National Park Service
U.S. Department of the Interior

Rock Creek Park
Washington, DC

Carter Barron Amphitheater and Box Office

HISTORIC STRUCTURE REPORT

VOLUME 1



Final Report
June 2018



Cover Illustration: Carter Barron Amphitheater in 1952, Rock Creek Park, Museum Resource Center.

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Carter Barron Amphitheater and Box Office

Rock Creek Park
Washington, DC

June 2018
Final Report

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Acronyms

Acronym	Term
ABA	Architectural Barriers Act
ABAAS	Architectural Barriers Act Accessibility Standards
ACI	American Concrete Institute
ACM	Asbestos Containing Material
AHJ	Authority Having Jurisdiction
ANSI	American National Standards Institute
CFA	Commission of Fine Arts
CMU	Concrete Masonry Unit
DOAS	Direct Outside Air Ventilation System
FRP	Fiber-Reinforced Polymer
FRV	Fundamental Resources and Values
HID	High Density Discharge
HSR	Historic Structure Report
HVAC	Heating, Ventilation, and Air Conditioning
IBC	International Building Code
ICC	International Code Council
IECC	International Energy Conservation Code
IFC	International Fire Code
IFUGC	International Fuel Gas Code
IMC	International Mechanical Code
IPC	International Plumbing Code
LBP	Lead Based Paint

MPDF	Multiple Property Documentation Form
MRCE	Museum Resource Center
NCP	National Capital Parks
NCPC	National Capital Planning Commission
NCR	National Capital Region
NCRO	National Capital Region Office
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act
NPS	National Park Service
NSO	National Symphony Orchestra
OSHA	Occupational Safety and Health Standards
PCB	Polychlorinated Biphenyl
RCRA	Resource Conservation Recovery Act
ROCR	Rock Creek
TCLP	Toxicity Characteristic Leaching Procedure
UFAS	Uniform Federal Accessibility Standards
XRF	X-ray Fluorescence

Chapter 1: Executive Summary

Statement of Purpose and Project Goals

The purpose of this Historic Structure Report (HSR) is to guide the preservation, rehabilitation, and interpretation of the Carter Barron Amphitheater and box office in Washington, DC. The Carter Barron Amphitheater is a 4,000-plus seat open-air performance space built on a wooded hillside in Rock Creek Park. It was constructed in 1950 as part of the commemoration of the sesquicentennial (150th anniversary) of the establishment of the District of Columbia as the nation's capital in 1800. The Amphitheater was envisioned by Harry Thompson, the landscape architect and Chief of the Planning Division of the National Capital Parks (NCP, which became the National Capital Region, NCR, in 1976) of the National Park Service (NPS), as early as the 1940s. It was designed by National Capital Parks architect William Haussmann and engineer Robert C. Horne under the direction of the National Capital Sesquicentennial Commission, led by film executive Carter T. Barron. The National Park Service managed the construction of the Amphitheater, and handled its management subsequently. The Amphitheater was one of the few major projects built in the National Capital Region between World War II and Mission 66 and represents a precedent setting design that influenced later Mission 66 work. It was designed in a style that blended ideas of the modern movement with the National Park Service's traditional rustic aesthetic. The Amphitheater and box office are designed with simple forms and horizontal silhouettes and employ natural materials to harmonize with the surrounding forest. Since its construction, NPS has made some alterations to the Carter Barron Amphitheater, the most significant of which included the replacement of the concrete floor and seating bowl, and the addition of accessible paths in 2004. In general, changes made to the Carter Barron Amphitheater have maintained its historic integrity, but wear and tear and the effects of weathering have impacted its character. The complex also has a number of functional issues including lack of ABAAS-compliant accessibility.

This HSR documents the history and chronology of change to the building in order to understand its evolution and the decision-making processes that led to changes in the past; describes and evaluates existing conditions, including architectural, structural, and building systems; and presents a treatment philosophy

and recommendations following the Secretary of the Interior's Standards for the Treatment of Historic Properties to ensure that future work preserves the character-defining features of the site and building. The HSR is largely confined to the Amphitheater and the box office, with some consideration of the site as it relates to building issues. An assessment of the physical and cultural landscape is not part of this report.

Investigation History and Method

The task of preserving a historic site requires a disciplined approach to analyzing historical evidence, documenting physical conditions, and anticipating the future needs of the property. This is accomplished by utilizing a variety of investigative procedures. These include researching primary and secondary sources, performing detailed physical surveys of the structures and site, consulting with specialists in materials and construction methods, and employing scientific technology.

Historic research was largely limited to materials provided by the National Park Service and the archival collections of Rock Creek Park. The project historian viewed the collections at the National Park Service's Museum Resource Center in Landover, Maryland. Copies of materials were made at that facility and visual materials (photographs, drawings) were later scanned and provided to the HSR team. Limited additional research was undertaken to supplement these collections, which should be considered comprehensive but not necessarily exhaustive.

The consultant team, including architectural, structural, building systems, and hazardous materials consultants, performed on-site surveys on Monday, November 20, 2017; on Thursday, November 30, 2017; and on Thursday, December 7, 2017. Temperatures were in the 40s-50s Fahrenheit those days, with sunny skies. Survey was largely visual, with no destructive testing aside from the collection of samples for hazardous material evaluation and mortar analysis. Photographs were taken and have been used to supplement the narrative where appropriate.

The recommendations in this report are based on documentary evidence and visual observations collected to date. The research process is not concluded with the completion of this report. Rather, it will be supplemented in the future by further information

gathered through additional investigation, and by subsequent documents and information as they are discovered.

Project Team Members

The National Park Service contracted with a team of professionals to complete the HSR. The team consists of:

Alpha Corporation, Dulles, VA, serving as prime consultant and providing structural assessment.

Quinn Evans Architects (QEA), Washington, DC, serving as team leader for the preparation of the HSR, and providing historic documentation, architectural evaluation, and architectural drawings.

Summer Consultants, McLean, Virginia, providing mechanical, electrical, and plumbing services.

ARC Environmental, Baltimore, MD, providing hazardous materials testing.

Conservation Solutions Inc, Clinton, MD, providing mortar analysis.

Report Organization

The Historic Structure Report provides both a philosophical approach and practical recommendations for treatment of the property, supported by historic research and survey of existing conditions. The report is organized as follows:

Chapter 1: Executive Summary
Presents the statement of purpose and project goals, project team members, investigation methods, report organization, and a summary of findings.

Chapter 2: Administrative Data
Provides background information including locational data, related studies, and cultural resource data.

Chapter 3: Developmental History
Presents and analyzes the site chronology as derived from historical and physical investigations, including site history, list of character-defining features, and historic images.

Chapter 4: Condition and Systems
Presents, analyzes, and evaluates the existing site features and drainage, exterior envelope, interior finishes, structural systems, and mechanical, electrical, and plumbing systems.

Chapter 5: Treatment Analysis
Presents the philosophical approach to treatment that guides the treatment recommendations, and provides a code analysis.

Chapter 6: Treatment Recommendations
Presents recommendations for the appropriate treatment and use of the buildings, including treatment recommendations for the box office, promenade, seating, stage, and backstage; structural, mechanical, electrical, and plumbing systems; hazardous materials; and mortar.

Chapter 7: References
Provides a bibliography of sources used in the preparation of this report.

Appendices
Includes drawings, hazardous materials and mortar analysis reports, and historical photographs.

Summary of Findings

Statement of Significance

Carter Barron Amphitheater is significant as a pre-Mission 66 project whose design reflects the NPS transition in the 1950s from the rustic to the modern.

Carter Barron Amphitheater, its box office, entrance gate, and guard house are listed as contributing resources in the Rock Creek Park National Register Historic District amended nomination drafted in 2014. They were listed as non-contributing resources in the original 1991 National Register listing. The original period of significance was from 1791 to 1941. It was extended to

1972 in the 2014 amended nomination draft. The Amphitheater and its related structures have not been evaluated for individual listing in the National Register of Historic Places.

Carter Barron Amphitheater is also listed in the Multiple Property Listing for Missions 66-Era Visitor Centers, Administration Buildings, and Public Use Areas in the National Capital Region of the National Park Service as a pre-Mission 66 project. According to the Mission 66 Multiple Property Listing, "The most substantial facility constructed in NCP after World War II but before Mission 66 was Carter Barron Amphitheater in Rock Creek Park" and it was "unprecedented in National Capital Parks at the time of its construction."

Existing Conditions

The Carter Barron Amphitheater is a large open-air performing arts facility that seats more than 4,000 people. The complex includes a box office, grand entrance gates, winding wooded paths, a promenade, concessions stands and public restrooms, seating, a stage, stage wings, an orchestra pit, interior staff and performer spaces on and below the stage level, and two guard houses, one at the parking lot and one at the backstage entrance. The complex is served by a bus drop off, a parking lot, and an access road. This report is focused primarily on the Amphitheater and box office. The landscape and resources such as the guard houses, bus drop off, parking lot, and access road are only discussed as they relate to the general site context and the Amphitheater and box office. Overall, the Carter Barron Amphitheater condition is fair, with some materials in poor condition and others in good condition. The structural condition of the stage is a major area of concern. A previous evaluation determined the stage was structurally inadequate. This resulted in the temporary closure of the facility. This report concurs with that evaluation.

Treatment Recommendations

The Carter Barron Amphitheater complex should generally be treated with a rehabilitation approach. Within that general treatment, there are areas of greater or lesser significance, which

in turn should be treated with greater or lesser care in regards to preserving character-defining features. See the preservation treatment zone diagrams in Chapter 5. To address the structural deficiencies of the stage, this report recommends the complete reconstruction of the stage deck and structural supports.

Chapter 2: Administrative Data

Location

The Carter Barron Amphitheater and box office are located along the eastern edge of Rock Creek Park in Washington, DC, near the intersection of 16th Street and Colorado Avenue, NW, and approximately four miles north of the National Mall. Event parking for Carter Barron Amphitheater is located northeast of the Amphitheater. There is a small staff parking lot immediately north of the Amphitheater Stage. The site consists of the Amphitheater, entrance gate, box office, parking lot guard house, and back stage guard house.

Proposed Treatment

The proposed treatment approach for the Carter Barron Amphitheater and box office is rehabilitation. There are no major changes anticipated to the function and use of the Carter Barron Amphitheater. It is expected to remain as a performing arts facility. Recommendations for the Amphitheater are generally limited to changes to improve its structural and building systems and maintain its general condition.

Related Studies

Carter Barron Amphitheater and box office were documented in the Amended Nomination and Boundary Increase for the Rock Creek Park Historic District to the National Register of Historic Places, drafted in 2014. The complex was also discussed in the Statement of Historic Contexts section of the "Mission 66-Era Visitor Centers, Administration Buildings, and Public Use Areas in the National Capital Region of the National Park Service," a Multiple Property Documentation Form (MPDF) written in 2012. Carter Barron Amphitheater was also briefly mentioned in the 1990 *Historic Resource Study Rock Creek Park* and in the 1996 Historic American Engineering Record study, *Rock Creek Park Road System*.

Cultural Resource Data

Carter Barron Amphitheater and box office are both listed as contributing resources along with the entrance gate and guard houses in the amended Rock Creek Park National Register Historic District, drafted in 2014. It is anticipated to be finalized in 2018. The Amphitheater and surrounding sites were listed as non-contributing resources in the original 1991 nomination. The first period of significance for the Rock Creek Park Historic District was from 1791 to 1941, a period that ended nine years

before the Amphitheater and related structures were built. The period of significance was extended to 1972 in the draft 2014 amended nomination.

The Carter Barron Amphitheater is not listed on the Washington DC Inventory of Historic Sites. While the Inventory does designate Rock Creek Park as a Historic District, the Amphitheater property is not listed as a contributing resource to that district.

Recommendations for Documentation

There are no significant recommendations for documentation. The current HSR will guide treatment and use of the Carter Barron Amphitheater in the future. A Cultural Landscape Report for the Amphitheater and its surroundings is recommended.

Recommendations for Research

Research for this report was generally confined to National Park Service sources including Rock Creek Park records held at the National Park Service Rock Creek Park Administrative Headquarters in Klingle Mansion and at the Museum Resource Center in Landover, Maryland. The records listed below could provide additional information on the Carter Barron Amphitheater, its planning, and construction.

- National Archives: Records of the National Capital Sesquicentennial Commission, record 148.10. Records include reports, correspondence, and working papers from 1947 to 1952. https://www.archives.gov/research/guide-fed-records/groups/148.html#148.10

- Washingtoniana Collection of the District of Columbia Public Library

    - National Park Service collection: This collection was closed at the time of writing this document due to processing related to the Martin Luther King Jr. Memorial Library renovation.

    - Carter Barron Amphitheater vertical file, temporarily in storage at the Newseum.

  - Note, this report includes some primary sources from the Washingtoniana Collection from prior research conducted by Amy Baskette, National Park Service Student Conservation Association Intern, Summer 2001.

- Commission of Fine Arts (CFA) records.

- National Capital Planning Commission (NCPC) records.

One missing resource is a complete set of original drawings for the Amphitheater. A selection of digital copies of original drawings were made available by the National Park Service but no master set or master drawing list has been identified. It is possible that additional drawings may be included either in the Records of the National Capital Sesquicentennial Commission, or in the NCPC or CFA records, as those entities reviewed the plans.

Chapter 3: Historical Background

Introduction

The Carter Barron Amphitheater was constructed in 1950 to commemorate the sesquicentennial (the 150th anniversary) of the establishment of the District of Columbia as the nation's capital in 1800. It was built as a project of the National Capital Sesquicentennial Commission (Commission), led by film executive Carter T. Barron, through the National Park Service (NPS). The Amphitheater was designed as an outdoor performing arts center in Rock Creek Park. Since its construction, NPS has made some alterations to the Carter Barron Amphitheater, the most significant of which include the installation of a curtain track, the addition of accessible paths, and the replacement of the concrete floor, seating bowl and lighting towers. In general, changes made to the Carter Barron Amphitheater have maintained its historical integrity, but wear and tear and the effects of weathering have impacted its character.

Terminology

The box office is called both the "box office" and the "ticket office" in various sources. This report uses "box office" to be consistent with NPS terminology except when quoting historic sources. The promenade is called the "promenade," the "rain shelter," and the "concourse" in various sources. This report uses "promenade" except when quoting sources.

Historic Background and Context

Rock Creek Park, Recreation, and Early Concepts 1866 to 1944

Rock Creek Park encompasses a large wooded valley near the heart of Washington, DC. The Rock Creek area was first evaluated for federal use in 1866 as part of an exploration of possible sites for the relocation of the White House (**Figure 3-1**).[1] The study never solidified into plans for relocation, but in 1890 the area was designated a National Park by an act of

1 Barry Mackintosh, *Rock Creek Park, An Administrative History*, "The First Vision," 1985. https://www.nps.gov/rocr/learn/historyculture/adhi1.htm.

Congress.[2] In 1918 the Olmsted Brothers, John Charles and Fredrick Law Jr. (sons of Fredrick Law Olmsted, Sr.), developed a study for Rock Creek Park, which focused on "the permanent preservation of its wonderful natural beauty, and the making of that beauty accessible to the people without spoiling the scenery in the process" (**Figure 3-2**). The Olmsted brothers divided the park into defined landscape units and prescribed the dominant vegetation for each. According to their recommendations, "Artificial development should in all cases be unobtrusive." Structures "should be so designed and located as to fall naturally into place as part and parcel of the scenery, and should never stand out as objects complete in themselves with the surrounding landscape becoming merely a background." The report designated a zone along Colorado Avenue as a "Division B – Plateau Recreation Ground…for more or less intensive recreation – tennis, basket ball, baseball, cricket, football, and band concerts" (**Figure 3-3**).[3]

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2 Rock Creek Park Authorization, Sess. 1, Ch. 1001, 1890. https://www.loc.gov/law/help/statutes-at-large/51st-congress/session-1/c51s1ch1001.pdf; Barry Mackintosh, *Rock Creek Park, An Administrative History,* 1985. https://www.nps.gov/rocr/learn/historyculture/adhi1.htm.

3 Barry Mackintosh, *Rock Creek Park, An Administrative History,* 1985. https://www.nps.gov/rocr/learn/historyculture/adhi1.htm; Olmsted Brothers, *Rock Creek Park,* December 1918.



Figure 3-1. This "Topographical Sketch of the Environs of Washington, DC" assessed Rock Creek valley, including the area that would eventually be home to Carter Barron Amphitheater, as part of a study to find a new location for a Presidential Mansion. Source: "Topographical Sketch of Rock Creek Park (1866)," *Ghosts of DC*, http://ghostsofdc.org/2013/01/02/topographical-sketch-of-rock-creek-park-1866/.

