Service entered into the planning process in earnest, producing revised plans and specifications in August 1952. Director Wirth looked "forward with enthusiasm to the full realization of the . . . program," and promised that the Park Service would operate and maintain the facility once constructed.[60] He even included cost estimates for the buildings, structures, grounds, exhibits, furnishings, roads,

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[54] Andrew M. Hewes, *Wright Brothers National Memorial: An Administrative History* (Washington, D.C.: Department of the Interior, National Park Service, 1967), 26-7.

[55] "Preliminary General Plan, Kill Devil Hill National Monument," Eastern Division Branch of Plans and Designs, drawing # NM-KDH-1002, ca. April 1934, TIC.

[56] "Mission 66 for Wright Brothers," 4.

[57] Hewes, *Wright Brothers National Memorial*, 73.

[58] "Preliminary Plan for Wright Brothers Memorial Museum, (3 sh.) drawing #NMEM-KDH-2014, Regional Planning and Construction Division, February 4, 1952, TIC.

[59] Wright Memorial Museum Committee of the Kill Devil Hills Memorial Society, "Prospectus for a Museum to be located at Kill Devil Hills, N.C. to Depict the Life and Accomplishments of Wilbur and Orville Wright, February 1952, "Museum-prospectus" file, Kill Devil Hills Memorial Society Papers (KDHMSP), Outer Banks History Center (OBHC), Manteo, North Carolina.

[60] Conrad Wirth to David Stick, ca. August 1958, KDHMSP, OBHC.

and walks.[61] Despite much effort, however, the committee was unable to raise funds for the million dollar complex, which was originally slated for completion by the fiftieth anniversary of the first flight. Several smaller goals were achieved in time for the celebration: the monument was renamed the Wright Brothers National Memorial, entrance and historical markers established, and reconstructions of the Wrights' living quarters, hanger, and wooden tracks constructed. Though disappointed at the lack of financial backing for the museum, the committee "strongly felt that the original plans for the construction of a Memorial Museum at the scene of the first flight should remain an objective of the Memorial Society."[62] The establishment of the Cape Hatteras National Seashore, also in 1953, may have contributed to their continued optimism.

Four years after the committee's initial attempt to fund an aviation museum, the National Park Service surprised all concerned with an offer to sponsor a scaled-down version of the facility. The committee met in Washington on October 23, 1957, only to learn that funds from the aircraft industry would not be forthcoming. During this meeting, Conrad Wirth outlined his Mission 66 program and revealed that a visitor center at Wright Brothers was included among the proposed construction projects. After further consideration, Wirth promised to make the Wright Brothers facility an immediate objective "by shifting places on the list with one of several battlefield visitor centers planned in advance of the forthcoming Civil War centennial."[63] Just four years earlier, the Park Service had planned a modernist museum for the site on the scale of a Smithsonian, with the free-flowing design of a public building typical of the period. For its Mission 66 visitor center, the Park Service sought a smaller, less expensive, more compact structure with distinct components: restrooms (preferably entered from the outside), a lobby, exhibit space, offices, and a room for airplane displays and ranger programs (in place of the standard audio-visual room or auditorium). As designers of the new building, the Park Service chose a new architectural firm based in Philadelphia: Mitchell, Cunningham, Giurgola, Associates (later known as Mitchell/Giurgola). With its symbolism of innovation, experimentation and evolving genius, the building was an ideal commission for the fledgling firm.[64]

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[61] An estimate of the costs was initially provided by Assistant Director Ronald Lee in June 1952. Wirth repeated the following estimates: roads and walks: $150,000; buildings and structures: $600,000; grounds: $186,000; utilities: $38,000; exhibits and furnishings: $230,000; total: $1,204,000. Ronald Lee to Admiral Ramsey, June 10, 1952, KDHMSP, OBHC.

[62] "Suggested Action for the Wright Memorial Museum Committee," Kill Devil Hills Memorial Society, Ronald F. Lee and Ralph V. Whitener, Executive Committee, May 19, 1953, KDHMSP, OBHC.

[63] See David Stick, "Wright Memorial Museum Committee (1959-1960)," 21; park archives, Fort Raleigh Headquarters, Manteo, N.C.

[64] Warren William Cunningham, known as "Barney," worked briefly with Mitchell/Giurgola before becoming a partner in Geddes, Brecher, Qualls, Cunningham. By the early 1960s, the firm was competing for commissions in the Philadelphia area.

Mitchell/Giurgola, Architects

The Wright Brothers Memorial Visitor Center was the "first building to achieve nationwide recognition" designed by Ehrman B. Mitchell and Romaldo Giurgola.[65] Although only a year old in 1957, the visitor center building type was not unfamiliar to either young architect. Mitchell and Giurgola met in the office of Gilboy, Bellante and Clauss, a Philadelphia firm commissioned to design the 1955-1956 visitor centers at Jamestown and Yorktown.[66] During Gilboy, Bellante and Clauss's association with the Park Service, Mitchell and Giurgola became acquainted with John B. Cabot, chief architect of the Eastern Office of Design and Construction. In October 1957, Mitchell invited "Bill" Cabot to a cocktail party at the family's new home in Lafayette Hill, Pennsylvania. The two discussed the prospect of Park Service work for the untested firm of Mitchell/Giurgola. As Mitchell recalls, Cabot said, "Mitch, Don't call me, push me, pressure me...if I get work, I'll call you."[67] A few months later, Cabot did call. When Mitchell questioned the Chief Architect about his choice of virtually unknown architects for the prestigious commission, Cabot said that the recent recession in the Eisenhower administration affected his decision: "We got a directive to get every project on the street. We had eight projects and seven architects."[68] If Mitchell/Giurgola obtained the Wright Brothers Visitor Center contract by being in the right place at the right time, the results they achieved far surpassed the Park Service's expectations. The publicity the building would receive in popular architectural journals over the next decade resulted not from the architects' reputations, but from the quality of the design of their building.