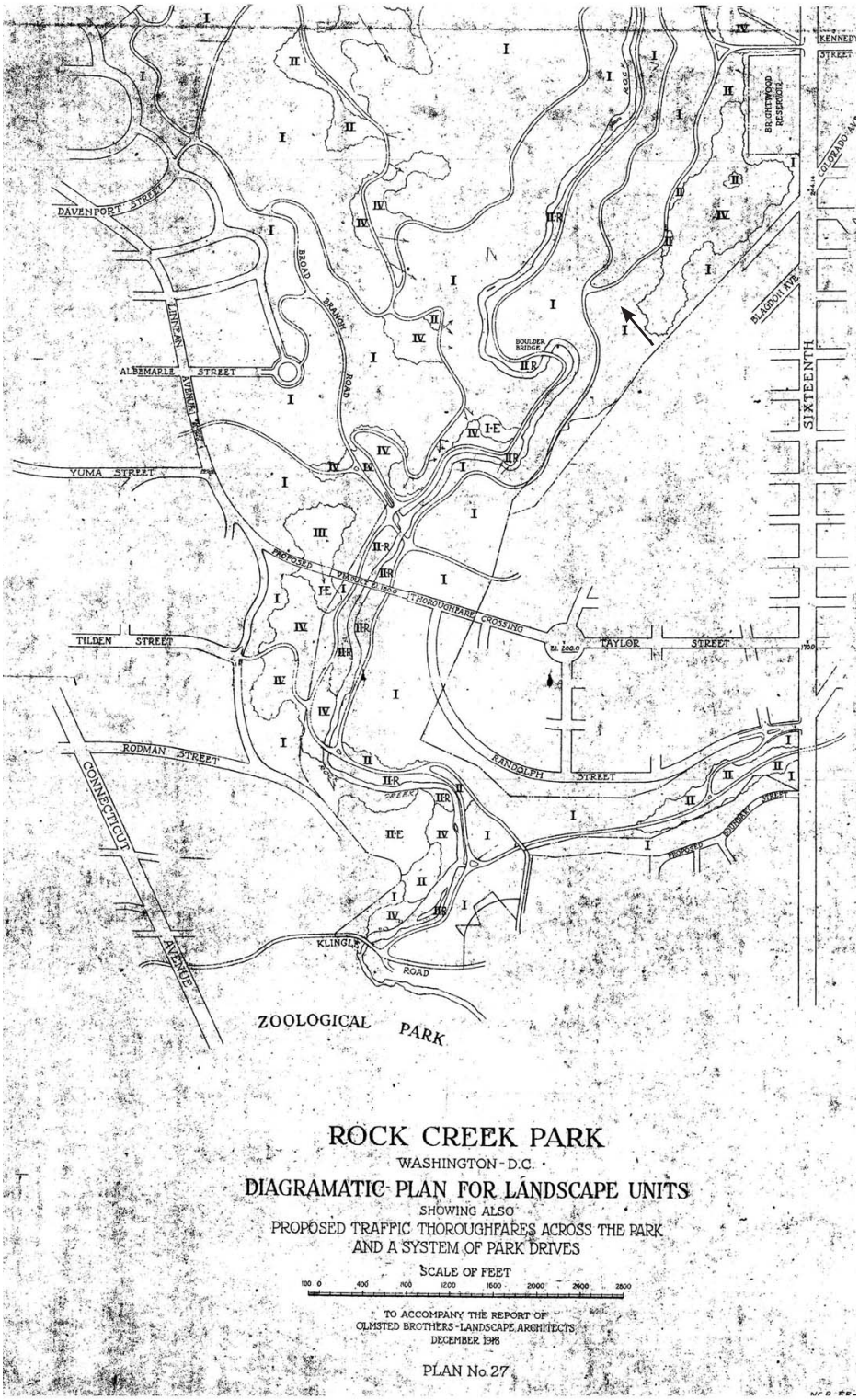


Figure 3-2. This "Diagramatic Plan for Landscape Units in Rock Creek Park" was included as part of the Olmsted Brothers 1918 park plan. Source: "Rock Creek Park: A Report by the Olmsted Brothers, December 1918." Digital scans from "The Way It Was… 1918," DC Urban Watershed, https://dwlab.wordpress.com/2011/02/03/the-way-it-was-1918/.

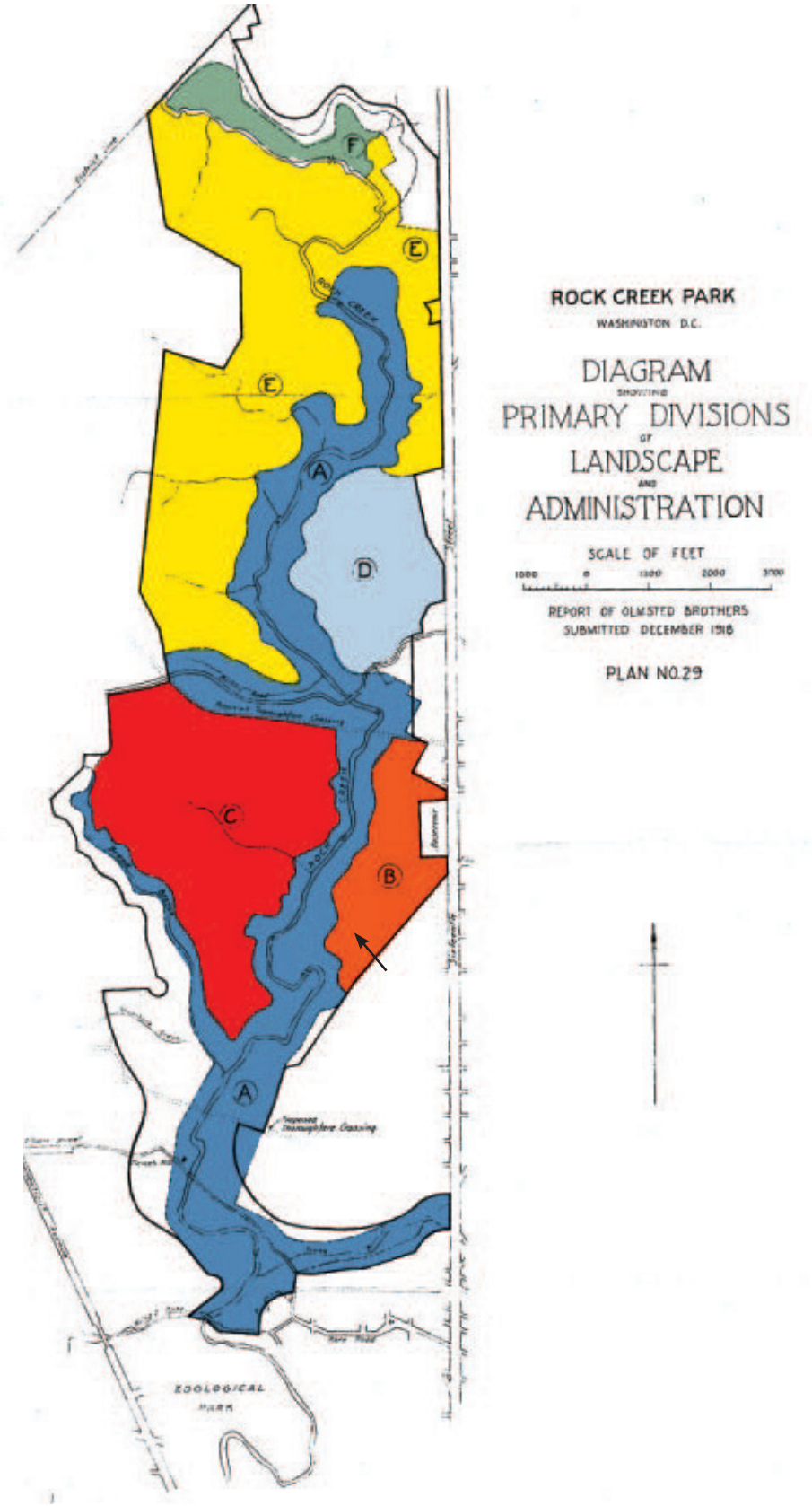


Figure 3-3. This plan illustrates recommendations put forth in the 1918 Olmsted brothers report on Rock Creek Park, which included "Division B," a recreational area planned to be kept open in contrast to the surrounding forest. Fredrick Law Olmsted, Jr. approved of the plan to build an amphitheater in the "Division B" tract. Source: "Rock Creek Park: A Report by the Olmsted Brothers, December 1918." Digital scans from "The Way It Was… 1918," DC Urban Watershed, https://dwlab.wordpress.com/2011/02/03/the-way-it-was-1918/.

During the 1940s, Harry Thompson, the landscape architect and Chief of the Planning Division of the National Capital Parks (NCP) of the National Park Service (NPS, which became the National Capital Region, NCR, in 1976), developed an idea for a "sylvan theatre with permanent benches and stage" in the Division B zone. On June 3, 1943, he toured Rock Creek Park with Fredrick Law Olmsted, Jr. and discussed his theater concept. Olmsted approved of the plan and site, noting in his report, "I was favorably impressed with this idea and the location he had in mind for it."[4] In 1944 the National Park Service commissioned a "Study for an Open Air Theater in Rock Creek Park" (**Figure 3-4 and Figure 3-5**). This design was a rustic precursor to the amphitheater that was eventually constructed. The study called for an amphitheater set back from Colorado Avenue in a location and orientation similar to the site later selected for Carter Barron Amphitheater. The design included a stage with enclosed dressing rooms, partially enclosed storage wings, bench seating in a grass bowl divided by flagstone aisles, and a grass "lobby." The amphitheater was envisioned to seat 1,400 and include a projector and screen.[5] No information was found regarding the context that led to this study. Its timing is unusual in that funding for an amphitheater in the middle of World War II would have been unlikely.

The Sesquicentennial Commission and Amphitheater Design & Construction, 1947-1950

To celebrate the milestone of Washington, DC's 150th anniversary as the nation's capital in 1950, a local citizens' organization lobbied Congress to establish the National Capital Sesquicentennial Commission, which it did by joint resolution in the summer of 1947. The commission was directed "to prepare a plan or plans and a program for the signalizing [sic] the one hundred and fiftieth anniversary of the establishment of the seat of the Federal Government in the District of Columbia; to give due and proper consideration to any plan which may be

4 F. L. Olmsted, "Rock Creek Park: Report of Visit," June 3, 1943, Rock Creek Park Files; "Chronology of National Park Service Regional Structure," 1998, https://www.nps.gov/hfc/services/library/regions.cfm.
5 Study for an Open Air Theater in Rock Creek Park," February 1944. Rock Creek Park Files.

submitted to it…".[6] The President of the United States was to serve as the ex officio Chairman, Carter T. Barron was elected executive vice chairman, and Barron appointed Edward Boykin as director. Barron was the Washington, DC representative of Metro-Goldwyn-Mayer (MGM) studios, and the head of the Loew's theater chain in DC. Under Barron's leadership, the commission decided to sponsor an open air theater as part of the commemoration, among other initiatives.[7] With the approval of Secretary of the Interior Oscar L. Chapman, the Commission selected the site identified years earlier by Thompson, but planned for a facility with two to three times the capacity.[8] NPS would design and manage the amphitheater and its construction, while the Commission would review plans and approve work, and Congress would authorize funds. The amphitheater would remain under Commission authority through the Sesquicentennial and then be turned over for management by NPS.[9]

6 Joint Resolution 129 (61 Stat. 396), July 18, 1947. http://legisworks.org/sal/61/stats/STATUTE-61-Pg396.pdf

7 Richard L. Coe, "The Dramatic History of Paul Green," *Washington Post*. July 26, 1987, https://www.washingtonpost.com/archive/lifestyle/style/1987/07/26/the-dramatic-history-of-paul-green/94b34b8d-9526-44df-b26f-e79c86354876/?utm_term=.d945f06736b2.

8 Barry Mackintosh, *Rock Creek Park, An Administrative History,* 1985, https://www.nps.gov/rocr/learn/historyculture/adhi4h.htm.

9 "Sesqui Theater Work to Start in Park Soon," *The Washington Star*, Washington, DC, November 16, 1949.

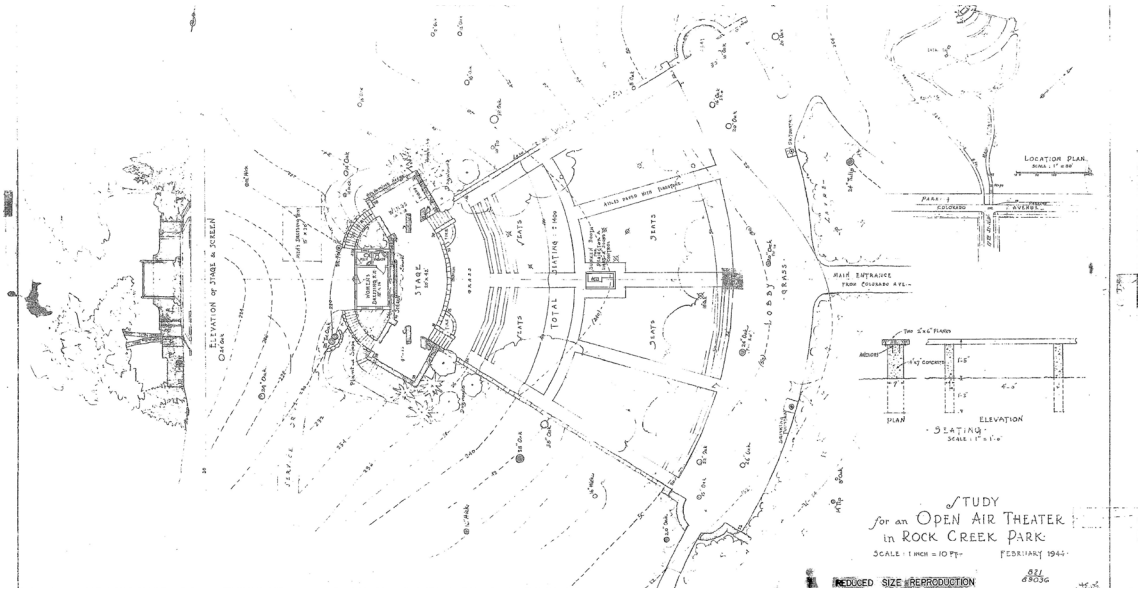


Figure 3-4. This 1944 site study proposes an amphitheater with a small stage, dressing areas, and bench seating for 1,400. The final design drew on the orientation and the connection of the amphitheater to the site topography and landscape illustrated here. Source: Rock Creek Park Files.

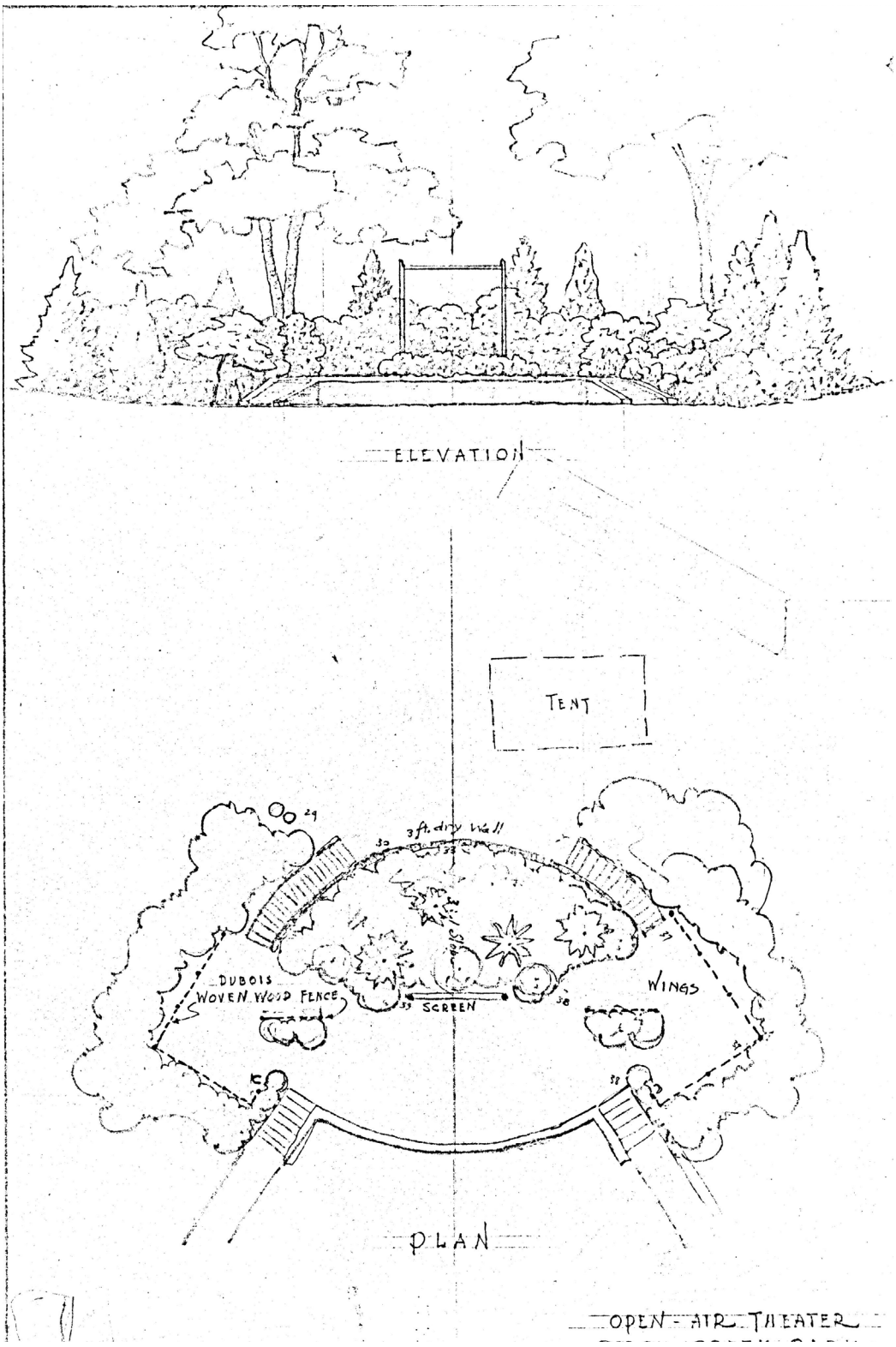


Figure 3-5. This plan and elevation shows an early concept for an amphitheater. Source: NPS, ROCR, id150574, No Date.

The Commission also hired Paul Green to write a play commemorating the occasion (**Figure 3-6**). Green, known for writing historical dramas, was the author of *The Common Glory*, performed in Williamsburg, Virginia, and *The Lost Colony*, performed on Roanoke Island in Manteo, North Carolina. Both plays were written for an outdoor setting and depicted significant events in American history with connections to the location in which they were performed. Both were also a commercial success. *The Lost Colony* was first performed in 1937 and was still in production by the late 1940s. (It remains in production today). *The Common Glory* was similarly performed for decades.[10] In 1949, Green and Commission members toured the Rock Creek Park site. During his visit, Green announced that "we shall try to put in drama here the real meaning of America… We shall try to interpret the meaning and destiny of this country as well as we can do it." He also noted that he envisioned the amphitheater as reflective of the 18th Century, "reminiscent of the Virginia plantations," according to a local paper.[11]

By spring 1949, the Commission had set aside $300,000 for the amphitheater and production, which were envisioned as integrally linked.[12] In May, Congress authorized the Commission to erect a structure as part of the commemoration.[13] National Capital Parks architect William Haussmann and engineer Robert C. Horne designed the amphitheater.[14] As noted in the Multiple Property Documentation Form for Mission 66 resources in the National Capital Region,

> *(b)oth Haussmann and Horne were career NPS staff. Haussmann (1906-1988) worked as a park architect for 32 years. He retired from NPS in May 1963 as the chief of the National Capital Office of Design and*

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10 "Paul Green, Pulitzer Playwright and Drama Teacher, Dies at 87," *The New York Times*, New York, NY, May 6, 1981, http://www.nytimes.com/1981/05/06/obituaries/paul-green-pulitzer-playwright-and-drama-teacher-dies-at-87.html.