Born in Italy in 1920, Romaldo Giurgola was educated at the University of Rome and, beginning in 1950, at Columbia University. He taught at Cornell and served as an editor of *Interiors* magazine before joining the faculty of the University of Pennsylvania in 1958. Ehrman B. Mitchell, Jr., a Pennsylvania native born in 1924, received his architectural education at Penn and a position with a local firm soon after graduation. Three years later he joined Gilboy, Bellante and Clauss of Philadelphia and in 1951 became the supervisor of the firm's London office. His work in England included coordinating with a large English consulting firm in the design of military air fields. When Mitchell returned to Philadelphia by the mid-1950s, he was experienced in running international architectural firms. In 1957, he and Giurgola began planning their partnership, and with the prospect of work from the Park Service, opened their own Philadelphia office. Along with the Wright Brothers visitor center commission, the firm designed two other public buildings, several residences, and projects for competitions during its first few years in business.[69]

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[65] Phoebe Stanton, "Mitchell/Giurgola Architects" in *Process: Architecture* 2 (October 1977): 153.

[66] E. Lawrence Bellante and Alfred Clauss also received the contract for the visitor center at Mammoth Cave under construction in 1957-58. Mitchell had left the firm by this time and did not recall the project.

[67] Interview with Ehrman B. Mitchell by the author, February 9, 1999, Philadelphia, Pennsylvania.

[68] Interview with Ehrman Mitchell.

[69] Mitchell/Giurgola designed residences for Mr. and Mrs. Crockett in Corning, New York, and the Mitchell family in Lafayette Hill, Pennsylvania, in 1958. The Mr. and Mrs. J. E. Steine Residence in Bryan, Ohio, was completed in 1959. Exhibition designs included the Far East Asia Development Project displayed in the New York Coliseum (with Wright and

When Giurgola became chairman of Columbia's architectural department in 1966, the firm opened a second office in New York. By this time Mitchell/Giurgola was a well-known architectural presence with an award-winning parking garage and the much sought after commission for the A.I.A. headquarters building in Washington, D. C., to its credit.[70] Ten years later, the partners would receive the A.I.A. firm award, the organization's most distinguished award for an office. The bicentennial year also marked the dedication of Mitchell/Giurgola's second Park Service structure, the Liberty Bell Pavilion on the mall across from Independence Hall.[71] Among the firm's many significant achievements are the Headquarters Building of the United Fund in Philadelphia (1971), of which one architectural historian declared "one has but to travel up and down the east coast of the United States to see the influence it has had on urban architecture."[72] Mitchell served as president of the American Institute of Architects in 1979-80, and in 1982, Giurgola was awarded the A.I.A. Gold Medal, the highest honor bestowed upon individual architects. The Wright Brothers Visitor Center was not only featured in the A.I.A. nomination, but as part of a traveling "Gold Medal Exhibition" sent to schools across the nation.[73] Architectural historians assessing the firm's career look to this building as the beginning, and, as their first significant work, a benchmark from which to judge future growth and change.[74]

The Wright Brothers Visitor Center commission not only inspired Mitchell and Giurgola, but, more importantly, proved a challenging design problem worthy of national recognition. Like a handful of other park sites, the Wright Brothers Memorial is a monument to scientific and technological achievement. For the architects, as for the public, its value lay both in its significance to the history of aviation and to the more personal story of perseverance and

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Mitarachi) in 1958, a design for the A.I.A. Philadelphia Chapter Centennial Exhibition (1958), and an exhibition design for the Brooklyn Museum (1959 with Kallman and Mitarachi). The firm also completed "Public Health Center No. 9" for the city of Philadelphia in 1959.

[70] Mitchell/Giurgola's Univ. of Pennsylvania parking garage received a gold medal from the Philadelphia chapter of the A.I.A. in 1964. Their submission to the competition for the A.I.A. National Headquarters in Washington, D.C., won first place out of two hundred and twenty-one entries, but inter-agency conflict prevented its construction.

[71] The firm designed two other buildings for the Park Service, the "Acadia National Park Headquarters Building" (1965) in Bar Harbor, Maine, which remained in project form, and a maintenance facility constructed for Independence Park in 1975.

[72] Stanton, "Mitchell/Giurgola Architects," *Process: Architecture.*

[73] The Gold Medal Exhibition opened at the A.I.A. convention in Honolulu on June 6, 1982. The show traveled to the school of architecture at the University of Hawaii, Honolulu; the Foundation for Architecture, Philadelphia; the Graduate School of Architecture at Columbia University, New York; and the American Institute of Architects National Headquarters in Washington, D.C. See Tony P. Wrenn to Marilyn Harper, February 24, 1997, memorandum, "National Register Status of Visitor Center."

[74] For example, architectural historian Phoebe Stanton lists the Wright Brothers Visitor Center as typical of early works departing from "doctrinaire architecture," and "defined by Kahn's comment on circumstantial and form." See Stanton, "Mitchell/Giurgola," 158. Kenneth Frampton, author of *Modern Architecture*, singles out the Wright Brothers Visitor Center as exemplifying the firm's early tendency towards "the superficial aspects of the New Monumentality, as this appeared in the more structurally ostentatious works of Eero Saarinen." See Frampton, "Forward," in Ehrman B. Mitchell and Romaldo Giurgola, *Mitchell/Giurgola Architects*, (New York: Rizzoli International Publications, Inc., 1983), 8.

experimentation leading to scientific progress. During the 1950s, when many of the country's first modern airports were under construction and the dream of space travel became a reality, aviation facilities used modern technology and materials to create aesthetic representations of flight, suggesting the limitless future of transportation. One early example, the Terminal building at Lambert-St. Louis Airport designed by Minoru Yamasaki with George Hellmuth and Joseph Leinweber (1953-1956), housed terminals in three concrete groin-vaulted buildings with glass and aluminum forming the semi-circular walls of the remaining space. By the beginning of the Mission 66 program, Eero Saarinen, creator of the Jefferson National Expansion Memorial, was busy with plans for the TWA Terminal at Kennedy International Airport, New York (1956-1962), and Dulles International Airport, Reston, Virginia (1958-1962). In November, 1957, park employees sent bags of sand from Kill Devil Hills to Los Angeles for the dedication of the city's "Jet-Age Expanded International Airport."[75]

Along with social change, the early 1960s brought restlessness among elite designers and a readiness for new leaders in the profession. In 1961, architectural critic Jan Rowan used the term Philadelphia School to describe what he hoped would become an exciting new direction in the practice of architecture. Architectural historians of today are equally eager to group Mitchell/Giurgola in this innovative "school" and to compare their work with the designs of Saarinen and others. As Ehrman Mitchell recalls, he and his partner were not thinking about modernist philosophy during their work at Wright Brothers, nor were they particularly interested in striking out in a new direction. The architects approached the Wright Brothers commission as a "natural response to conditions of program" and were motivated by "the quest for modern design." The overwhelming challenge was to portray the idea of flight in a static form. Mitchell/Giurgola's unconsciousness of any deliberate attempt to remake modernism was an early indication of their originality and key to their successful practice.