11 "Sesqui Theater in Rock Creek Park to Cost $200,000," *The Washington Star*, Washington, DC, April 10, 1949.

12 Ibid.

13 Barry Mackintosh, *Rock Creek Park, An Administrative History*, "The First Vision," 1985. https://www.nps.gov/rocr/learn/historyculture/adhi1.htm

14 Ibid.

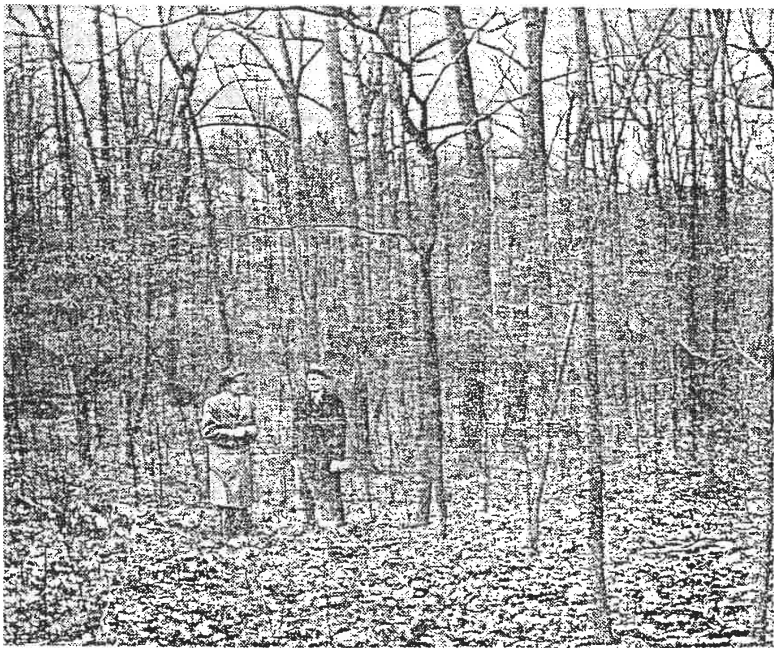


Figure 3-6. Edward Boykin and Paul Green toured the site of the amphitheater in April, 1949. Source: "Sesqui Theater in Rock Creek Park to Cost $200,000," *The Star*, Washington, DC, April 10, 1949.

> *Construction and entered private practice. During his tenure at National Capital Parks he designed, among other projects, the Harry T. Thompson Boat Center, the Rock Creek Nature Center, and the Spout Run Bridge on George Washington Memorial Parkway – all Mission 66 projects – and the Baltimore-Washington and Suitland parkways. Using his training in historic restoration at Colonial Williamsburg, Haussmann also worked on the restoration of the Custis-Lee Mansion, Ford's Theatre, and the Old Stone House. Horne (1910-1988) began his NPS career in the mid-1930s and, with the exception of military service during World War II, when he served in the U.S. Army Corps of Engineers, he spent his entire career with the National Park Service. After serving as chief engineer for the National Capital Region, he became associate regional director and represented NCR on local commissions and boards.* [15]

Design goals for the amphitheater included creating "an outdoor theater with a lot of the facilities of an indoor theater," according to Haussmann, and a seating bowl designed to give every

15 Judith H. Robinson, Tim Kerr, and Janel Crist Kausner, "Mission 66-Era Visitor Centers, Administration Buildings, and Public Use Areas in the National Capital Region of the National Park Service," Multiple Property Documentation form, December 5, 2012, E10.

theater goer "an equal opportunity of seeing and hearing all stage presentations," according to Boykin.[16] The amphitheater design expanded on the 1944 plan. The new design was roughly three times larger than that envisioned just a few years earlier, and it called for full seating and a paved bowl, instead of the benches and grass hill (**Figure 3-7).** The design struck a balance of National Park Service rustic, Washington, DC monumentality, and modern simplicity. As such, it incorporated local limestone to "suggest the formal design which is characteristic of other public buildings in the city," Boykin said. The degree to which the design worked with or in opposition to nature was somewhat disputed in the local press. According to *The Times-Herald*, the amphitheater would "be Washington's permanent outdoor theater, nestled in a rustic setting that the engineers intend to keep as undisturbed as possible."[17] *Washington Star* reporter James G. Deane interpreted the design differently, writing that "Nature won't recognize herself when the workmen finish remodeling her at the 16-acre site, "describing the concrete amphitheater bowl as a statement of "permanence" through which "man is doing his best to counter nature."[18]

The preliminary plans called for three stages with a spotlight to illuminate one at a time, allowing the others to transition between scenes and sets, out of view. Haussmann described the lighting approach as "unlike anything else in the country," and explained that it would allow the stage to operate without a curtain, a benefit in the outdoor environment. The plan had an orchestra

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16 Isabelle Shelton, "Geo. Washington Pageant Will Open Uncle Sam's 4,000 Seat Amphitheater," *The Cincinnati Enquirer*, Washington, DC, July 9, 1950; "Amphitheater Plans Approved; to be Ready in June," *The Washington Star*, Washington, DC, January 15, 1950.

17 Herbert Lansner, "'Best' Outdoor Theater Seen for Sesqui," *The Times-Herald*, Washington, DC, November 11, 1949; "Ground Broken at Site of Sesqui Amphitheater," *The Washington Star*, Washington, DC, December 18, 1949; "Amphitheater Plans Approved; to be Ready in June," *The Washington Star*, Washington, DC, January 15, 1950; Isabelle Shelton, "Geo. Washington Pageant Will Open Uncle Sam's 4,000 Seat Amphitheater," *The Cincinnati Enquirer*, Washington, DC, July 9, 1950.

18 James G. Deane, "Crews Putting Final Touches on 16-Acre Amphitheater," *The Washington Star*, Washington, DC, July 19, 1950.

pit for forty-five musicians, seats for 3,500 to 5,000 guests, a promenade, and a 600 car parking lot. [19]

The U.S. Commission of Fine Arts (CFA) reviewed and approved the preliminary plans in November, 1949. The same month, a team of theater experts toured the site and advised on the project. The team included stage designer Donald Oenslager, sound expert Harold Burris-Meyer, and theatrical lighting technician Stanley McCandless. The Commission also officially approved the preliminary drawings that month at a meeting of the Executive Committee including Senator Margaret Chase Smith of Maine, Representative Mary Theresa Norton of New Jersey, and the President of Riggs National Bank, Robert V. Fleming. [20]

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19 Herbert Lansner, "'Best' Outdoor Theater Seen for Sesqui," *The Times-Herald*, Washington, DC, November 11, 1949; "Ground Broken at Site of Sesqui Amphitheater," *The Washington Star*, Washington, DC, December 18, 1949; "Amphitheater Plans Approved; to be Ready in June," *The Washington Star*, Washington, DC, January 15, 1950; Isabelle Shelton, "Geo. Washington Pageant Will Open Uncle Sam's 4,000 Seat Amphitheater," *The Cincinnati Enquirer*, Washington, DC, July 9, 1950.

20 "Sesqui Theater Work to Start in Park Soon," *The Washington Star*, Washington, DC, November 16, 1949.

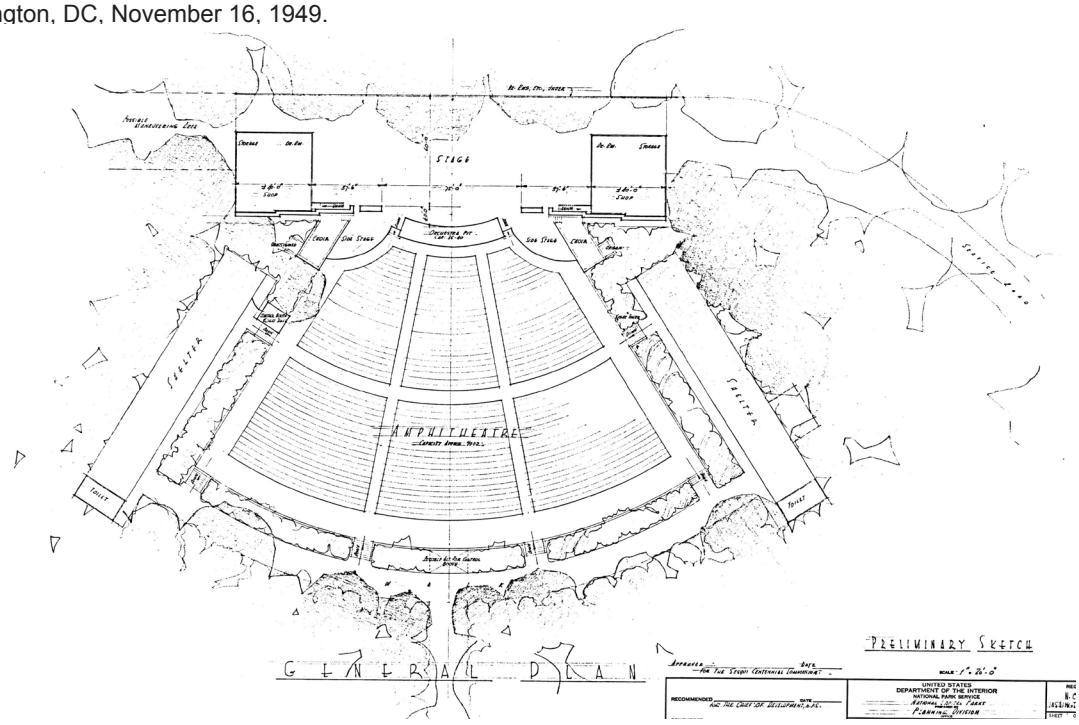


Figure 3-7. This 1949 concept plans shows an amphitheater layout similar to that built in 1950 but with shelters flanking the seating bowl. Source: 1949, NPS, Rock Creek Park.

The Commission broke ground for what was then called the Sesquicentennial Amphitheater on December 17, 1949, Secretary Chapman delivered an opening speech and dug the first shovel-full of dirt, kicking off the construction, in front of an audience of representatives from the District of Columbia government, the National Park Service, the Washington Board of Trade, federal agencies, and local civic groups (**Figure 3-8**).[21] According to a reporter for *The Washington Star, "*He repeated this motion not less than three times for the benefit of the photographers and several hundred shivering citizens bore mute testimony to the historic act." [22] In his speech, Secretary Chapman related the Amphitheater's construction to the values of freedom and equality, particularly for immigrants, noting:

> *Hoban, who designed the White House, was an Irish immigrant; Andrie, who helped decorate the Capitol, was an Italian immigrant, and L'Enfant, who planned this great city, was a French immigrant. So too, this amphitheater, built by workmen who derive from many lands and races, will be a lasting symbol of our faith in freedom and equality. Let its continued use serve as an example that the principles of freedom and equality, handed down to us by the founding fathers, are not merely ideals but are working principles in our democracy.* [23]

Irving C. Root, Superintendent of the National Capital Parks, a unit of the National Park Service that managed parks in the District, directed preliminary construction work on the Amphitheater including land clearing and the installation of water and sewer lines. In mid-January 1950, National Park Service authorities put out a call for private construction bids to complete the majority of the work.[24]

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21 William A. Millen, "Rock Creek Park Amphitheater Takes Form," *The Washington Star*, Washington, DC, December 17, 1949.

22 "Mr. Chapman Almost Digs Sesqui Bowl Singlehanded," *The Washington Star*, Washington, DC, December 17, 1949.

23 William A. Millen, "Rock Creek Park Amphitheater Takes Form," *The Star*, Washington, DC, December 17, 1949.

24 "Ground Broken at Site of Sesqui Amphitheater," *The Washington Star*, Washington, DC, December 18, 1949; "Amphitheater Plans



Figure 3-8. Secretary of the Interior Oscar Chapman (holding shovel) breaks ground for the Sesquicentennial Amphitheater with, from left to right, Edward Boykin, director of the Sesquicentennial Commission; Joseph C. McGarraghy, chairman of the Executive Committee; Claudia Pinza, opera singer; and William J. Dougherty, Assistant Director of Information, Department of the Interior. Source: Oscar Chapman Scrapbook, Harry S. Truman Presidential Library and Museum, https://www.trumanlibrary.org/photographs/view.php?id=43323, December 17, 1949.

The CFA reviewed final construction drawings for the Amphitheater in January, 1950 (**Figure 3-09)**. [25] The Sesquicentennial Commission Executive Committee approved the drawings in March and authorized a $100,000 budget increase. Barron justified the expense by explaining that the permanent theater would pay for itself in the long run.[26]

Approved; to be Ready in June," *The Washington Star*, Washington, DC, January 15, 1950; "Bids for Amphitheater Announced; First Draft of Drama Completed," *The Washington Star*, Washington, DC, January 30, 1950.

25 "Bids for Amphitheater Announced; First Draft of Drama Completed," *The Washington Star*, Washington, DC, January 30, 1950.

26 "Park Amphitheater Plans Approved by Sesqui Commission," *The Washington Star*, Washington, DC, March 8, 1950.

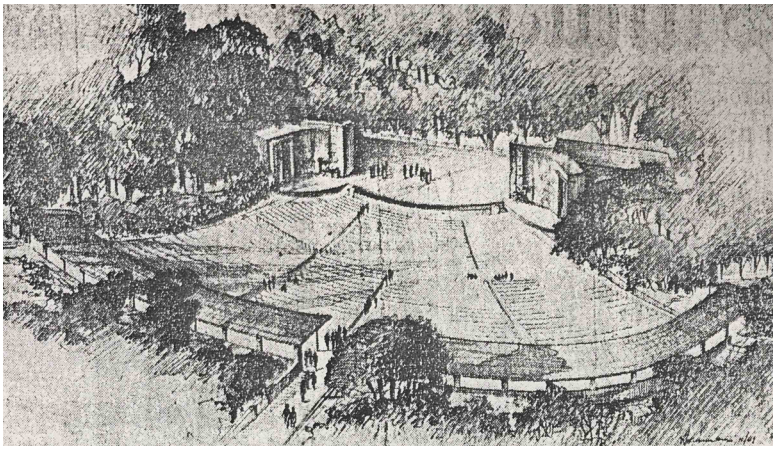


Figure 3-9. The Commission of Fine Arts reviewed this sketch as part of the final drawings for the Amphitheater in January 1950. Source: "Amphitheater Plans Approved; to be Ready in June," *The Star*, Washington, DC, January 1, 1950.

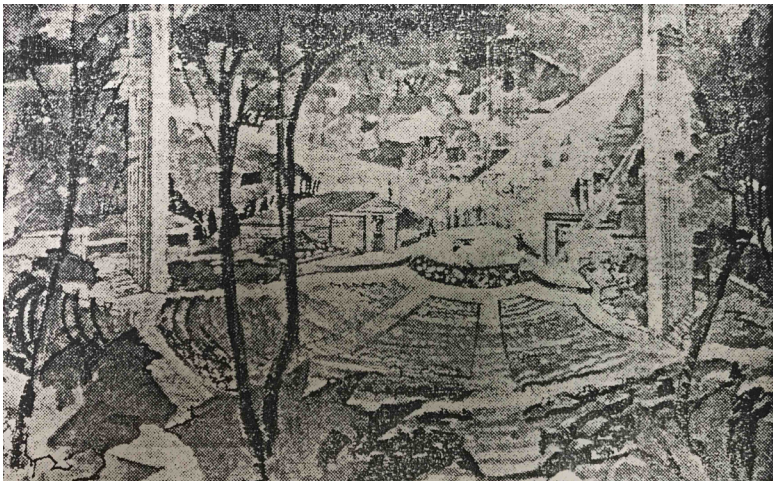


Figure 3-10. An artist's rendering of the Amphitheater in November, 1949. Source: *The Star*, Washington, DC, November 21, 1949.

Construction slowed in April 1950 due to bid errors and disputes. The National Park Service had accepted the lowest bid for the majority of the work, in the amount of $264,466 from Arlington based contractor E. L. Daniels. Before the final contract, Daniels realized his bid was inadvertently submitted $30,000 short. Comptroller General of the United States Lindsay C. Warren ruled that Daniels was not obligated to perform the work at the bid amount as the final contract had not been signed and the error was deemed "reasonable."[27] The Commission awarded the job to the next lowest bidder, Jay Cee Construction, Inc., and approved an additional $29,000 budget increase. By May, the total cost, including roads and parking lot, had reached $563,676.[28] Helsing Brothers, Inc. was awarded the contract for paving roads and parking area.[29]

Construction continued through June. (**Figure 3-11 - Figure 3-21**). Final inspection of the Amphitheater was conducted on July 18, 1950. Green was particularly enthusiastic about the

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27 "Bad Arithmetic Delays Sesqui Amphitheater," *The Washington Post*, Washington, DC, April 1, 1950.

28 "$29,000 Price Set by Sesqui for Theater," *The Washington Post,* Washington, DC, April 8, 1950; "$268,977 Bid Filed for Amphitheater," *The Washington Star*, Washington, DC, ca. 1950 (no date on record);

29 "$268,977 Bid Filed for Amphitheater," *The Washington Star*, Washington, DC, ca. 1950 (no date on record); Barry Mackintosh, *Rock Creek Park, An Administrative History*, "Interpretation, Recreation, and Entertainment,"1985. https://www.nps.gov/rocr/learn/historyculture/adhi4h.htm.

results, calling the Amphitheater "the most spectacular and best-equipped theater of its kind in the world," and declaring "I've seen theaters all over Europe, but none is as fine as this one." [30]

30 Bettie McNamara, "Amphitheater Ready; Called 'World's Best'," *The Washington Star*, Washington, DC, July 19, 1950.



Figure 3-11. Trees were cleared and land graded for the Amphitheater's construction by February, 1950. Source: Rock Creek Park Files, February 3, 1950.

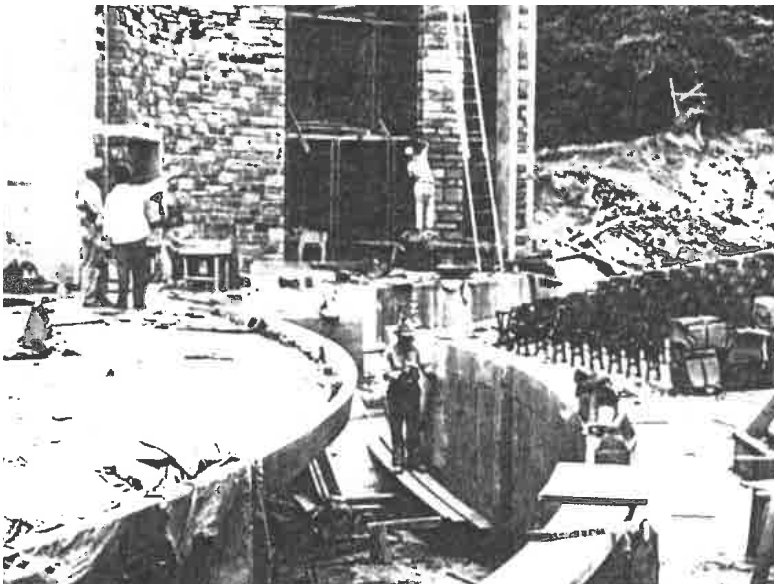


Figure 3-12. Construction of the stage and wings continued through June, 1950. Source: Photocopy from The Washingtoniana Collection in the Washington, DC Public Library, Rock Creek Park Files, June 30, 1950.

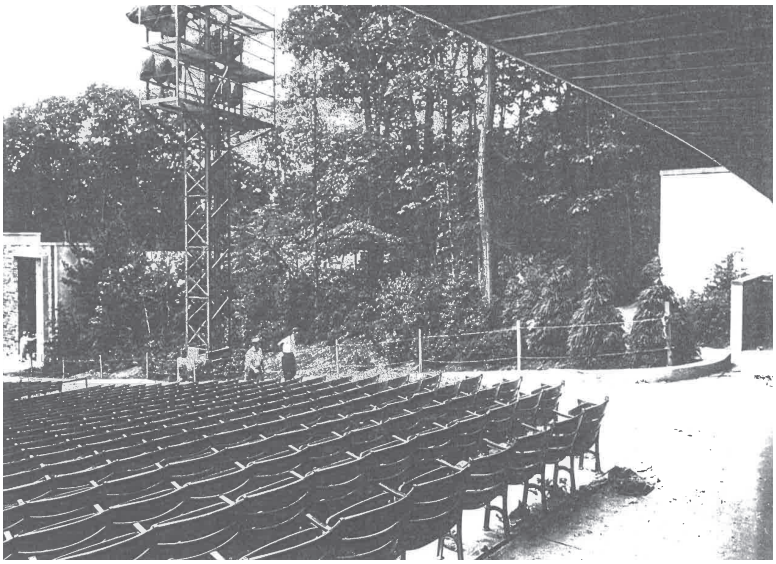


Figure 3-13. This view of the north edge of the Amphitheater was taken from the promenade shortly before its opening. Source: Photocopy from The Washingtoniana Collection in the Washington, DC Public Library, Rock Creek Park Files, July 27, 1950.

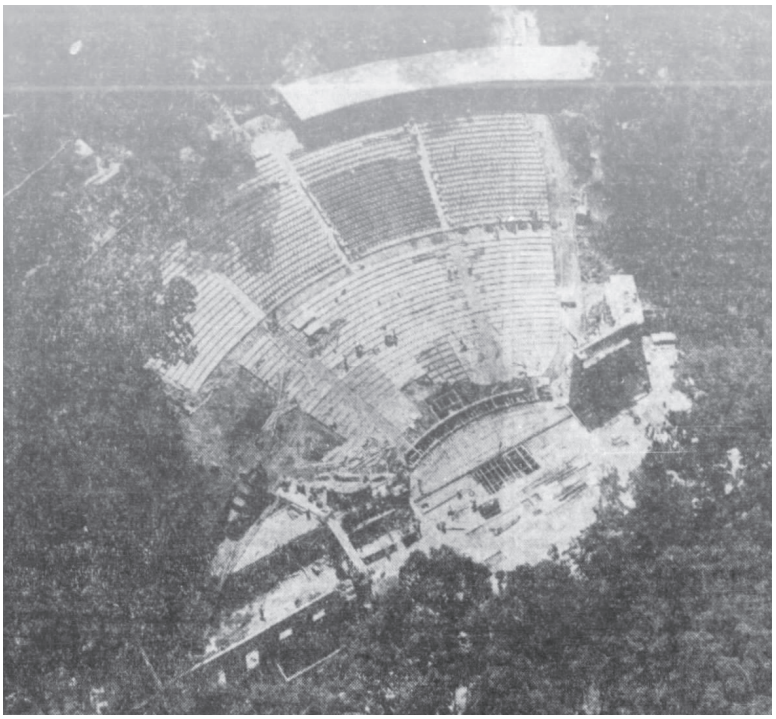


Figure 3-14. This aerial photograph shows the Amphitheater during construction. Source: Isabelle Shelton, "Geo. Washington Pageant Will Open Uncle Sam's 4,000 Seat Amphitheater," The Cincinnati Enquirer, Washington, DC, July 9, 1950.

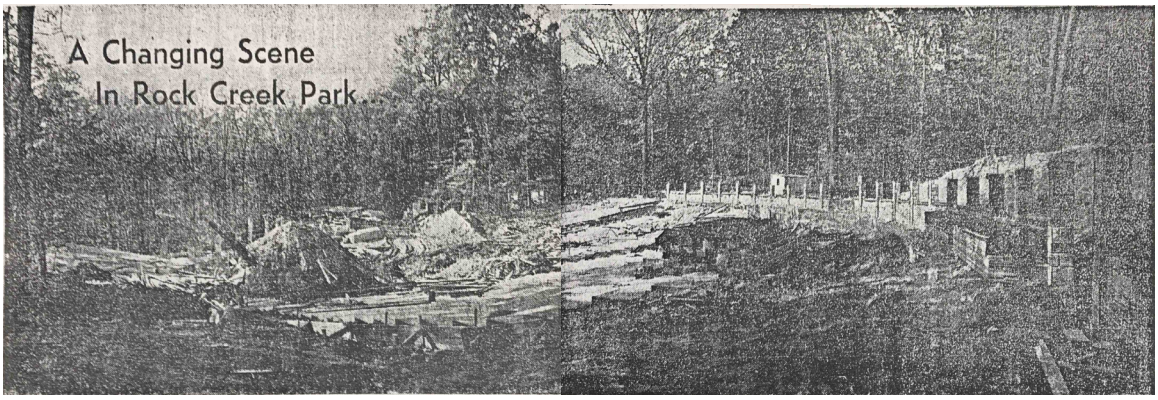


Figure 3-15. Construction continued through the spring of 1950. Source: "A Changing Scene in Rock Creek Park...," *The Star*, Washington, DC, May 17, 1950.



Figure 3-16. The last push of stage construction continued through August 1950. This view of the stage was taken from the south lighting tower shortly before its opening. Source: Photographer Abbie Rowe, July 27, 1950, Museum Resource Center (MRCE), National Capital Region Office (NCRO) Photos, Series 1, Box 92.



Figure 3-17. This view of the north edge of the Amphitheater was taken from the south lighting tower shortly before its opening. Source: Photographer Abbie Rowe, July 27, 1950, MRCE, NCRO Photos, Series 1, Box 92.



Figure 3-18. Workers put the finishing touches on landscaping near the south restroom. Source: Photographer Abbie Rowe, July 14, 1950, MRCE, NCRO Photos, Series 1, Box 92.



Figure 3-19. *Faith of Our Fathers* cast examine a blueprint during the final stage of construction. Source: Harry S. Truman Presidential Library and Museum, https://www.trumanlibrary.org/photographs/view.php?id=43326, July 18, 1950.



Figure 3-20. Workers paint the promenade. Source: Photographer Abbie Rowe, July 15, 1950, MRCE, NCRO Photos, Series 1, Box 92.

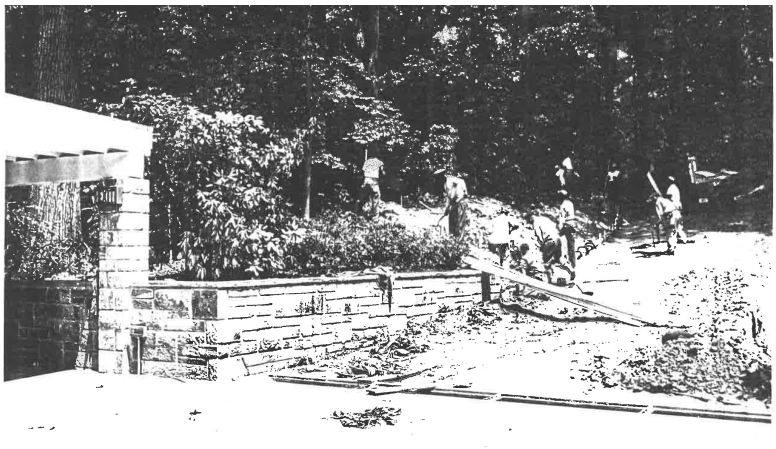


Figure 3-21. Workers install landscaping at the top of the center aisle of the seating area. Source: Photocopy from The Washingtoniana Collection in the Washington, DC Public Library, Rock Creek Park Files, July 14, 1950.

While construction was in its final stages, the Commission advertised the sesquicentennial celebration, anchored by Green's play which he titled *Faith of Our Fathers*, promoting it as an event for the entire country. A pamphlet announcing the production described the Amphitheater design and the play it would host, concluding, "This is YOUR theater in YOUR Nation's Capital…come and enjoy it!"[31].

Due to construction delays and unexpected costs, a few architectural elements were left unfinished including the room below the stage, plans for a lift, and the entrance gates. The entrance gates were finished by the opening of the 1952 season.

31 *Faith of Our Fathers* pamphlet, August 1950. https://digital.lib.ecu.edu/viewer.aspx?pid=33291&n=2/ .

Amphitheater Opening, Rededication, and Re-Programming, 1950-1953

The Sesquicentennial Amphitheater opened on August 4, 1950 with the inaugural performance of Green's *Faith of Our Fathers*. The play depicted the life of George Washington from arrival at Mount Vernon in 1759, through his leadership and victory in the American Revolution in 1783, to his role in laying out the city of Washington with Pierre L'Enfant in 1800.[32] President Truman and his family attended the opening, marking its significance.[33] (**Figure 3-22 - Figure 3-24**).

Even in the Amphitheater's first months, disputes arose over its use for events outside of *Faith of Our Fathers*. The local Junior Chamber of Commerce solicited permission to hold the Miss Washington beauty pageant at the Amphitheater, a use Green felt "was represented as feeling…unworthy of the amphitheater," according to *The Washington Star.*[34] Green's own production, however, did not meet expectations. The musical was met with mixed reviews in part because of its ambitious scope. Unlike his past productions, *Faith of Our Fathers* was not as widely attended as hoped and lost $21,629.43 its first summer.[35] Despite the lackluster opening, the musical was renewed for a second season.[36]

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32 James O'Neill, Jr., "Open-Air History 'Faith of Our Fathers' is a Summer 'Must,'" *The Washington Daily News*, Washington DC, June 2, 1951.

33 Barry Mackintosh, *Rock Creek Park, An Administrative History,* 1985.

34 "Controversy on Use of Amphitheater for Beauty Contest Settled," The Washington Star, Washington, DC, August 12, 1950.

35 "Sesqui Lost $21,000 on Pageant," The Washington Daily News, DC, October 27, 1950.

36 "Sesqui 'Faith' Drama to go on Next Year, Hildreth Announces," The Washington Star, Washington, DC, December 2, 1950.



Figure 3-22. The premiere of *Faith of Our Fathers* at the Rock Creek Park Sesquicentennial Amphitheater. Source: Harry S. Truman Presidential Library and Museum, https://www.trumanlibrary.org/photographs/view.php?id=37601, August 4, 1950.



Figure 3-23. Navy band playing at Rock Creek Park Sesquicentennial Amphitheater outside the box office during the premiere performance of *Faith of Our Fathers*. Source: Harry S. Truman Presidential Library and Museum, https://www.trumanlibrary.org/photographs/view.php?id=43326, August 4, 1950.



Figure 3-24. Rock Creek Park Sesquicentennial Amphitheater on opening night. Source: Harry S. Truman Presidential Library and Museum, https://www.trumanlibrary.org/photographs/view.php?id=37579, August 4, 1950.

On November 16, at the age of 46, Carter Barron died of cancer, with which he had struggled during his leadership in bringing the Sesquicentennial Amphitheater into fruition.[37] Within the week, President Truman decided to rename the Amphitheater in his honor. Secretary Chapman reflected on the decision, telling a local paper, "It is fitting that the Amphitheater which is the keystone of the Sesquicentennial celebration be named in honor of Carter T. Barron, who more than any other person, was responsible for its construction."[38] **(Figure 3-25)**

37 "Carter Barron History," National Park Service, April 2008, https://www.nps.gov/rocr/planyourvisit/cbhistory.htm.
38 "Amphitheater Renamed for Carter Barron," The Washington Star, Washington, DC, November 23, 1950.



Figure 3-25. This photograph shows the memorial plaque on the finished gate wall in 1952. From left to right, Mrs. Ann Chapman; Secretary of the Interior Oscar Chapman; Thomas Sutton Jett, Special Assistant to the Superintendent of National Capital Parks; and Edward J. Kelly, Superintendent of National Capital Parks pose for a picture outside the entrance to the Carter Barron Amphitheater after attending a performance by the Army Band. Source: Harry S. Truman Presidential Library and Museum, https://www.trumanlibrary.org/photographs/view.php?id=41989, May 4, 1952.

On May 25, 1951, just a few days before the opening of the Amphitheater's second season, President Truman held a rededication ceremony to memorialize Barron and his contributions. (**Figure 3-26**). Memorial plaques were placed at the opening gate walls, which themselves were still under construction.[39] President Truman gave a speech on the occasion saying,

> *It is a pleasure to me to be able to make a small contribution to the memory of Carter Barron and for the dedication of this wonderful amphitheater. This amphitheater is the result of the efforts of Carter Barron. I knew him very well. He was just what Walter Pidgeon said he was, he was the ideal southern gentleman.*

39 "Chapman and Others Outside Carter Barron Amphitheatre," May 4, 1952, Harry S. Truman Presidential Library and Museum, https://www.trumanlibrary.org/photographs/view.php?id=41989.



Figure 3-26. President Truman speaks at the dedication of the Carter Barron Amphitheater in Rock Creek Park. Source: Harry S. Truman Presidential Library and Museum, https://www.trumanlibrary.org/photographs/view.php?id=39104, May 25, 1951.

Truman also took the occasion to reflect on events in East Berlin where, according to Truman, "thousands of persons have been kidnapped by the secret police. They just disappear, and are never heard of again. They kidnap the children between the ages of 10 and 16, and carry them off to Moscow. And those children never come home." He then connected "our duty to keep this thing from spreading" to the themes in *Faith of Our Fathers* concluding,

> *We must believe in the Faith of Our Fathers. We must believe in freedom and justice and fairness. We must believe in human rights and civil rights for every man, be he yellow, red, black, or white. We must act in accordance with that belief, and if we do act in accordance with the Faith of Our Fathers, there will be no question about the outcome, we will attain world concord and world peace.*

This effort to link fighting communism and the secret police to the colonial musical performed at Carter Barron Amphitheater demonstrates both the larger cold war trend of defining America through its history of resistance and the importance of Carter Barron Amphitheater at the national scale.[40]

That summer, *Faith of Our Fathers* opened for a second season after undergoing a drastic redesign intended to boost interest and attendance.[41] The musical was again met with mixed reviews. James O'Neill, Jr. of *The Washington Daily News* called it a "summer 'must'" and "a far smoother work than last year's effort." But he lamented that, "Mr. Green's George Washington strikes me as being a trifle less human than the gentleman I had admired in high school history." O'Neill also described the production as "laced with this questionable form of art" (i.e. modern dance) which he describes as "a gang of females

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40 Harry S. Truman, "Remarks at the Dedication of the Carter Barron Amphitheater," May 25, 1951. http://www.presidency.ucsb.edu/ws/index.php?pid=13795.

41 James O'Neill Jr. "Open-Air History 'Faith of Our Fathers' is a Summer 'Must,'" *The Washington Daily News,* Washington, DC, June 2, 1951; Jay Carmody, "New 'Faith of Our Fathers' has Circus Pace and Color," *The Washington Star*, Washington, DC, June 2, 1951.

clothed in Mother Hubbards, lifting their hands to Heaven, while crawling around the platform doing deep-knee-bends."[42] Modern dance or no, ticket sales for *Faith of Our Fathers* were again low that summer.[43]

In its second season, the future of the Amphitheater as either a local or a nationally renowned institution was as much in question as the future of the musical production itself. In his review of the opening night, Richard Coe of *The Washington Post* referred to the Amphitheater, somewhat wishfully it seems, as "the Capital City's newest tourist mecca," noting the night was attended by "an audience of 2500, including visitors from all parts of this country and some from abroad."[44] By the end of the season, however, it appeared the Amphitheater had not fully arrived on either the national or local scene. Carter Barron Amphitheater's general manager, Paul M. Massmann, accounted for the summer's low ticket sales by explaining that the Amphitheater was not yet a Washington tradition. Pointing to many late arrivals, he observed that many still had trouble finding the Amphitheater. But Massmann predicted that within a few years it would become a local destination. He was less confident in the likelihood of the Amphitheater and its musical to take hold on a national level. Massmann assessed that, "if *Faith of Our Fathers* is to persist, it must become one of the sights to see in Washington, just like the Washington Monument, the Jefferson Memorial, the Capitol dome." More likely, he saw the potential for the Amphitheater as a venue for a wider range of uses including concerts, plays, and religious and educational events.[45] Massmann also believed that if the Amphitheater were to host events beyond *Faith of Our Fathers,* it would need a curtain.[46]

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42 James O'Neill, Jr., "Open-Air History 'Faith of Our Fathers' is a Summer 'Must,'" *The Washington Daily News*, Washington DC, June 2, 1951.