In theoretical discussions following construction of the visitor center, Mitchell & Giurgola explained how the firm was both modernist and critical of the standard tenets of previous modern design. As important as their built work, the theory and projects of Mitchell/Giurgola not only influenced generations of student architects, but inspired the flagging profession with new hope. Mitchell and Giurgola considered themselves "inclusivist" in their architectural theory and were convinced that a "partial vision" in design presented a more acceptable view of reality than the elitist and exclusionary practices of past modern architecture.[76] The young architects began their career at a time when severe modernist architecture seemed to lack the vim and vigor of real life. The work of Philadelphia architect Louis I. Kahn offered exactly what was missing: a sense of order and a reason for being. Kahn passed on his architectural theories in lectures at the University of Pennsylvania and in his buildings; construction began on the University's Richards Laboratories in 1958, the year Giurgola joined the faculty. Energized by Kahn's work and their shared experience at Penn--Mitchell, Giurgola, Robert Venturi, Robert Geddes, and other young architects emerged as a new force in the profession. By the mid-1960s this "Philadelphia School" was considered on the cutting edge of architectural design. As Rowan described it, the

[75] *Virginia-Pilot* (November 18, 1957), 29-A.

[76] William Marlin, "On Trying to Understand the Significance of Mitchell/Giurgola," *Architectural Record* (April 1976): 117-118.

Philadelphia School responded to the modernist work of such icons as Richard Neutra and Mies Van der Rohe. In place of the abstract forms and universal principles of the previous generation, the younger architects gravitated toward Kahn's more personal and sensitive design philosophy. The close relationship between Mitchell/Giurgola and Kahn is illustrated by the writings of Romaldo Giurgola, who not only became an ardent follower, but a scholar of Kahn's work. Closer study of Giurgola's writings helps to show how Kahn influenced the firm's attitudes toward place, community, and landscape and their expression through the use of light and attention to building materials.[77]

Their first major building, Mitchell/Giurgola considered the Wright Brothers Visitor Center an important example of their architectural philosophy; the design is clearly a response to the methods of their predecessors and to the new possibilities outlined by Kahn. In a 1961 reference to the design methodology employed at Wright Brothers, Giurgola explained that the "order will be the participation in the environment of the building's special theme, not the imposition of abstract forms."[78] The same year, when interviewed for *Progressive Architecture*, Giurgola spoke about the role "subjective experience" played in the design process, a subject considered taboo to the blatantly objective proponents of the International Style.[79] The article included a full-page detail photograph of a segment of the visitor center illustrating the contrast of wood panels and concrete, close-ups of the entrance and ceremonial terraces, and smaller views of the overall building and plan. With the exception of Quarry Visitor Center at Dinosaur, completed in 1958, the Wright Brothers Visitor Center received the most media coverage of any National Park Service project of its type.

Designing the Visitor Center

During his speech at the 1957 First Flight Anniversary ceremony, Conrad Wirth described "major developments" scheduled for the Wright Brothers site over the next two years. The Park Service planned to proceed immediately with construction of a new entrance road and parking lot for the visitor center. Actual construction of the visitor center would begin during the next fiscal year. The new building would "accommodate visitors in large numbers...provide for their physical comforts...and present the story of the Wright Brothers at Kill Devil Hill in the most effective way graphic arts and modern museum practice can do it."[80]

Wirth's remarks seem innocent enough, but the new building transformed the visitor experience at Wright Brothers. As historian Andrew Hewes pointed out in 1967, the

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[77] See Romaldo Giurgola and Jaimini Mehta, *Louis I. Kahn* (Boulder, Colorado: Westview Press, 1975); Romaldo Giurgola with Pamille I. Berg, "Kahn, Louis I.," in Adolf K. Placzek, ed., *Macmillan Encyclopedia of Architects*, vol. 2 (New York: Macmillan Publishing Co., 1982), 537-546.

[78] Stanton, "Mitchell/Giurgola," 155.

[79] Jan C. Rowan, "Wanting to Be: The Philadelphia School," *Progressive Architecture* 42, no. 4 (April 1961): 150-154.

[80] Conrad Wirth, "Mission 66 Wright Brothers National Memorial," First Flight Ceremony program, 1957; Conrad Wirth Papers, American Heritage Center, Laramie, Wyoming.

focus of site interpretation shifted from the memorial shaft to the visitor center. The interior of the shaft and a stairway to the top of the monument had been open to visitors since its creation, but in 1960 access was closed. During an August 1958, committee meeting, members agreed that "special consideration be given to directing people to the first flight area rather than to the memorial feature."[81] Excitement over what shape the visitor center might take increased after the groundbreaking at the anniversary ceremony. According to Superintendent Dough's monthly report, "Mr. Benson of EODC and Messrs. Mitchell, Cunningham and Giurgola" visited the site on March 15 "in order to work up final drawing plans for the visitor center." These were actually preliminary design studies, the first of over one hundred sketches and drawings created for the visitor center. The next month, "Messrs. Tom Moran, Harvey H. Cornell (landscape architect), Donald F. Benson and others" gathered to discuss location of the visitor center and parking area.[82]

This collaborative effort took shape in the Park Service's development drawings of Route 158 (still under construction), the entrance road to the monument, the parking lot, visitor center footprint, and paths to the quarters and hanger.[83] The location of these features and the connections between them were approved by John Cabot, Regional Director Elbert Cox, Thomas Vint, and Conrad Wirth between April and June 1958. As the Mission 66 report for the park emphasized, the visitor center was to be "within the Memorial near the camp buildings" and a trail would lead from the facility to the first flight area.[84] Mitchell corroborated that the siting of the building was entirely a Park Service decision. The site was "exactly what they dictated. The location was specified as being close to the flight line." In a recent letter, Giurgola agreed that the site "was carefully planned while working closely with the NPS."[85] The Park Service wanted the public to stand under the dome and be able to see the monument and first flight markers from inside the building.[86]

Mitchell and Giurgola's early sketches on yellow trace, produced in March and April 1958, included several very different ideas for the overall plan of the building and its exhibition space. In one case, the architects envisioned an office wing separated from the rest of the building by a landscaped courtyard; the gallery was two stories. They also considered placing the central lobby and information area between an office wing and exhibit gallery. A version of the compact organization that would become their final choice was considered in March but not accepted until later in the design process. The architects' proposals for the double-height gallery and fenestration demonstrated their interest in creating dramatic effects of light and shadow, not to

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[81] Ronald Lee to David Stick, August 14, 1958, "Lee, Ronald," file, OBHC.

[82] Horace Dough, "Superintendent's Monthly Report," May 12, 1958, park archives, Fort Raleigh.

[83] "Visitor Center Development," drawing #NMEM-WB-3003 and #3003A, EODC, April 7, 1958, TIC.

[84] "Mission 66 for Wright Brothers National Memorial," 5.

[85] Romaldo Giurgola to Carol Shull, March 4, 1997.

[86] Telephone Interview with Ehrman B. Mitchell, Jr., January 25, 1999, by the author; Interview with Ehrman Mitchell, February 9, 1999.

mention maximizing the opportunity to frame specific exterior views. Fenestration possibilities ranged from triangular mullion designs to vertical and horizontal patterns on the upper half of the exhibit space. These window arrangements were coordinated with first-floor windows, usually of a contrasting design. One perspective shows this gallery as a glass-walled cylinder; another slices a parachute-shaped roof open in the center and inserts a half-moon of glass. In some of the sketches the architects used brilliant colors--bright white, yellow and turquoise--to emphasize the contrast between translucent and solid sections of the window walls. Subtle changes in the patterning of window facades and ceilings altered the effect of mass, causing the gallery to "float." Throughout their artistic experiments, Mitchell and Giurgola were considering the location of the building in relation to the hilltop monument and the flight area. Preliminary site sketches include arrows indicating vistas from the building to these points of interest. The firm's early design efforts demonstrate a wide range of possibilities, but none that compare with the final plan in terms of clarity of program, circulation, and function.[87]

While the architects worked with possible design schemes, the park turned its attention to construction of the parking facilities accompanying the new building. In June the contract for the new entrance road and parking area was awarded to Dickerson, Inc., of Monroe, North Carolina, for the low bid of $73,930. The 0.56 mile road and parking area was to be completed within two hundred and fifty days. A group of EODC architects and landscape architects—Zimmer, Moran, Roberts, and McGinnis—visited in August "to discuss plans for the Visitor Center and Parking Area."[88] As Dough remarked, "the completion of the road project will pave the way for the building contractor."[89] The planning for the visitor center project also provided the incentive to finalize a land acquisition deal for which state funds had already been allotted. Congress authorized the Memorial's boundary expansion in June 1959, adding an additional one hundred and eleven acres to the park.[90] This extension provided the additional land to the east and north of the building necessary to include the fourth landing marker and parking lot.

The preliminary plans submitted by Mitchell/Giurgola at the end of the summer were visually pleasing as well as instantly readable. The initial sketch in the series only depicts the building's ceremonial terrace, the roof overhang, and the edge of the lobby framing a panoramic view of the monument, barracks, and take off and flight markers. The final plan organized the elements of the program within a square, avoiding the potential monotony of such geometry by alternating interior spaces with open exterior terraces. The architects' early sketches suggest that their artistic exuberance might have been a little shocking to their Park Service clients. Perhaps in an effort to temper the more unusual aspects of the design, Mitchell/Giurgola produced several more subtle sketches. In elevation, the shell roof appears to diminish; from some angles it appears to dominate the structure, but as the building is approached, the dome gradually levels out and almost disappears. Among the preliminaries is a view of the building and the distant Wright

[87] This paragraph is based on examination of over a hundred sketches in the Mitchell/Giurgola Collection at the Architectural Archives of the University of Pennsylvania, Philadelphia, Pennsylvania.

[88] Dough, "Superintendent's Monthly Report," September 12, 1958.

[89] Dough, "Superintendent's Monthly Report," January 8, 1959.

[90] Hewes, "Wright Brothers National Memorial," 1967.

Brothers monument against the night sky. Two-thirds of the paper is black, and the building barely distinguishable among the trees and gentle rise of the horizon. Attention is focused on the road leading into the park, an exiting car, and a car passing by on the main highway.[91]

The working drawings essentially refined the designs presented earlier, but the cover sheet depicts an unusual perspective of the floor plan. The axonometric aerial view emphasizes the extent of window space, shown as thin, solid lines, in contrast to the three-dimensional walls. A plan and elevation appeared in a February 1959, "news report" in the popular journal, *Progressive Architecture*. The short description, "Two Visitors' Centers Exemplify New Park Architecture," noted that "the design of visitors' facilities provided for national tourist attractions seems to be decidedly on the upgrade, at least as far as the work for the National Park Service is concerned." Perhaps not coincidentally, the other visitor center pictured was the work of Bellante & Clauss at Mammoth Cave National Park.[92] Later that year, the architects submitted a presentation drawing, complete with a small boy flying a toy plane in front of the ceremonial terrace, and a twelve-inch sectional model of half of the exhibit hall. The model effectively demonstrated the building's innovative air circulation system with a cut-away view of the duct in the assembly room. In section, the concrete dome appeared lighter and more "wing-like" than depicted by drawings.