43 William A. Millen, "An Important Message for More Ears," *The Washington Star,* Washington, DC, August 14, 1951.

44 Richard L. Coe, "2500 See Opening of Sesqui Play," *The Washington Post,* Washington, DC, June 2, 1951.

45 William A. Millen, "An Important Message for More Ears," *The Washington Star,* Washington, DC, August 14, 1951.

46 Ibid.

With the sesquicentennial celebration over, the Commission wrapped up its work and finalized outstanding budget items. While the Carter Barron Amphitheater had largely been a success, some of the Sesquicentennial Commission's other initiatives had not come to fruition, including its Freedom Fair. Roughly $350,000 had been budgeted for the event, a portion of which was still unused in the fall of 1951. Those funds were reallocated to the Amphitheater, the only permanent structure to come out of the Sesquicentennial efforts.[47] In discussing potential uses for the fund, Melvin D. Hildreth, executive vice chairman of the Commission, said he hoped it could be used to complete features of the Amphitheater included in the original plan such as a hydraulic elevator and ornamental gateways. He also pointed to the need for a temporary cover to protect it from sudden rain.[48]

The summer of 1952 was a season of transition for Carter Barron Amphitheater. By February, 1952, the Sesquicentennial Commission Executive Committee had decided that *Faith of Our Fathers* would not go on. They recommended that the government not renew the show and return the $1.4 million earmarked for future seasons.[49] In March 1952, an African American play sharing a similar historical sentiment to *Faith of Our Fathers* was proposed for the Amphitheater, but never produced.[50] The 1952 season opened with a performance of the Army Band as part of Concert Week at Carter Barron Amphitheater.[51] Looking for an alternative to *Faith of Our Fathers*, the National Park Service contracted with event manager Super Attractions, run by Irvin and Israel Feld, for a late

47 "Sesqui Lost $21,000 on Pageant," *The Washington Daily News,* DC, October 27, 1950; "Amphitheater Renamed for Carter Barron," *The Washington Star*, Washington, DC, November 23, 1950.
48 "Amphitheater May Soon Get Face-Lifting," *The Times-Herald,* Washington, DC, September 22, 1951. Records of these specific improvements were not found.
49 "Zoning Violation Denied in Sesqui Site Dispute," *The Washington Star,* Washington, DC, February 13, 1952.
50 "Amphitheater Sought for All Negro-Play," *The Washington Star*, Washington, DC, March 26, 1952.
51 "Concert Week at Carter Barron Amphitheater," Harry S. Truman Presidential Library and Museum, https://www.trumanlibrary.org/photographs/view.php?id=41990.

summer lineup including Ballet Russe de Monte Carlo, but the brothers were unable to arrange a full season of entertainment the following year (**Figure 3-27**).[52] The Amphitheater also underwent managerial change that summer. On July 1, 1952, the Sesquicentennial Commission disbanded and management of the Amphitheater turned over to National Capital Parks.[53]

52 John V. Horner, "McKay Falls Heir to D.C. Fight Over Amphitheater Shows," *The Washington Star*, Washington, DC, February 25, 1953; Barry Mackintosh, *Rock Creek Park, An Administrative History,* 1985; "Plan for Ballet Irks Amphitheater Area," *The Washington Daily News*, Washington, DC, July 23, 1952; Carter Barron History, National Park Service, https://www.nps.gov/rocr/planyourvisit/cbhistory.htm.

53 Mackintosh, *Rock Creek Park, An Administrative History.* Note, the date of transfer is disputed. The National Register nomination

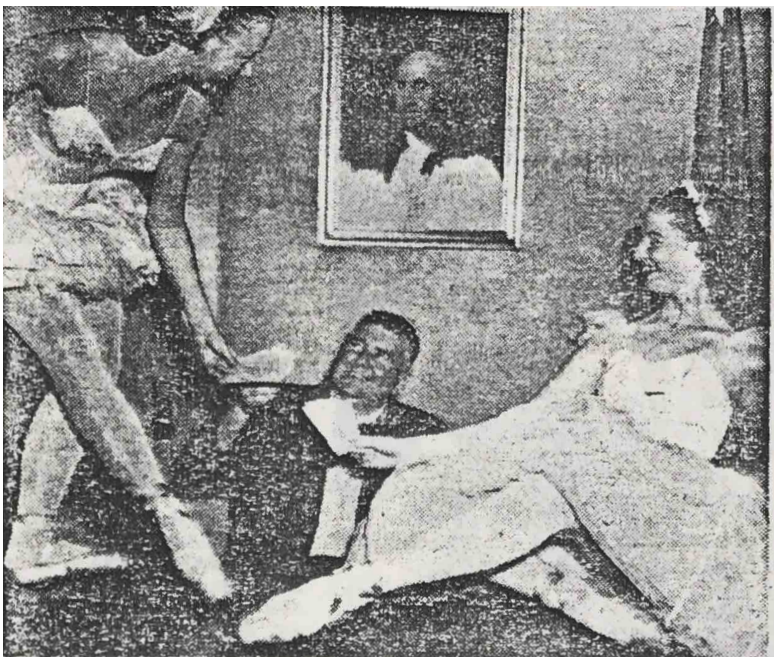


Figure 3-27. Caption from the *Washington Daily News*: "Tickets to the Ballet Russe de Monte Carlo, opening here on Aug. 8 for a nine-day run at the Carter Barron Amphitheater in Rock Creek Park, are presented to Ed Kelly, superintendent of the National Capital Parks, by Sarita Edwards of Alexandria (left) and Lettie Tayman of Cheverly, Md."
Source: "Plan for Ballet Irks Amphitheater Area," *The Washington Daily News*, Washington, DC, July 23, 1952.

Some of the local residents were not pleased with the addition of the Carter Barron Amphitheater to Rock Creek Park. They objected to the added noise, traffic, and dust from the unpaved parking lot, and took every decision regarding the Amphitheater's future use as an opportunity to voice their opposition. In February, 1952, a group of 50 neighbors sent a thirteen-point petition to President Truman, Congress, and District officials objecting to the renewal of *Faith of Our Fathers* for the upcoming season, arguing that the theater was in violation of the zoning ordinance. The claim did not garner much concern as the Amphitheater was constructed on government land, and thus not subject to the city's zoning.[54] The neighbors' complaints were not specific to *Faith of Our Fathers*. They also protested the Ballet Russe, which performed at the Amphitheater in July, 1952, and a general call from the National Capital Parks for applications for private rentals for profit-based events.[55]

For the 1953 season, the National Park Service fully embraced a contracted summer season with a variety of performances. They awarded the season contract to Washington Festival, Inc. operated by local television celebrity Constance Bennett Coulter. The twelve-week summer lineup included *Show Boat*, *Annie Get Your Gun*, and *Carousel* among others. To support the change in programming, the National Park Service added a curtain and curtain track over the main stage.[56] (**Figure 3-28 and Figure 3-30**). Despite the changing program, attendance numbers remained low. Washington Festival lost $200,000 and their contract was not renewed for a second season.[57]

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form states that the Commission transferred ownership to the National Park Service on January 29, 1953, just over six months later. National Register of Historic Places, *Rock Creek Park Historic District (Amended Nomination and Boundary Increase)*, drafted 2014.

54 "Zoning Violation Denied in Sesqui Site Dispute," *The Washington Star,* Washington, DC, February 13, 1952; "Sesqui Show Opposed by Citizen Unit," *The Washington Post*, Washington, DC, February 14, 1952.

55 "Plan for Ballet Irks Amphitheater Area," *The Washington Daily News*, Washington, DC, July 23, 1952; "Amphitheater Plan Opposed," *The Times-Herald*, Washington, DC, February 7, 1953.

56 Photograph. Photocopy from The Washingtoniana Collection in the Washington, DC Public Library, April 30, 1953. Rock Creek Park Files.

57 Carter Barron History, National Park Service, https://www.nps.gov/rocr/planyourvisit/cbhistory.htm; John V. Horner, "McKay Falls

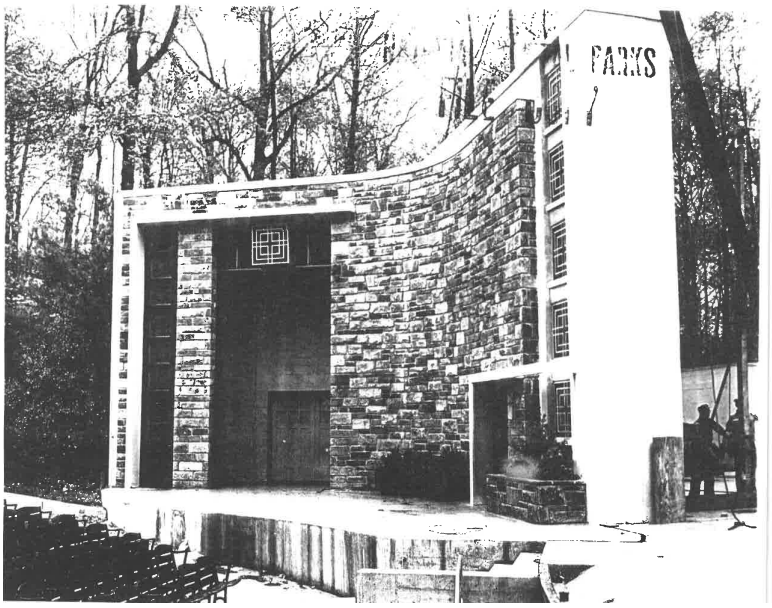


Figure 3-28. The curtain track was installed before the 1953 summer season. Workers installing the track can be seen behind the wall of the south stage wing (far left). Staining is visible on the stage wall, despite being only three years old. Source: Photocopy from The Washingtoniana Collection in the Washington, DC Public Library, Rock Creek Park Files, April 30, 1953.

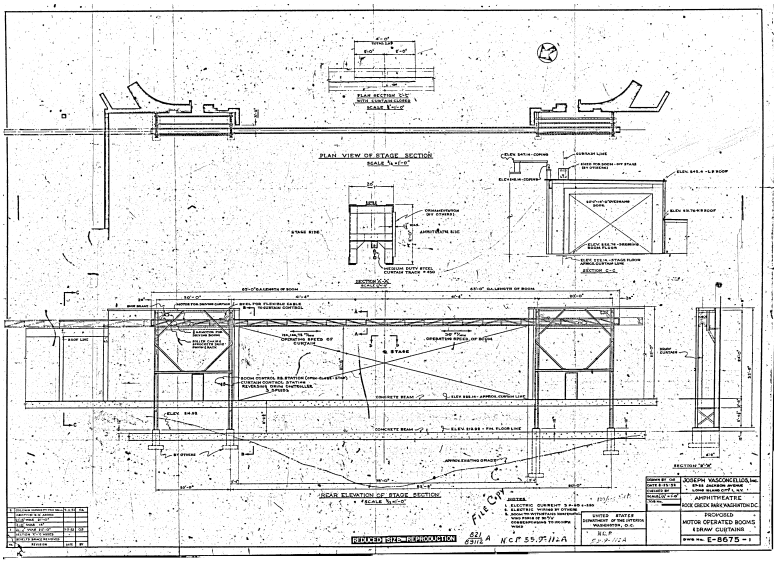


Figure 3-29. This drawing shows the curtrain track design, plan and rear elevation. Source: NPS, ROCR, id69992, August 1, 1952.



Figure 3-30. The curtain track can be seen in this photo from an evening production. Source: 1955, MRCE, NCRO Photos, Series 1, Box 92.

Carter Barron Amphitheater Hits its Stride, 1954-1960

For the fifth season at Carter Barron Amphitheater, the National Park Service contracted again with Super Attractions. Calling the lineup "Entertainment Under the Washington Stars," the Feld brothers scheduled a wide range of performances including popular music, ballet, opera, and the National Symphony Orchestra (NSO). The breadth in programming brought in a larger audience, and Super Attractions retained the contract for over twenty years.[58]

Plans for an additional parking lot were also initiated in 1954. This lot supported the Amphitheater, but was also part of a tentative plan to manage parking downtown. Day long parking at the National Mall was eliminated in 1954, leaving many commuters to nearby government agencies with limited parking options. The city considered using the additional Carter Barron Amphitheater lot for commuters by offering a shuttle from the lot down to the National Mall. [59]

In an effort to reduce cost, Super Attractions increasingly prioritized popular musical acts including big name performers over elaborate dramatic productions. [60] During the late 1950s and 1960s, Carter Barron Amphitheater hosted headliners like Ella Fitzgerald, Louis Armstrong, Diana Ross and the Supremes, Harry Belafonte, and Ray Charles.[61] **(Figure 3-31 - Figure 3-35).**

Heir to D.C. Fight Over Amphitheater Shows," *The Washington Star*, Washington, DC, February 25, 1953; Barry Mackintosh, *Rock Creek Park, An Administrative History,* 1985.

58 Felix W. Salmaggi, "News Release: Entertainment Under The Washington Stars," June 1968, Rock Creek Park Files; Tom Zito, "The Cost of Keeping Carter Barron Open," *Washington Post*, August 31, 1973.

59 "Prentiss Orders Plans for Fringe Parking Lot at Amphitheater," *The Washington Star,* September 23, 1954; No records were found indicating whether or not the shuttle and commuter parking plan was carried out.

60 Barry Mackintosh, *Rock Creek Park, An Administrative History,* 1985.

61 Felix W. Salmaggi, "News Release: Entertainment Under The Washington Stars," June 1968, Rock Creek Park Files.



Figure 3-31. Louis Armstrong and Ella Fitzgerald. Source: July 11, 1956, MRCE, NCRO Photos, Series 1, Box 92.



Figure 3-32. Louis Armstrong. Source: Photographer Abbie Rowe, July 1, 1957, MRCE, NCRO Photos, Series 1, Box 92.



Figure 3-33. Secretary of the Interior Stewart Udall and his wife Ermalee meet a ballerina back stage on opening night of the summer 1962 season. Source: Photographer Abbie Rowe, Rock Creek Park Files, June 10, 1962.

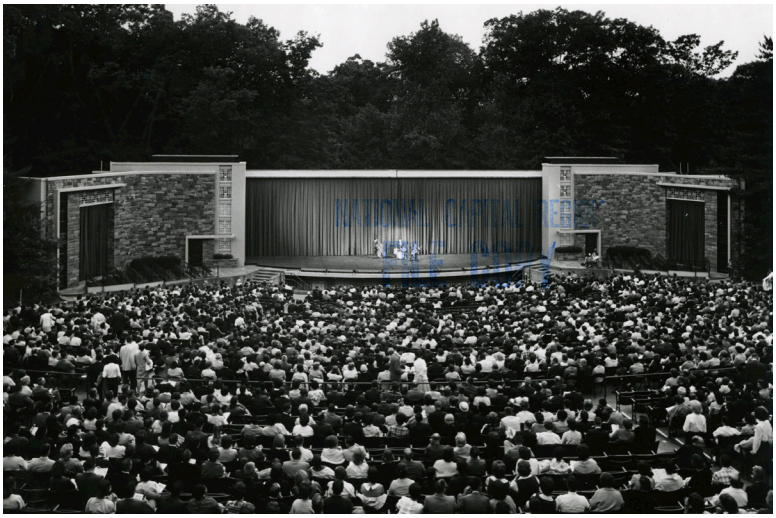


Figure 3-34. Opening night of the 1965 summer season. Source: Photographer Abbie Rowe, June 15, 1965, MRCE, NCRO Photos, Series 1, Box 92.



Figure 3-35. Ermalee Udall at opening night of the 1965 summer season. The box office shelter is visible behind the crowd. Source: Photographer Abbie Rowe, June 15, 1965, MRCE, NCRO Photos, Series 1, Box 92.

Even though the Amphitheater was designed specifically for *Faith of Our Fathers*, it worked well for this wide range of acts, and National Capital Parks and Super Attractions only made small alterations to the theater. Sometime during 1955 or 1956, a control booth built in the center of the front rows of seating was removed.[62]

62 Comparison of photograph taken in 1955 and 1956, Museum Resource Center (MRCE) and 1956, National Capital Region Office (NCRO) Photos, Series 1, Box 92.

Starting in 1957, Super Attractions began using the small stages flanking the center stage for additional seating.[63] To accommodate the change in use they first used movable railings, and in 1960 they added temporary railings mounted to the face of the stage wing walls. By the end of the season they also added raised platforms to create step seating.[64] After the close of the 1960 season, permanent railings following the stepped seating profile were mounted to the stage.[65] (**Figure 3-36 and Figure 3-37**)**.** Finally, in the 1970s Super Attractions added a three-pole circus tent to protect the center stage from rain. [66]

Super Attractions and NPS also expanded the box office with additions added to the rear and the north end of the front elevation. (**Figure 3-38 - Figure 3-41**). NPS also added a bus station near the box office in 1955.

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63 July 31, 1957, Abbie Rowe, MRCE, NCRO Photos, Series 1, Box 92..

64 June 4, 1960, Abbie Rowe, MRCE, NCRO Photos, Series 1, Box 92.

65 August 21, 1962, Abbie Rowe, MRCE, NCRO Photos, Series 1, Box 92.

66 Carter Barron History, National Park Service, https://www.nps.gov/rocr/planyourvisit/cbhistory.htm.

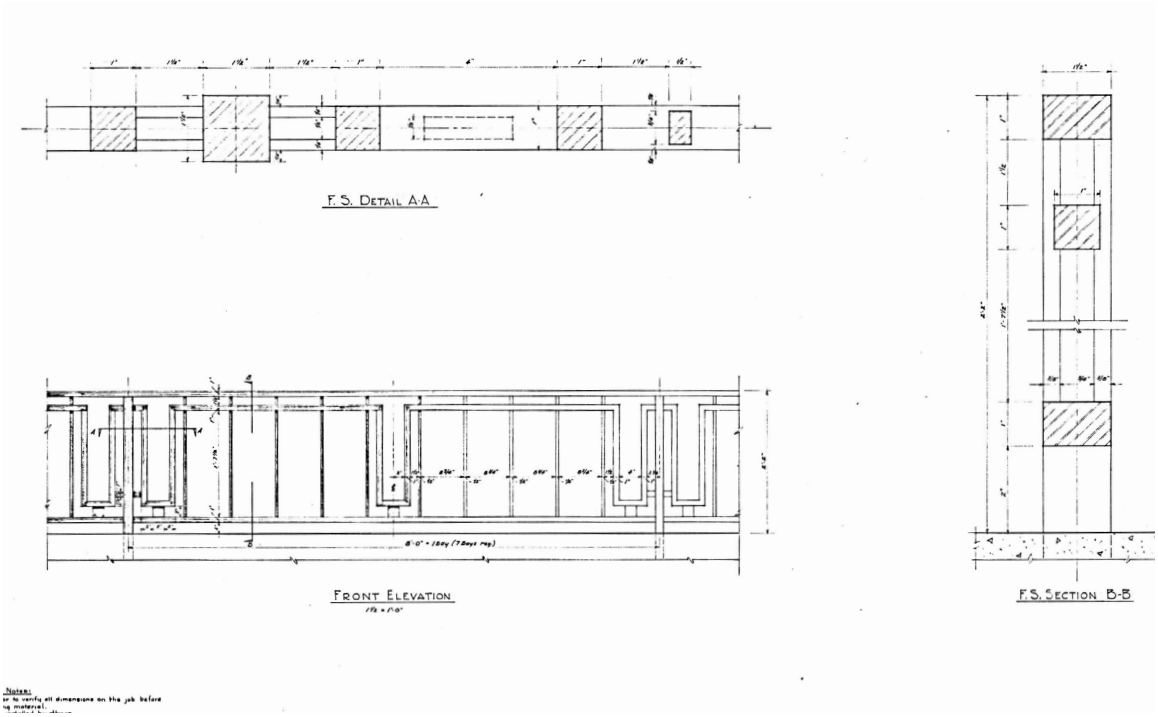


Figure 3-36. Railings were added to the orchestra pit in 1955. Source: NPS, ROCR, id104120, April 1, 1955.

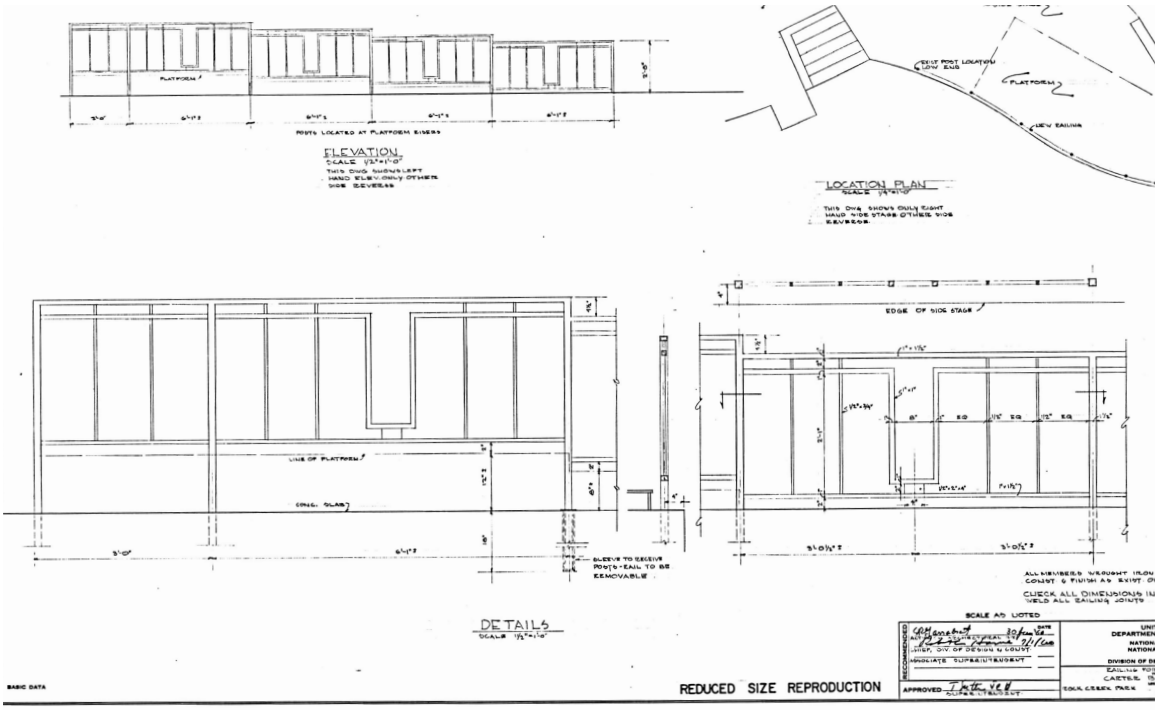


Figure 3-37. Railings were added along the edge of the stage wings after the 1960 summer season. Source: NPS, ROCR, id81221, July 1, 1960.

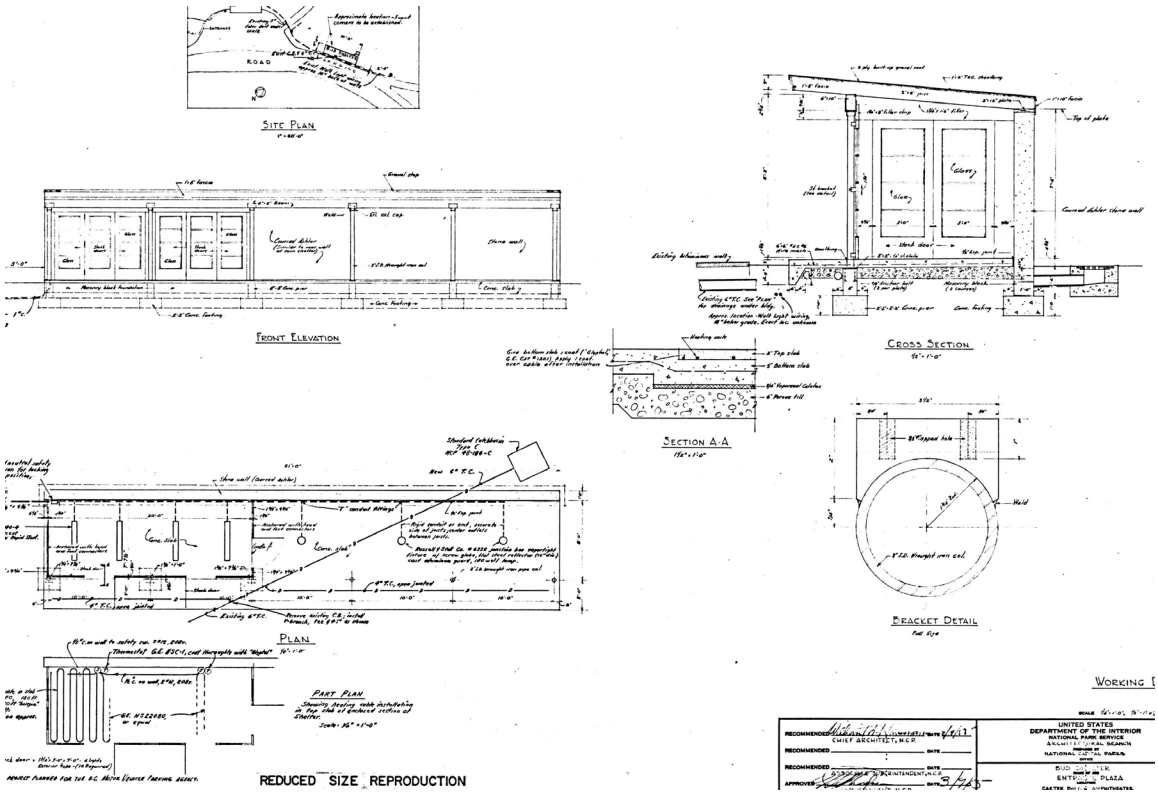


Figure 3-38. A bus shelter, as shown in these drawings, was constructed in 1955. Source: NPS, ROCR, id114893, March 1, 1955.

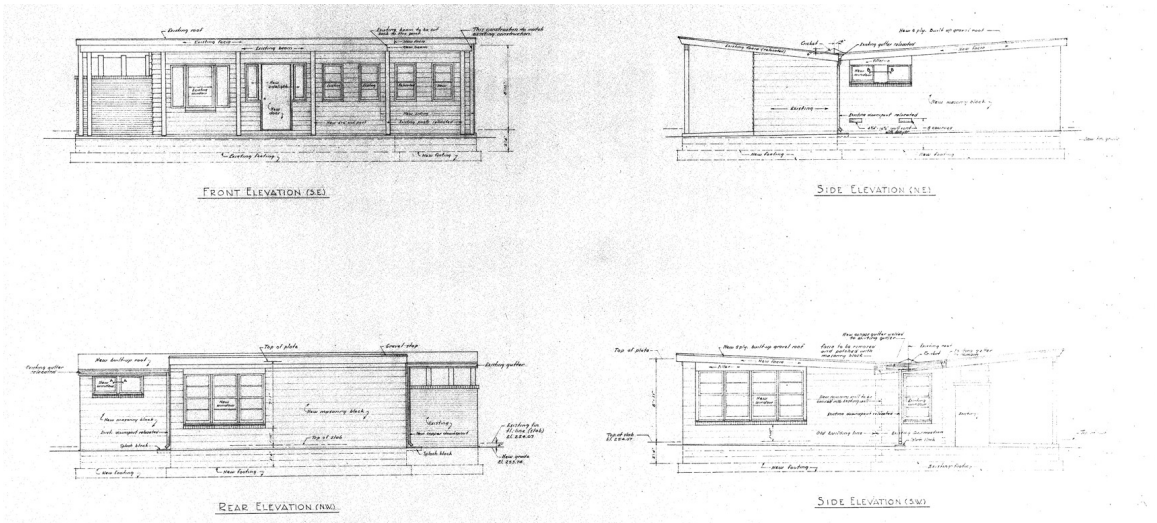


Figure 3-39. These elevations illustrate the additions. Source: NPS, ROCR, id111070, April 1, 1955.

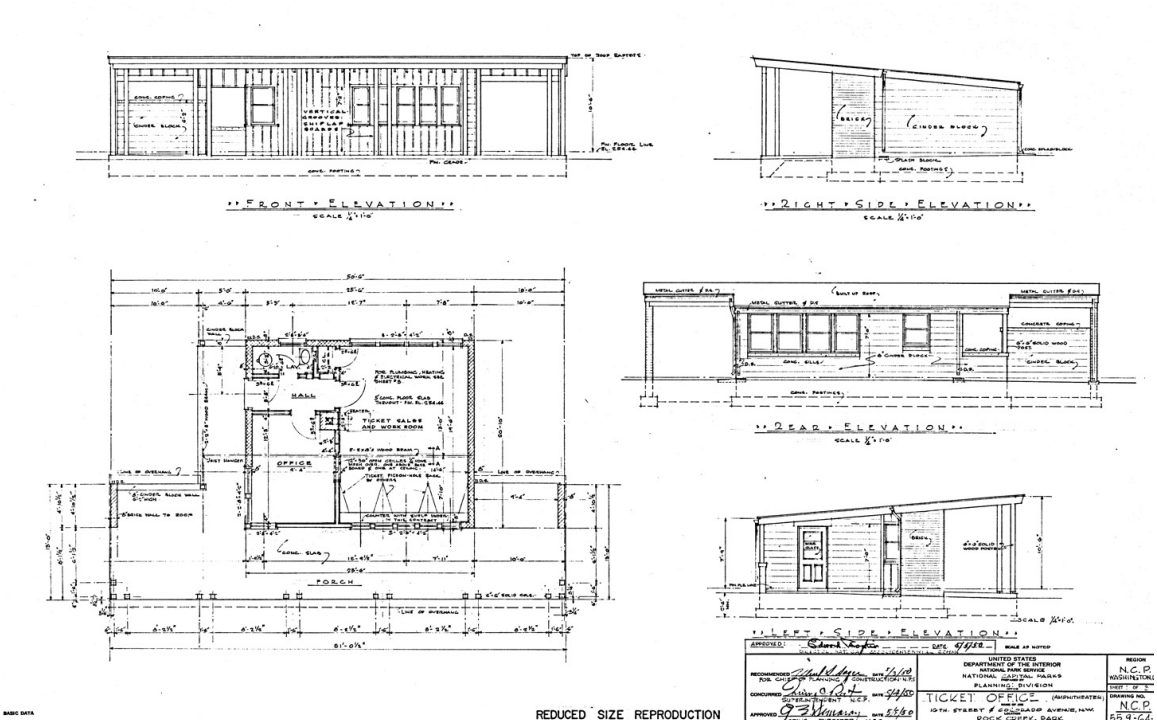


Figure 3-40. This drawing shows the box office's original design. Source: NPS, ROCR, id49801, May 1, 1950.

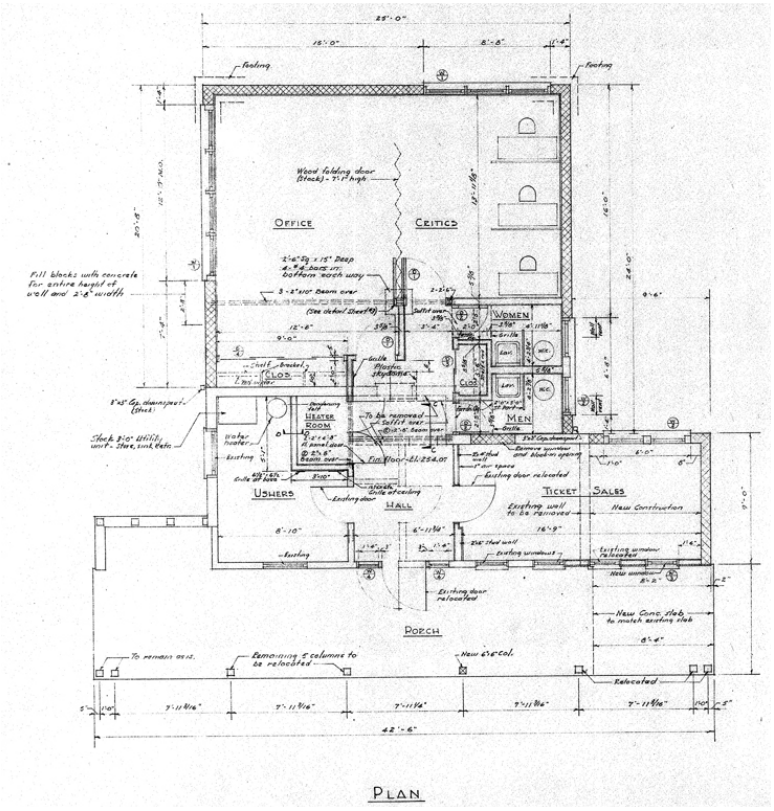


Figure 3-41. The box office was expanded in 1955 as shown in these plans. Source: NPS, ROCR, id111070, April 1, 1955.

The Amphitheater Struggles, 1960-1990

The future of Carter Barron Amphitheater was not only determined by its programming, but also by larger events and trends that shaped Washington, DC and its surroundings. Long before the Amphitheater's construction, the population of Washington, DC boomed. Its growth was due in large part to the New Deal expansion of the federal government in the 1930s and World War II in the 1940s. The city grew from 486,869 residents in 1930, to 663,091 residents in 1940, to 802,178 residents in 1950, of which 35% were African American. But the post-war era was also the start of enormous suburban expansion in greater Washington, DC, supported by government homeownership incentives. Many of the new suburban homes were not available to African Americans largely due to discriminatory lending policies. As a result, many of Washington, DC's white residents moved to Maryland or Virginia, while the majority of its black residents remained in the District. By 1960, the population of Washington, DC had dropped to 763,956 residents, half of which were African American. The total population continued to decline in the 1970s and 1980s, with African American residents accounting for 70% of the population.[67]

The audience for Carter Barron Amphitheater changed dramatically over the course of its first few decades, and with it came a shift in programming. According to Jacqueline Trescott of *The Washington Star,* music dominated the lineup throughout the 1960s, responding to the interests of the Amphitheater's audiences. Super Attractions ended showings of the ballet in 1969 because, according to the wife of Israel Feld, "Our audience was gone."[68] She went on to lament the shift in the lineup recalling that, "The whole Washington scene was changing... And our new patrons didn't want operettas and Broadway plays." By 1972, according to Tresscott, the Amphitheater had become "the summertime-palace of second-

67 "District of Columbia – Race and Hispanic Origin: 1800 to 1990," United States Census Bureau, https://web.archive.org/web/20080726045433/http://www.census.gov/population/www/documentation/twps0056/tab23.pdf.

68 Barry Mackintosh, *Rock Creek Park, An Administrative History,* 1985.

string soul."[69] The unfortunate subtext here was that the "downgrade" described in the press was attributable to patronage by African Americans.

Tensions surrounding race, housing, and economic conditions exploded in April of 1968 in response to the assassination of civil rights leader Martin Luther King, Jr. The resulting unrest destroyed large sections of the city over the course of four days. Thirteen people died, thousands were injured, and hundreds of buildings were lost.[70] The uprising was a seminal moment in Washington, DC's history, and has been cited as a turning point for the Amphitheater. In the context of Carter Barron Amphitheater's changing lineup, Feld reported that, "after the riots, people were afraid."[71] Looking back over twenty years later, *Historic Resource Study, Rock Creek Park*, a 1990 survey of Rock Creek Park's historic resources, concluded that "the riots of 1968 drastically curtailed white patronage of the theater and by the 1970s, Carter Barron had evolved into a concert stage, largely patronized by black teenagers."[72] A 1984 feasibility study commissioned by the Federal City Council and the National Capital Region assessed that the Amphitheater's "broadly-based middle-class audience abandoned it overnight; Carter Barron was perceived by its past audiences as no longer a 'safe place.'"[73]

Carter Barron Amphitheater was further challenged by new competition, also driven by the growth of Washington,

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69 Ibid.

70 "Civil Disturbances in Washington, DC: April 4-8, 1968, a Preliminary Damage Report," National Capital Planning Commission, May, 1968, https://books.google.com/books?id=wz56AAAAMAAJ&printsec=frontcover&dq=dc+riots+1968&hl=en&sa=X&ved=0ahUKEwjnqY2f7arYAhWim-AKHXmOAmAQ6AEIOTAD#v=onepage&q&f=false. Nation's Capital Still Recovering from 1968 Riots," *CNN*, April 4, 1998, http://www.cnn.com/US/9804/04/mlk.dc.riots/.

71 Barry Mackintosh, *Rock Creek Park, An Administrative History,* 1985.

72 William Bushong, *Historic Resources Study, Rock Creek Park, District of Columbia*, United States Department of the Interior, National Park Service, August 1990. p 148. https://www.nps.gov/parkhistory/online_books/rocr1/hrs.pdf

73 Michael Sheehan Associates, Inc., *Project: Carter Barron,* 1984.

DC suburbs. The Merriweather Post Pavilion, an outdoor amphitheater in Columbia, Maryland, located thirty miles north of Washington, opened in July 1967.[74] Four years later the Filene Center at Wolf Trap, another outdoor amphitheater, opened in Vienna, Virginia, fifteen miles west of Washington.[75] The Kennedy Center, an indoor performance center and memorial to John F. Kennedy, also opened in 1971.[76]

By the early 1970s, the National Park Service was struggling to keep Carter Barron Amphitheater open. After several years of low ticket sales, the Felds asked to be released from their long-term contract with NPS. In an effort to keep up attendance, and to keep the Felds on board, the National Park Service created a program that provided 5,600 free tickets to children from the District for summer programming, paid for as a $280,000 subsidy to Super Attractions. The program was repeated with a $212,000 subsidy in 1973.[77] Despite the low ticket sales, the National Park Service did not consider closing the facility to be a viable option. According a 1973 *Washington Post* article by Tom Zito,

> *One source noted National Park Service officials are sharply aware that Carter Barron has attracted an almost exclusively young black audience in the past two years. They were deeply concerned, the source said, about public reaction if they shut down the amphitheater while providing funds for suburban Wolf Trap which opened two years ago and draws mainly white audiences.*[78]

After struggling sales, Super Attractions declined the contract for the 1975 summer season. NCR hired Cellar Door Productions and Dimensions Unlimited, two of the area's largest rock concert promoters, to program the 1975 season. They returned to a varied program schedule, but the ticket subsidy program

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74 Wesley Case "50 Years of Merriweather," *The Baltimore Sun*, July 12, 2017. http://data.baltimoresun.com/features/merriweather/

75 "History," *Wolf Trap*, http://www.wolftrap.org/about/history.aspx.