In a one-sheet "resume" promoting Mitchell & Giurgola, Associates, written a few years after the visitor center dedication, the architects described the Wright Brothers commission as "among our major projects," and went on to discuss its design in some detail. The "dome-like structure over the assembly area," though technically "a transitional thin shell concrete roof with opposed thin shell overhangs connecting the perimeter of the structure to form a complete monolithic unit," also had a symbolic role. The roof structure design "admirably serves to allow light into the display area of the aircraft to give this area a significant character as well as forming a strong focal point on the exterior of the structure which stands above the low-lying landscape, in concert with the higher rising dunes and pylon." Evidently, the north concrete wall of the entrance terrace had been the subject of considerable public speculation. Here, and in their resume, the architects explained that the patterned wall was intended "to be an expression of the plastic quality of concrete by means of well-defined profiles, recessions and protrusions, simply placed to form an integral pattern over the wall surface." Not only did the wall feature rigid and curved shapes, but also contrast in depth and surface, as sections of the wall were bush hammered. In effect, the concrete patterned wall was public art.[93]

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[91] Mitchell, Cunningham, Giurgola, Assoc., August 4, 1958, drawing # NMEM-WB 3004, microfiche, TIC.

[92] "Two Visitors'' Centers Exemplify New Park Architecture," *Progressive Architecture*, vol. 40, no. 2 (February 1959): 87.

[93] See "Wright Brothers" museum file, ca. 1962, park archives, Fort Raleigh. This file includes an additional comment by the architects, "Patterned Concrete Wall, Wright Brothers National Memorial," which reads as follows: "It has attracted many visitors to use it as a background for snapshots and has provoked many questions as to its meaning. It means, simply, that concrete is plastic and may be effectively used to create almost any visual experience, this being one the architects believe to admirably suit the condition of structure, site and deeds."

The attention lavished on aesthetics and symbolic purpose, as described by Mitchell/Giurgola, did not detract from the visitor center's practical function. Visitors appreciated the straightforward approach to the building from the parking lot and the exterior restrooms adjacent the entrance terrace. They may not have noticed the unusual shape of the drinking fountains, with their molded concrete basins, or paid much attention to the undulations and protrusions of the sculpted wall. But even at the most basic level, these design elements suggested the free-flowing form of both sand dunes and objects that fly. The entrance terrace was also part of the 128-foot-square concrete platform elevating the entire building a few feet above the ground. Steps extended to either edge of the terrace, and visitors crossed the open area to reach the double glass doors leading into the lobby. At this point, visitors were also invited to walk around the building to the ceremonial terrace. The entrance facade was full-height steel-framed windows divided by concrete piers, a pattern of bays encircling the building. Similar windows formed the far wall of the lobby, which could be seen by looking through the building from the terrace.

Upon entering the visitor center, attention was immediately directed towards the ceremonial terrace outside and the first flight monuments beyond. The Park Service information desk was actually located behind the visitor at this point. Since the lobby space flowed into the exhibit room, visitors gravitated to this area after taking in the view. The walls of the exhibit area were entirely covered with vertical tongue-and-groove cypress boards and wood paneling. This interior treatment, combined with the lack of windows, resulted in an inward-looking museum space conducive to study.[94] Park offices were located to the left of the exhibit area. Once visitors had followed the exhibits in a rectangular pattern around the museum, they found themselves at the entrance to the assembly room. In contrast to the muted tones and contemplative mood of the museum, the assembly room was a double-height space full of light from the three clerestory windows in its shell roof and the floor-to-ceiling windows on three sides. The shell roof, the 40-foot-square shape of the space, and the square mirrored above in the corrugated concrete overhang also emphasize the importance of the replica "1903 flyer" in the center of the room. This assembly area was intended to substitute for an audio-visual or auditorium space, and in their presentations, Park Service interpreters would not only use the plane as a prop, but point out the flight markers, hangar and living quarters, and distant hilltop monument. Double doors at either end of the south facade led out to the ceremonial terrace. When groups gathered here for the annual celebration and other events, the Memorial's significant features stood in the background.

Although the interior contrasts of ceiling height and the amount of light emitted into the spaces belies the fact, the visitor center's walls are divided into equally spaced bays; whereas the assembly room is all glass, however, the office and exhibit spaces alternate cypress wood panels with sections of treated concrete. The faces of the piers are bush hammered. These surface contrasts force the visitor to pay attention to the composition of materials: the durable cypress wood, traditionally used in boat building, and the color and texture of the aggregate, which

[94] The specifications called for millwork and paneling of "Tidewater Red Cypress" with a "Clear Heart finish." Framing lumber was to be Douglas fir, Hemlock, and southern yellow pine. See "Specifications for Construction of a New Visitor Center to be Located at Wright Brothers National Memorial, Kill Devil Hills, North Carolina," Section GC-9 "Carpentry & Millwork," 9-1, park archives, Fort Raleigh.

includes sparkling chunks of quartz and other arresting stones. In theory and practice, the Wright Brothers Visitor Center was a balance between aesthetics and function.

The best example of Mitchell/Giurgola's concern with aesthetically pleasing structure is also the least noticeable. The mechanical systems for heating and cooling the building were "inconspicuously incorporated" into the building. *Progressive Architecture* was particularly interested in the "water-to-water heat pump" that both took advantage of the oceanfront location and eliminated the need to compromise the building's "vast horizontality with a vertical stack."[95] Fan-coil units and ducts were hidden above a suspended ceiling in the lobby and museum, but in the assembly room, they became part of the interior decoration. The corrugated concrete overhang houses ducts that pull in fresh air from outside, and the "soffit" below is a "continuous slot" for return air. Frederick W. Schwarz of Morton, Pennsylvania, was the consulting engineer for the heating and air conditioning system.

Building the Visitor Center

Donald Benson remembers the prospect of a modernist visitor center on the Outer Banks of North Carolina as more controversial than the colorful beach shelter he designed for Cape Hatteras National Seashore a few years earlier. The shelter's sun shades rose out of the beach like sculptures, but such artistic license was acceptable in a recreational facility devoted to seaside entertainment. In contrast, the visitor center was expected to be functional, dignified, and a public building for the local community. If the Park Service was now familiar with the Mitchell/Giurgola design, local contractors must have been surprised when sets of plans and specifications were sent out for bidding in January 1959.[96] Modern architecture was not part of the design vocabulary of the region, nor were modernist buildings prevalent in the state of North Carolina.[97] Bids were opened on February 4, 1959, and the contract was awarded to Hunt Contracting Company of Norfolk, Virginia, for their offer of $257,203.[98]

Construction of the visitor center began in March 1959, and foundation piles had been driven by the end of the month. In early spring, the beam forms were at grade level. Superintendent Dough predicted rapid progress now that "the slow process of getting the building staked out, supplies on hand and work organized has been completed."[99] Concrete columns and piers were erected in

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[95] "Kitty Hawk Museum," *Progressive Architecture* 44 (August 1962): 117.