76 "History of the Living Memorial," The Kennedy Center, http://www.kennedy-center.org/pages/about/history.

77 Michael Sheehan Associates, Inc., *Project: Carter Barron,* 1984.

78 Tom Zito, "The Cost of Keeping Carter Barron Open," *Washington Post*, August 31, 1973.

continued at roughly $130,000. Acts included popular music like Bruce Springsteen and Kool and Gang, regulars like the U.S. Navy Band, the National Symphony Orchestra, and theatrical productions from the Shakespeare Theatre Free For All Festival and the Black Repertory Company.[79] The range of acts was intended to increase audience numbers, but local media coverage reflected the racial dynamics underlying the decisions. In 1973 Tom Zito of *The Washington Post* noted that, "last year and the summer program (booked by Super Attractions) was restricted to music aimed specifically at a young, black audience."[80] After the change in programming, reporter Jacqueline Trescott of *The Washington Post*, wrote "the hordes of teenagers were back, but scattered among the visors and t-shirts were family groups, black and white couples in their 20s and 30s and a large number of women dressed in the latest fashions."[81]

The rock concert approach did not prove profitable either. Cellar Door and Dimensions reduced their contracts. In 1977 two local producers took over, also with little success.[82] By 1978, the National Park Service began to operate the Amphitheater itself.[83] The summer program continued to prove a challenge and in 1978 the season was reduced to a handful of performances with only one act in the entire month of July.[84]

In 1967 NPS replaced the on-stage speaker grilles, which had been built into the stage wing walls, with new grilles (**Figure 3-42 and Figure 3-43**). The limestone cladding on the inside edge of the wing walls was painted black to mask visible wear. By 1978, the National Park Service had made some additional small alterations to Carter Barron Amphitheater. A small, corrugated

79 Carter Barron History, National Park Service, https://www.nps.gov/rocr/planyourvisit/cbhistory.htm.

80 Tom Zito, "The Cost of Keeping Carter Barron Open," *Washington Post*, August 31, 1973.

81 Carter Barron History, National Park Service, https://www.nps.gov/rocr/planyourvisit/cbhistory.htm.

82 Michael Sheehan Associates, Inc., *Project: Carter Barron,* 1984.

83 Barry Mackintosh, *Rock Creek Park, An Administrative History,* 1985.

84 Charlie McCollum, "After a year off, it's concert time again at RFK," *The Washington Star.*

metal follow spot booth was added to the roof of the promenade (**Figure 3-44**). Windows on the original ground level control booths were replaced.[85] Sometime before 1991, the bus shelter serving the Amphitheater was also demolished.[86]

85 Comparing photograph by Abbie Rowe taken on May 24, 1965 in the Rock Creek Park files to a photograph taken by Photographer W. D. Clark in September 1978 from the MRCE, NCRO Photos, Series 1, Box 92.

86 National Register of Historic Places, *Rock Creek Park Historic District (Amended Nomination and Boundary Increase)*, drafted 2014.

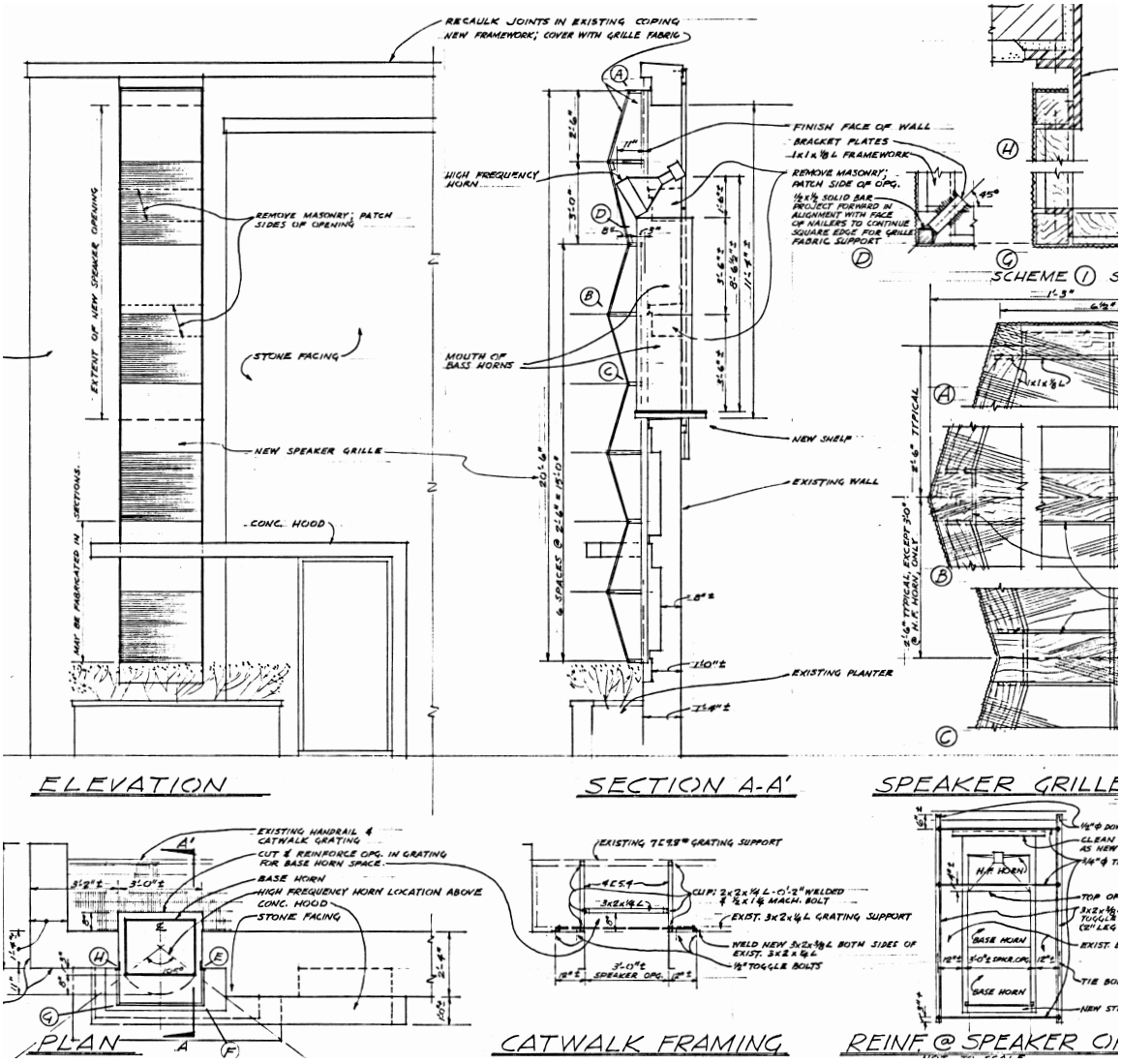


Figure 3-42. This elevation and section shows the replacement of the original speaker grilles and capstone dividers. Source: NPS, ROCR, id254125, May 1, 1967.

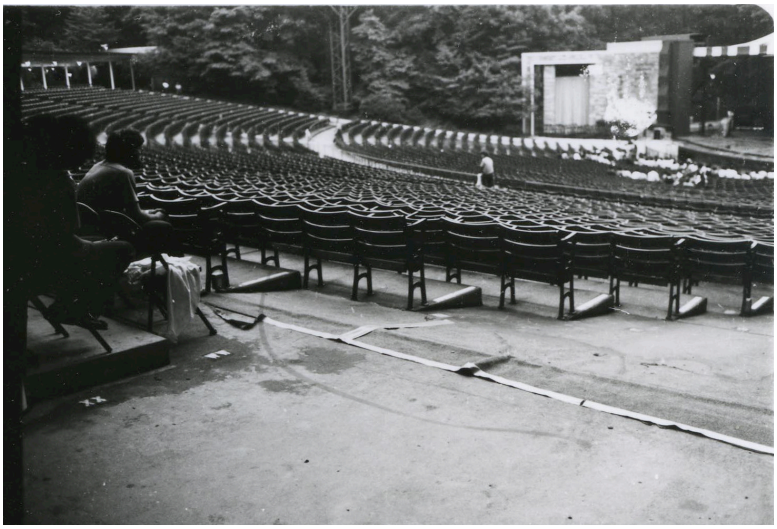


Figure 3-43. This photo shows the new speaker screens and curled carpeting along the aisle. Source: Photographer W. D. Clark, September 1978, MRCE, NCRO Photos, Series 1, Box 92.



Figure 3-44. This photo shows the Amphitheater seating and control booths. A spot booth was added to the roof above the southern control booth. The control booth windows were replaced sometime between 1965 and this photo in 1978. Source: Photographer W. D. Clark, September 1978, MRCE, NCRO Photos, Series 1, Box 92.

The Carter Barron Amphitheater continued to struggle through the 1980s and 1990s, so much so that a *Washington Post* drama critic described Carter Barron Amphitheater in 1984 as "now more celebrated as a parking lot."[87] The feasibility study from that same year, however, described a different picture:

> *Over the last three seasons (1981-1983) Carter Barron has quietly but effectively cultivated a noticeably supportive audience from the local black grass-roots community and neighborhoods – not just young people and teenagers either. This is a feat which hasn't been matched by any of the more established and visible theatres and concert halls of this city. The staff of Carter Barron is to be commended for this accomplishment.*

The study went on to outline the Amphitheater's "compromising public perceptions," which included assumptions that the Amphitheater was closed, inaccessible to easy transportation, and unsafe, an attribute which the report noted was unsupported by fact.[88]

The summer program remained somewhat limited. As of 1990, the *Historic Resource Study, Rock Creek Park*, a survey of Rock Creek Park's historic resources that preceded the National Park Service's National Register nomination, noted that "Carter-Barron theater's decline has not been reversed and its future is uncertain."[89] The following year, the Rock Creek Park Historic District was listed in the National Register of Historic Places with a period of significance from 1791 to 1941. The Carter Barron Amphitheater and its related buildings were identified as non-contributing resources.[90] The exclusion of the Amphitheater from historical status was the logical extension of the historic

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87 Barry Mackintosh, *Rock Creek Park, An Administrative History,* 1985.

88 Michael Sheehan Associates, Inc., *Project: Carter Barron,* 1984.

89 William Bushong, *Historic Resources Study, Rock Creek Park, District of Columbia*, United States Department of the Interior, National Park Service, August 1990. p 148. https://www.nps.gov/parkhistory/online_books/rocr1/hrs.pdf

90 National Register of Historic Places, *Rock Creek Park Historic District*, Multiple Property Documentation, National Register, 1991, p 28.

district's period of significance, which itself was dictated by the National Register's fifty-year rule, but its exclusion also reflected the degree to which the National Park Service saw sites older than Carter Barron Amphitheater as a greater priority for future investment.

The Amphitheater also suffered physically in this period. In addition to the typical wear and tear expected in an outdoor structure, a wind and rain storm knocked down two large trees in June 1989. One tree fell on a restroom and concession stand, rendering both unusable, and the other fell on the stage storage room directly behind the north wing wall. The tree left a ten-foot crack in its concrete block wall.[91] The restrooms and concession stands were renovated in the 1990s both for modernization and for accessibility needs. During this project the National Capital Region also repaired the promenade roof and updated electrical wiring.[92] The crack, which did not alter the primary functioning of the storage room, was not repaired.[93]

Renewed Investment in Carter Barron Amphitheater, 1991 to Present

The early 1990s marked a period of renewal for Carter Barron Amphitheater. In 1991, the Shakespeare Theatre, which became the Shakespeare Theatre Company in 2005, held its first season of the Shakespeare Theatre Free for All, a series of free performances at the Amphitheater. The program offered free community performances as well as transportation and tickets for thousands of public school students. The festival cast well known artists including Paul Winfield, Kelly McGillis, Sabrina Le Beauf, and Harry Hamlin. When the weather cooperated, the Shakespeare Theatre Free for All brought between 20 and 30 thousand patrons to the Carter Barron each year. The Shakespeare Theatre Free for All remained an anchor for Carter

91 "Rehabilitate Structural Defects Carter Barron," Development / Study Package Proposal, United States Department of the Interior, National Park Service, Package 204, Revision 5, June 23, 1992.

92 Carter Barron History, National Park Service, https://www.nps.gov/rocr/planyourvisit/cbhistory.htm.

93 Observation by Project Architect, Lucy Moore. The crack in the storage room wall was visible as of the November, 2017 survey.

Barron summers until 2009 when the Shakespeare Theatre Company moved its performances indoors to Sidney Harman Hall. The indoor facility was more predictable and comfortable for the performers.[94] (**Figure 3-45 - Figure 3-49**).

94 "Shakespeare Theatre Free for All," *Washington Post*, Washington, DC, June 7, 1996; "Shakespeare is Free for All," http://www.shakespearetheatre.org/watch-listen/shakespeare-is-free-for-all/; Conversation with National Park Service Staff Rita Gunther, April, 2018.



Figure 3-45. A performance of *The Merry Wives of Windsor* as part of the Shakespeare Theatre Free for All, covered by a three pole circus tent. Source: Jun 4-16, 1991, MRCE, NCRO Photos, Series 1, Box 92.



Figure 3-46. The Shakespeare Theatre Company put on *The Comedy of Errors* at Carter Barron in 1994. Source: Photographer Carol Pratt, Shakespeare Theatre Company, 1994.



Figure 3-47. A performance of *A Midsummer Nights Dream*, part of the Shakespeare Theatre Free for All series. Source: Shakespeare Theatre Company, 2005.



Figure 3-48. A performance of *A Midsummer Nights Dream*, part of the Shakespeare Theatre Free for All series. Source: Shakespeare Theatre Company, 2005.



Figure 3-49. A performance of *Love's Labor's Lost*, part of the Shakespeare Theatre Free for All series in 2007. Source: Shakespeare Theatre Company, 2007.

The National Symphony Orchestra was also a regular feature of the Carter Barron Amphitheater summer season including free NSO In Your Neighborhood performances. The NSO held its last performance at the Amphitheater in 2008. The financial crisis reduced corporate donor support for large free undertakings at the Amphitheater.[95]

Although local residents resisted the early seasons at Carter Barron Amphitheater, neighbors forty years later saw it as a resource worth supporting. In 1992, an organization called Friends of Carter Barron Foundation of the Performing Arts signed a Memorandum of Agreement with the National Park Service to facilitate their mission of preserving, repairing, maintaining, and interpreting the facility.[96] Friends of Carter Barron organized volunteer efforts and public outreach events on site throughout the 1990s. "It is critically important," wrote Regional Director of the National Capital Region Robert Stanton in a 1995 memo on operations and management,

> *that we continue to strengthen existing as well as forge new partnerships for the preservation of the amphitheatre and support of high quality and culturally diverse programs. The Friends of Carter Barron, the Shakespeare Theatre, the National Symphony Orchestra of the John F. Kennedy Center, the Washington Post, and various corporate sponsors are excellent examples of these partnerships."*[97]

The Friends of Carter Barron Memorandum of Agreement was terminated by the NPS in 2000.[98]

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95 Conversation with National Park Service Staff Rita Gunther, April, 2018.

96 Memorandum of Agreement between United States of America Department of the Interior, National Park Service and Friends of Carter Barron, June 25, 1992. In the ROCR files.

97 Robert Stanton, Memo "Guidelines for the operation and management of Carter Barron Amphitheater for FY95," May 16, 1995, MRCE, NCRO Photos, Series 1, Box 92..

98 Conversation with National Park Service Staff Rita Gunther, April, 2018.

National Capital Parks also renewed efforts to reinvest in maintenance and improvements. In July, 1992, an internal *Development/Study Package Proposal* outlined a range of conditions requiring extensive work including:

- Outdated and deteriorated electrical wiring and related systems.
- Inaccessible restrooms.
- Spalling concrete floors at the seating and entrances.
- Leaking roofs over the promenade and concessions stands.
- Peeling paint.

The study also again identified the need for a permanent cover over the center stage to protect performers during adverse weather. The study concluded that

> *The facility is being operated below standard. It is difficult to attract popular shows due to the poor facility. We want to increase the number and quality of programs for the amphitheater. Presently, we average 19 shows per season per year. If the facility does not improve, visitation will further decrease. The main reason for the present low visitation is the out dated and poor condition of the theater. The concrete deck area is hazardous to personnel and entertainers due to deterioration.*[99]

While the study comprehensively identified conditions in need of restoration or modernization, funding for the work was not immediately available. In 1993, the Shakespeare Theatre, in cooperation with the National Park Service, installed a truss and canvas roof system to provide temporary but structurally stable protection over the stage for their performances.[100] The curtain

99 "Rehabilitate Structural Defects Carter Barron," Development / Study Package Proposal, United States Department of the Interior, National Park Service, Package 204, Revision 5, June 23, 1992.

100 Carter Barron History, National Park Service, https://www.nps.gov/rocr/planyourvisit/cbhistory.htm.

tracks were retracted. The south boom was removed.[101] (**Figure 3-50**)

101 Conversation with National Park Service Staff Rita Gunther, December, 2017.



Figure 3-50. A 2014 structural report recommended the removal of the steel platforms, seen here behind the steel curtain track. They were removed shortly thereafter. Source: NPS Photo, 2014.