[96] The first day of bidding, originally scheduled for January 28th, took place on February 4, 1959. The lowest of seven bids, $218,935 by Wilson H. Wright of Hampton, Virginia, was rejected because it came by telegraph unaccompanied by a bond.

[97] Catherine Bishir of the North Carolina State Historic Preservation Office determined that "as a seriously conceived, architect-designed work of mid-twentieth century modernist architecture" the visitor center is both "unparalled in Dare County and the Outer Banks" and "of exceptional importance to the state of North Carolina." See Bishir, "Evaluation of the Visitor Center (Mitchell/Giurgola, 1959-1960), Wright Brothers National Memorial," North Carolina State Historic Preservation Office, January 15, 1997.

[98] "Wright Brothers National Memorial, Monthly Progress Report," February, 1959, park archives.

[99] Horace Dough, "Superintendent's Monthly Report," May 5, 1959, park archives, Fort Raleigh.

June and most of the floor slabs poured. On July 24th, the contractors' work was inspected by Tom Vint, chief of design and construction, and Chief Safety Officer Baker, both of the Washington office.[100] By the end of the summer, the east elevation had begun to take shape. A view from the south shows the beams for the exhibit room standing apart from the office wing. The next month, contractors were laying the ribbed ceiling forms for the corrugated concrete overhang around the perimeter of the assembly room.[101] The major concrete portions had been cast, and Mitchell and Giurgola may have witnessed some of this form work during their "field inspection" at the site on September 24-25.[102] Form work for the patterned wall was well underway by October. A steel grid was used to create the protruding shapes on the surface of the wall, and a wooden framework was still bracing it in January. While the decorative wall was under construction, contractors were also assembling the arch beam forms of the dome. The general shape became visible in November; a plywood shell framed the central half sphere, and intricate interior scaffolding supported the dome framework throughout this construction. Engineer Don Nutt of EODC witnessed the "dome pour" later in the month. Smooth reinforced concrete covered the central portion first. The contractors then turned to form work for the "flange overhangs," which were subsequently poured. The dome sat on four coupled columns and was "tied" at its base by four tension rods. A December photograph of the assembly room interior shows the completed dome and semi-circular windows, the supportive scaffolding removed.

Despite colder temperatures, contractors were able to pour the steps to the visitor center in January 1960. Chief of EODC Zimmer and Supervising Architect Cabot spent two days "reviewing progress and details" of the construction that month, and Don Benson and Ann Massey, both of EODC, visited the site to discuss color and design.[103] Interior framing was still exposed in February, but the dome, overhang, and exhibition area roof were considered complete. Roofing compound was applied to the lobby section of the visitor center the next month, although glass sections of the building remained empty. Wall panels and windows were not installed until April, when engineer Don Nutt and landscape architect Ed Peetz (EODC) visited for a construction review. Sometime during the month, the contractor made his third estimate for a completion date, settling on June 10. The final inspection of the visitor center took place on June 20, 1960. Evidently no major changes were required, and specialists from the museum division were busy installing the twenty-two museum exhibits during the first weeks of July, when work also began on the surrounding landscaping.[104]

The contractors for "planting and miscellaneous construction"—Cotton Brothers, Inc., of Churchland, Virginia—had replaced existing concrete walks and additional pathways by mid-

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[100] Dough, "Monthly Report," August 13, 1959.

[101] Dough, "Monthly Report," September 29, 1959.

[102] Dough, "Monthly Report," October 12, 1959.

[103] Dough, "Monthly Report," January 12, 1960; this team of interior designers worked at the Gettysburg Visitor Center and Cyclorama building in 1961.

[104] Dough, "Monthly Report," July 12, 1960, and August 10, 1960.

August. Landscape work involved grading and spreading topsoil as well as "considerable experimentation and effort...with native groundcovers." After completing the walks, seeding, planting tubs and flagpole base, the contractors began work on the wooden fence. Progress was interrupted by Hurricane Donna, which struck September 11 and leveled sections of the fence, but repairs were accomplished by the end of the month. In addition, the contractors planted twelve varieties of trees and provided plants for inside the museum. Before the final inspection, Cotton Brothers installed the Park Service's signs and gate.[105]

The Wright Brothers Memorial Visitor Center was officially opened to the public on July 15, 1960. By all accounts, the building met with a positive reception. Superintendent Dough wrote that "hundreds of compliments have been received about the exhibits and the building's design since it was opened. Visitors are generally surprised to learn of the aeronautical principles formulated by the Wrights, and the descriptive term 'beautiful' is used repeatedly in describing the building." He also noted that although about two thousand visitors passed through the visitor center every day during the summer season, "these are so well distributed during visiting hours that there are seldom over 75 visitors within the building at a time."[106] During the month of August, the site received 62,177 visitors, a 34% increase since the year before, and approximately three thousand more visitors than visited in August 1998.[107] Although Dough seemed optimistic about these figures in his initial report, by September he had become concerned about the "too interesting" museum exhibits, which he blamed for causing congestion in the visitor center. On five peak days "3,500 plus jammed into the visitor center." Dough indicated that the Park Service had not expected such crowds until 1966, as shown by graphs included in their Mission 66 prospectus. Rather than consider a building expansion, however, Dough suggested changing the exhibition layout: "More museum exhibits to further spread out the visitors may be the answer, but in our view the law of diminishing returns sets in when many more than about 19 exhibits are installed in a visitor center."[108] Mission 66 planning documents indicate that the Park Service anticipated record numbers of visitors (nearly 90,000 per month by 1966) and judged the visitor center facility adequate to serve their needs.[109] By that time, Dough had retired and Superintendent James B. Myers assumed his post.

Dedication of the Visitor Center

The exterior appearance of the visitor center was significantly altered by the end of the summer, with the completion of the wooden fence shielding the parking area from a clear view of the first

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[105] Cotton Brothers, Inc., the only party to bid on the project, received the contract for $34,228.11 on June 17, 1960. The final inspection was conducted on October 22, 1960. "Completion Report, Planting and Miscellaneous Construction, Wright Brothers National Memorial, Kill Devil Hills, North Carolina," n.d.

[106] Dough, "Monthly Report," August 10, 1960.

[107] 59,171 people visited the Wright Brothers Memorial in August 1998. See "U.S. Department of Interior Monthly Public Use Report," park archives, Wright Brothers National Memorial.

[108] Dough, Monthly Report, September 11, 1960.

[109] "Table 1: Total Annual Number of Visitors," in "Master Plan for Preservation and Use of Wright Brothers National Memorial, Vol. III, General Park Information Section C: Public Use Data," September 1963.

flight markers and buildings. In preparation for the dedication, landscape architect Lewis from EODC "inspected new planting and miscellaneous construction," and the Park Service's supervisory architect, Judson Ball, reviewed the state of the visitor center.[110] By September the walks from the visitor center to the camp buildings and the main entrance gate were complete. The information desk for the lobby was delivered and installed, and planning for a permanent display of a Wright glider replica continued.[111]

The Wright Brothers Memorial Visitor Center was dedicated on December 17, 1960, the 57th anniversary of the first flight. According to one news account, a "slim audience saddened by Friday's airliner collision over New York and Saturday's crash at Munich" attended.[112] The most memorable moment in Mitchell's recollection of the event was a speech by Maj. Gen. Benjamin D. Foulois, who actually watched the Wright brothers test their early planes and flew the country's first army aircraft. Local papers covering the dedication had only compliments for the new visitor center building, and by early December over one hundred thousand visitors had already passed through its doors.[113]

If the Wright Brothers' legacy was the main focus of dedication day, over the next few years the visitor center building would become the subject of its own articles and press releases. *Progressive Architecture* had given notice of the design in 1959, and, in 1961, included a floor plan, photograph of the finished building, and close-ups of the concrete wall and terrace design in its profile of "the Philadelphia School."[114] Two years later, the "Kitty Hawk Museum" was a feature of the journal's August issue. The building received praise for its orientation and planning of interior spaces that "make visiting this national park an aesthetic as well as an instructive experience."[115] *Washington Post* architectural critic Wolf Von Eckardt called the visitor center a "simple, but all the more eloquent, architectural statement that honors the past precisely because it does not ape it."[116] The Wright Brothers Visitor Center was also singled out in "Great Builders of the 1960s," a special section of the international publication *Japan Architect* (1970), in the *AIA Journal's* 1971 assessment of Park Service design, "Our Park Service Serves Architecture Well," and as an example of excellent government-sponsored architecture in *The Federal Presence* (1979).[117] The fact that Mitchell/Giurgola was hardly a

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[110] Dough, "Monthly Report," September 14, 1960.

[111] Dough, "Monthly Report," October 17, 1960.

[112] *News and Observer* (Raleigh, N.C.)(December 17, 1960), clippings file, park archives, Fort Raleigh.

[113] "New Wright Memorial Visitors Center at Kill Devil Hills," *Coastland Times* (December 2, 1960).

[114] Rowen, "Wanting to Be: The Philadelphia School," *Progressive Architecture.*

[115] "Kitty Hawk Museum," *Progressive Architecture* 44 (August 1963): 112-117.

[116] Wolf Von Eckardt, "The Park Service Dares to Build Well," *The Washington Post* (March 29, 1964), G6.

[117] "Our Park Service Serves Architecture Well," *AIA Journal* (January 1971): 18-25; Lois Craig, et al, "The Government as Host," in *The Federal Presence* (Cambridge, Massachusetts: MIT Press, 1979), 496-7. "A View of Contemporary World Architecture," *Japan Architect* (July 1970): 65-78.

household name in the early sixties, even in professional circles, speaks eloquently of the building's enthusiastic reception by the popular media.[118]

The Visitor Center Today

When Ehrman Mitchell re-visited the Wright Brothers Memorial Visitor Center in the mid-1990s, he was astonished by the changes that had taken place since its dedication over thirty years earlier. Mitchell was particularly bothered by the new fenestration, the areas of exterior concrete wall that had been painted white, and metal sheets covering some of the cypress wood panels. The cypress boards at the edge of the entrance terrace were an artistic "identification" that the Park Service chose to fill-in with ordinary plywood to conform to a standard bench. Mitchell was equally disappointed by changes inside the building. Visitors originally entered the lobby to face a wall of windows looking out over the ceremonial terrace to the flight markers beyond. Today, the doors open into a bookshop and an adjacent information desk. Although the wall of windows and set of double doors still form the facing wall, the view is blocked by shelves, postcard displays and Park Service personnel. Visitors are less likely to use the doors to the terrace, which are now practically behind the information desk. The floors, once vinyl tile, are covered with industrial carpeting. As 1960s photographs illustrate, the original lobby and exhibit area flowed together in a single, spacious and airy room. Today, this sense of openness is compromised by the additional furnishings.

The least visible but most extensive alterations to the building involved heating and air conditioning. The air circulation system required improvement almost immediately. Bids were opened for the work in October 1962, and E. K. Wilson and Sons, Inc., awarded the $5,684 contract. Repairs included the installation of two flow meters and "three-way diverting valves in each of three zones to divert hot and chilled water from units coils."[119] In October 1968, further work was performed on the mechanical systems. The existing heat pump and associated piping and an old three hundred-gallon water tank and twenty-five-gallon compression tank were removed and a new hot water boiler installed. The air-conditioning system was also upgraded.

The most significant aesthetic alteration of the original design was performed by East Coast Construction Company, Inc., contractors from Florida who were awarded the contract for the refenestration of the building in May 1975. Along with replacing the original glass with safety glass, work included replacing steel window frames with aluminum, replacing steel casement-type ventilation windows with larger, fixed-sash aluminum windows in the assembly room, and altering door dimensions. The most dramatic change in appearance, however, was a matter of color. As 1961-1962 postcards of the building indicate, the original steel window frames and mullions were bright red-orange, a choice that drew attention to the glass areas of the walls and dome. Architect Don Benson recalls that Ann Massey chose the color to add warmth to the

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[118] The firm was also included in the *Macmillan Encyclopedia of Architects*, vol. 3 (New York: Macmillan Publishing Co., 1982), which noted its "considered response to the urban context and the natural environment, and...sense of place..."

[119] "Bids Have Been Mailed for Wright Center Work," *Coastland Times* (October 5, 1962); "$5,684 to be spent on Visitor Center Repairs at K.D.H.," *Coastland Times* (November 9, 1962), park archives.

building.[120] The color change, increased thickness of mullions, and adjustments in their locations, resulted in marked visual differences. As much as these changes alter the aesthetic of the building, however, they do not compromise its overall form, affect visitor circulation or jeopardize the integrity of the structure.[121]

While the fenestration project was underway, the park considered a much greater change to its visitor center: the addition of an auditorium and museum extension to the north end of the building. In 1977, the MTMA Design Group of Raleigh, North Carolina, produced a full set of construction drawings for the addition. From the front, the building would appear unaltered, but a circular auditorium was attached to the north side of the assembly room and the museum extended beyond the mechanical room. A circular glider display was included within this area, as was a door into the auditorium. The exterior of the addition continued the general pattern of the building's facade, with rope texture concrete areas separated by panels of wood siding and sandblasted textured areas of concrete. On June 26, 1978, the park sent out an invitation for bids on construction of the addition, along with an expansion of the parking lot and related work. Total costs were estimated at between $250,000 and $390,000. The addition was never constructed, apparently due to lack of funds.

During the 1980s, the Park Service installed stair railings on both terraces and a handicapped access ramp alongside the restrooms. There is also a ramp leading up to the ceremonial terrace. At this time, the park partially enclosed the employee parking lot on the northeast side of the building with a wood fence similar in appearance to the fencing along the visitor parking lot. Most recently, in 1997, a new HVAC system was installed, which resulted in the loss of the two windows on the north side of the building. The covered air duct system, which forms a kind of cornice encircling the assembly room, was painted canary yellow. It is certain that the architects would not have chosen to highlight this aspect of the room in such a fashion.[122]

Professional photographs of the Wright Brothers Visitor Center tend to exaggerate its modern features by emphasizing the shell roof. With the barren site as a backdrop, all sense of proportion is lost. Drawings are equally deceptive; the plan appears plotted on a relentless grid. Even written descriptions distort the building's image by focusing on its relationship to contemporary airport facilities. In fact, the Wright Brothers Visitor Center is a small, relatively understated building. Despite the elevating concrete platform, it sits low in the landscape, allowing the hilltop monument to take center stage. Wright Brothers satisfies Director Wirth's mandate of protection and use. The building focuses on experience--leading visitors into the building, introducing a few facts, and then pushing them out to the site.

In 2000, the Park Service faces growing pressure to supplement its natural and historical parks with theater entertainment and computerized, "interactive" interpretation, both for economic

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[120] Interview with Donald F. Benson by the author, March 9, 1999, Lakewood, Colorado; Benson owns four different postcards of the exterior of the building printed in the early 1960s.

[121] National Register Nomination, Additional Documentation, August 30, 1996.

[122] National Register Nomination, Additional Documentation, addendum, October 9, 1997, cover sheet. The additional documentation was approved by the National Register, February 26, 1998.

reasons and to sustain public interest. Rather than overshadow the Wright's technology with our own, we might learn from Mission 66 museum specialists who worried that their interpretation would distract visitors from the park site and guarded against "overdevelopment of exhibits."[123] The Wright Brothers Visitor Center not only commemorates the achievement visitors come to marvel at, but does so without destroying what remains of the historic scene. The launching of the first flight is easy to imagine from the ceremonial terrace or high atop Kill Devil Hill.

Writing in 1997, Romaldo Giurgola recognized that the Wright Brothers Visitor Center might be considered "thoroughly insufficient" for the Park Service's current needs and visitor load. He also insisted that "the design reflected the particular period of American architecture of the early 1960s in which the rigidity of modernism evolved into more articulated solutions integrating internal and external spaces."[124] If architects and architectural historians celebrate the building's role during this period of transition in the design profession, the visitor center's greater importance lies in its status within the history of Park Service planning. Few buildings speak so eloquently about the goals of the Mission 66 program: the effort to bring the public into the action without damaging park resources, the importance of a modern architectural style representative of new technology, and the need for a functional visitor facility suitable for the next generation.

[123] R. H. Lewis, draft, "Reexamination of the Museum Phases of Mission 66," June 22, 1960; Harpers Ferry Archives. A September 1965 addendum to this report singles out the "exact reproduction of the Wright Brothers' powered plane" as one of the "fine specimens" displayed in Mission 66 exhibit areas.

[124] In addition, Giurgola wrote that "for new needs a new building, separate from the existing, may be built while the old one could serve well as a meeting place for seminar classes, ceremonial receptions, etc., when properly restored." Romaldo Giurgola to Carol Shull, March 4, 1997, North Carolina SHPO, Raleigh, N.C.; Ehrman Mitchell to S. Allaback, June, 15, 1999.

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Previous documentation on file (NPS):

__ Preliminary Determination of Individual Listing (36 CFR 67) has been requested.
X Previously Listed in the National Register.
___ Previously Determined Eligible by the National Register.
__ Designated a National Historic Landmark.
__ Recorded by Historic American Buildings Survey: #
__ Recorded by Historic American Engineering Record: #

Primary Location of Additional Data:

__ State Historic Preservation Office
__ Other State Agency
X Federal Agency; NPS Archives
__ Local Government
__ University
__ Other (Specify Repository):

10. GEOGRAPHICAL DATA

Acreage of Property: Less than 1 acre

UTM References:	Zone	Easting	Northing
	18	439800	3986215

Verbal Boundary Description:

The boundary is a rectangle 100 feet from the building foundation to the west and south, continuing along the edge of the service drive pavement to the east and north.

Boundary Justification:

The boundary is based on the building's footprint and additional surrounding area that consitutes the historic setting of the building.

11. FORM PREPARED BY

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NATIONAL HISTORIC LANDMARKS SURVEY