In 1995, Robert Stanton, the Regional Director for the National Capital Region, delegated management of the Amphitheater to the Rock Creek Park Superintendent. In doing so, Stanton outlined his goals for the resource in a memo stating,

> *I am committed to a multi-year program for the continued rehabilitation of the amphitheater. Accordingly, I have approved the allocation of $50,000 this fiscal year in order to correct safety and accessibility deficiencies, and improvement [sic] to dressing rooms. I also want you to initiate work on the under stage area, and to this end I've asked our Design staff to prepare the necessary plans and specifications. I expect to make a similar annual allocation, hopefully larger, over the next 5 years in order to bring the amphitheater to the highest preservation standards possible for its 50th anniversary in the year 2000.*[102]

He included in the memo a phased plan for annual work on the Amphitheater.

The public was also committed to seeing Carter Barron Amphitheater endure. In 1996 the National Park Service began preparing a comprehensive long term plan for Rock Creek Park. As part of the National Environmental Policy Act (NEPA) process, which requires an environmental review of federal work, the National Park Service outlined four Alternative Scenarios for future park management in a draft Environmental Impact Assessment. In the alternative called "Urban Wilderness," which emphasized natural landscape and vegetative growth over recreation space, several major recreation areas, including the Carter Barron Amphitheater, were identified for removal. During public review, the DC community strongly objected to the possibility of losing Carter Barron. The option was altered to remove reference to the Amphitheater in its final version.[103]

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102 Robert Stanton, Memo "Guidelines for the operation and management of Carter Barron Amphitheater for FY95," May 16, 1995, MRCE, NCRO Photos, Series 1, Box 92.

103 *Rock Creek Park Road System*. Historic American Engineering Record, HAER No DC-55. Washington, DC: Department of the Interior,

Rehabilitation efforts continued. In March 2000 the National Park Service supervised an Asbestos Containing Materials inspection.[104] From winter 2003 through early summer 2004, the National Park Service undertook a major rehabilitation project, supported by $1 million from the DC Sparkle fund.[105] The Amphitheater seats, concrete bowl, and concrete promenade floor were replaced. The new concrete aisles were designed with steps to improve circulation. The concrete floor also included accessible seating areas at the front, middle, and back of house, as well as a designated sound area with built-in cable troughs. During construction, drainage problems were discovered under the concrete bowl, and additional gravel was added to improve ground conditions. An accessible path was added on the south side of the Amphitheater connecting the promenade to the cross aisle. The lighting towers were also replaced (**Figure 3-51 - Figure 3-54**).[106]

National Park Service, 1996. http://www.loc.gov/pictures/item/dc0966/ p 156-159.

104 "Asbestos Inspection," a memo from William R. Ciancaglini, Custer Environmental, Inc., to Steve LeBel, Concessions Analyst, Agreement Coordinator, and Carter Barron Amphitheater Coordinator, National Park Service, March 31, 2000.

105 "Carter Barron Amphitheatre Closed for Repairs," https://www.nps.gov/rocr/planyourvisit/cbarron.htm.

106 Drawings by Gauthier Alvarado & Associates, Inc, "Rehabilitate Carter Barron Amphitheatre, Phase 1," United States Department of the Interior, National Park Service, National Capital Region Maintenance and Design; Rock Creek Park Carter Barron History, National Park Service, https://www.nps.gov/rocr/planyourvisit/cbhistory.htm.



Figure 3-51. The concrete seating bowl was demolished in 2003 and reconstructed. Source: NPS Photo, November 13, 2003.



Figure 3-52. The rehabilitation work included improving the drainage below the seating bowl. Source: NPS Photo, January 14, 2004.

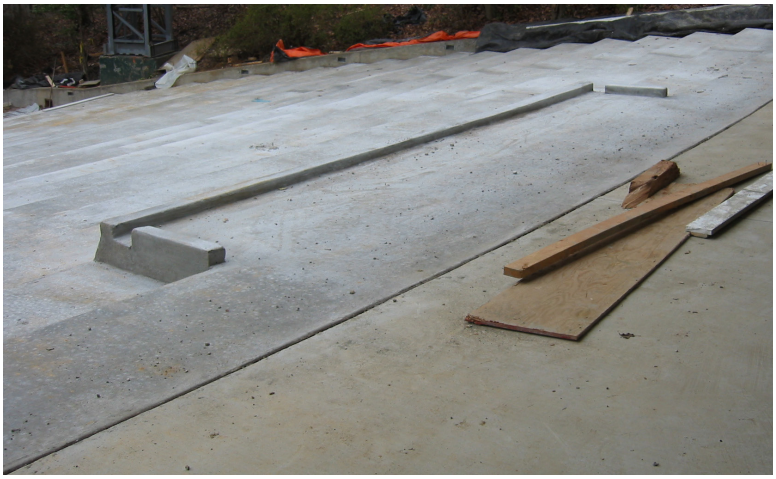


Figure 3-53. Accessible seating was integrated into the seating built in 2004. Source: NPS Photo, 2004.



Figure 3-54. Form work and reinforcing bars were placed before the concrete slab was poured in 2004. Source: NPS Photo, 2004.

In the spring of 2010, solar tubes were added to the box office, production office, and public restrooms with funding from the American Recovery & Reinvestment Act. [107]

In 2012, wind and rain from Hurricane Sandy knocked down trees on the Amphitheater site including one which damaged the stage level dressing rooms. The roof, gutters, and interior of dressing room 15 were repaired.[108]

Ten years later, in 2014, a draft amendment to the Rock Creek Park Historic District National Register listing was developed, which expanded the period of significance up to 1972. In this revision, Carter Barron Amphitheater and its related buildings were identified as contributing resources.[109]

That same year, structural engineers inspected the stage and wings, those areas not rehabilitated in the 2003-2004 project, for structural concerns. Their report concluded that:

- The concrete slab in south part of the stage was in poor condition. The slab at the front of the stage has visibly corroded reinforcing bar.
- The stage concrete exhibited some delamination.
- The motorized boom steel frame was corroded.
- The steel platforms behind the stage wings were in poor condition.
- The expansion joints in the stage need to be replaced. Expansion joints should be added to Concrete Masonry Unit (CMU) basement walls below the stage.
- The crack in the stage storage room wall should be repaired.[110]

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107 Conversation with National Park Service Staff Rita Gunther, April, 2017.

108 Ibid.

109 National Register of Historic Places, *Rock Creek Park Historic District (Amended Nomination and Boundary Increase)*, drafted 2014.

110 "Structural Assessment of Carter Barron Amphitheater, Condition Assessment Report" Projection Engineering Group, February, 2014.

In 2017 another study examined the recently added accessible path and the stage load. Regarding the accessible path, the study concluded that "both the running slope and cross slope are steeper than the maximum slopes as allowed, and therefore, do not comply with ABAAS," the Architectural Barriers Act Accessibility Standard. Regarding the stage, engineers concluded that the stage slab was subject to forces above its allowable design capacity under current code requirements. The engineers recommended that operations be suspended on the stage immediately.[111] The National Park Service decided to close Carter Barron Amphitheater for the 2017 summer season and began a process for further evaluation and repair. [112]

111 "Stage Load Assessment & Accessible Handrail Installation," Johnson, Mirmiran & Thompson, Inc., February 1, 2017.

112 Emily Linroth, "Carter Barron Amphitheatre Closed for 2017 Season, Amphitheatre Stage Can't Support Performance Weight, Needs Repairs," National Park Service, March 1, 2017. https://www.nps.gov/rocr/learn/news/carter-barron-amphitheatre-closed-for-2017-season-for-repairs.htm.

Summary Chronology

1866 Rock Creek Valley, including the area in which Carter Barron Amphitheater would later be constructed, was surveyed under the direction of the U.S. Senate as part of a search for viable nearby land for a new White House.

1890 Congress established Rock Creek Park and appropriated $1,200,000 for survey, appraisal, acquisition, and related costs.

1918 The Olmsted Brothers developed a plan for Rock Creek Park focusing on "the permanent preservation of its wonderful natural beauty, and the making of that beauty accessible to the people without spoiling the scenery in the process."

1943 Fredrick Law Olmsted, Jr. toured Rock Creek Park on June 3 and 4 with Harry Thompson, landscape architect and Chief of the Planning Division of the National Capital Parks of NPS. They reviewed Thompson's idea of a "sylvan theatre with permanent benches and stage." Olmsted agreed with the plan and proposed location in a "Division B" recreation area, which later became the site of the Carter Barron Amphitheater.

1944 A "Study for an Open Air Theater in Rock Creek Park" was completed in February. The design included a stage with small wings and a dressing room, a screen and equipment for movie projection, and bench seating for 1,400.

1947 July 18: Congress established the National Capital Sesquicentennial Commission with the mission "to provide for the appropriate commemoration of the one hundred and fiftieth anniversary of the establishment of the seat of the Federal Government in the District of Columbia in the year 1800." President Harry S. Truman appointed Carter Barron, friend and head of the Loew's theater chain in the Washington, DC region, to lead the commission

The commission adopted the plan for an amphitheater in Rock Creek Park and funded its design and construction through NPS.

1949 November 17: The Commission of Fine Arts approved preliminary drawings for the Sesquicentennial Amphitheater.

The Sesquicentennial Commission Executive Committee and a few members of the House and Senate also reviewed preliminary drawings.

December 17: Secretary of the Interior Oscar L. Chapman broke ground on the Amphitheater at a ceremony attended by members of the Sesquicentennial Commission, NPS, the Washington Board of Trade, federal agencies, and local civic groups.

1950 January 14: U.S. Commission of Fine Arts approved the completed architectural drawings.

March 7: The Executive Committee approved the completed architectural drawings and approved a $100,000 budget increase.

April: Construction was delayed by several weeks due to a dispute with the lowest bidding contractor for a substantial portion of work. The contractor was allowed to withdraw the bid. The Commission awarded the job to the second highest bidder at a $29,000 cost increase.

August 4: The Amphitheater opened with a production of *Faith of Our Fathers*, by Paul Green commissioned for the Sesquicentennial. President Harry S. Truman and his family were in attendance.

November 17: Carter Barron passed away at the age of 46.

December 2: *Faith of Our Fathers* was renewed for a second season at the Amphitheater.

1951 May 25: The Amphitheater was rededicated to Carter Barron on the opening night of the 1951 summer season. President Harry S. Truman gave remarks.

June 1: The second season of *Faith of Our Fathers* opened after a dramatic redesign intended to increase interest and ticket sales.

1952 July 1: The Sesquicentennial Commission disbanded, leaving the Amphitheater to National Capital Parks management.

The Amphitheater was first used for commercial productions with a short ballet performance orchestrated by Super Attractions.

1953 A curtain track was installed ahead of the 1953 season.

The first commercial production season was held at Carter Barron. Washington Festival, Inc. operated by local television celebrity Constance Bennett Coulter, won the contract for the 1953 summer season which included *Show Boat, Annie Get Your Gun,* and *Carousel.*

1954 Super Attractions, run by brothers Irvin and Israel Feld, began managing the theater's performance schedule in 1954, booking ballet, opera, popular musicals, and the National Symphony Orchestra.

1955 Renovations to the box office added two additions, one at the north of the front elevation and the other at the rear. Air conditioning was also added.

A bus shelter was added north of the ticket office. It was demolished sometime between 1991 and 2014.

Railings were added around the orchestra pit.

1956 The control box in the front row of seating was removed between 1955 and 1956.

1960 Raised platforms for seating were added to the stage wings along with temporary railings that were mounted to the face of stage wing walls.

Permanent railings, which followed the profile of the stepped floors, were mounted to the stage wings after the 1960 summer season.

1967 July: The Merriweather Pavilion, a competing outdoor amphitheater in Columbia, Maryland, opened.

Speaker grilles and cast stone were removed and replaced with a new speaker grille.

1968 April: Four days of unrest in Washington, DC followed the assassination of Martin Luther King, Jr.

1971 July: The Filene Center at Wolf Trap, a competing outdoor amphitheater in Vienna, Virginia, opened.

1970s The Feld Brothers added a three-pole circus tent to cover part of the stage.

1976 Cellar Door Productions and Dimensions Unlimited were hired as new management and scheduled acts including Kool and the Gang, Bruce Springsteen, the Shakespeare Theatre Free For All Festival, Richard Pryor, and the DC Black Repertory Company. At the end of the season, the National Park Service took over theater operations.

1978 The number of performances per summer season declined.

Small changes to the Amphitheater were made sometime between 1965 and 1978 including:

- An enclosed control booth on the promenade roof was added.
- The control booth windows were replaced.
- The limestone cladding on the wing walls was painted black.

1984 Michael Sheehan Associates, Inc. completed *Project: Carter Barron*, a feasibility study for the revitalization of Carter Barron Amphitheater sponsored by the Federal City Council and the National Capital Region. The report recommended that NPS target "popularly priced family entertainment in an accessible setting," as a goal for its revitalization with a focus on "middle-of-the-road music, country & western, jazz, and gospel."

1989 A storm brought down two large trees on Carter Barron buildings. One fell on a restroom and concession stand leaving them unsafe for use. The other fell on the stage storage building behind the south wing wall, leaving a 10-foot-long crack.

Plans for covered seating were explored but not constructed.

1991 Rock Creek Park Historic District was listed in the National Register of Historic Places with a period of significance from 1791 to 1941. The Carter Barron Amphitheater and related buildings were identified as non-contributing resources.

The Shakespeare Theatre began the Shakespeare Theatre Free for All, its long-running free performances at Carter Barron Amphitheater.

1990s NPS renovated the public restrooms, repaired the promenade roof, updated electrical work, and installed an accessible path from the main entrance walkway to the promenade.

1992 The backstage buildings were reroofed.[3]

Friends of Carter Barron Amphitheater and NPS signed a Memorandum of Agreement authorizing Friends of Carter Barron to help preserve, repair, maintain, and interpret the Amphitheater.

July: National Park Service staff prepared a "Development/ Study Package Proposal" for Carter Barron Amphitheater. The proposal stated that the "facility is being operated below standard. It is difficult to attract popular shows due to the poor facility." The report identified the following problems:

- The electrical wiring and related systems were outdated and deteriorating.
- The restrooms were not accessible.
- The concrete floor at the seating and promenade was spalling.
- The promenade and concession stand roof leaked,
- Paint was peeling.
- The stage needed a permanent cover for performers.

1993 The Shakespeare Theatre, in cooperation with NPS, installed a truss and canvas roof system for the stage. The curtain tracks were retracted. The south boom was removed.

1996 NPS prepared a comprehensive long-term general management plan for Rock Creek Park. As part of the NEPA process, NPS outlined four Alternative Scenarios including one "Urban Wilderness" option which called for the elimination of several major recreation areas and allowed for a more "natural" vegetation management policy. The first draft called for the removal of Carter Barron Amphitheater and nearby tennis courts, but was revised to retain both facilities.

1999 The promenade and concessions buildings were reroofed.

2000 An Asbestos Containing Materials (ACM) inspection was conducted. ACM was found in the green room, dressing rooms, the laundry room, shower and restrooms, the electrical room, and under the stage.

2001 A cost estimate for the "Rehabilitate Carter Barron Amphitheater" project was prepared. Work included electrical rewiring, accessibility improvements, office and under-stage improvements, and drainage improvements among others.

Canopy options to cover the stage were studied but not constructed.

2004 NPS oversaw the "Rehabilitate Carter Barron Amphitheater" project. The Amphitheater's concrete floor, concrete seating bowl, and seats were replaced. The new concrete bowl included stepped aisles, areas for accessible seating at the front, middle, and back of house, an area for sound equipment, and built in cable troughs. The overall layout remained the same. Drainage was improved with gutters and additional gravel below the concrete seating bowl. An accessible path was added between the promenade and the cross aisle. The lighting towers were replaced.

2008 The Shakespeare Theatre Company held its last Free for All at Carter Barron Amphitheater.

2014 The Rock Creek Park Historic District National Register listing was drafted. The period of significance was extended to 1972. Carter Barron Amphitheater and related buildings were identified as contributing resources.

February: "Structural Assessment of Carter Barron Amphitheater, Conditions Assessment Report" was conducted. Findings included:

- The concrete slab in south part of stage was in poor condition.
- The slab at the front of stage had visibly corroded reinforcing bar.
- There was some delamination of concrete on the stage.
- The motorized boom steel frame was corroded.
- The steel platforms behind the stage wings were in poor condition (subsequently removed).
- The expansion joints needed to be replaced.
- Expansion joints should be added to Concrete Masonry Unit (CMU) basement wall.
- The crack in stage storage building wall was in need of repair.

2017 Johnson, Mirmiran & Thompson, Inc completed a "Stage Load Assessment & Accessible Handrail Installation" report and drawing set. The report concluded that the stage slab was subject to forces above its allowable design capacity, based on current codes. The report also concluded that the accessible path added in 2004 did not comply with ABAAS as "both the running slope and cross slope are steeper than the maximum slopes as allowed."

Chronology of Alterations

Amphitheater

1949 December 17: Construction began.

1950 August 4: The Amphitheater opened.

1953 A **curtain track and boom** were installed before the 1953 season.

1955 **Railings** were added around the orchestra pit.

1956 The **control box** in the front row of seating was removed between 1955 and 1956.

1960 **Raised platforms for seating** were added to the stage wings along with temporary railings that were mounted to the face of the stage wing walls.

Permanent railings, which followed the profile of the stepped floors, were mounted to the stage wings after the 1960 summer season.

1965 - 1978 The following changes were made in this window of time.

- A **three-pole circus tent** was added to cover part of the stage. The tent was temporary but likely required structural anchors.
- An enclosed **sfollow spot booth** was added to the promenade roof.
- The **control booth windows** were replaced.
- The **speakers** on stage wing walls were removed and covered.
- The **limestone cladding** on the wing walls was painted black.

1967 **Speaker grilles and cast stone** were removed and replaced with a new speaker grille.

1989 A **restroom and concession stand** were damaged by a falling tree. A second tree fell on the **stage storage building** behind the south wing wall, leaving a 10-foot-long crack in the wall.

Early / Mid 1990s The following changes were made in this window of time.

- The **public restrooms** were renovated.
- The **promenade roof** was repaired.
- The **electrical work** was updated.
- An **accessible path** from the main entrance walkway to the promenade was installed.

1992 The **backstage buildings** were reroofed.

1993 The Shakespeare Theatre, in cooperation with NPS, installed a **truss and canvas roof system for the stage**. The roof system was temporary but required structural anchors.

2004 The Amphitheater underwent significant rehabilitation efforts.

- The Amphitheater's **concrete floor, concrete seating bowl, and seats** were replaced. The new concrete bowl included stepped aisles, areas for accessible seating at the front, middle, and back of house, an area for sound equipment, and built in cable troughs. The overall layout remained the same.
- **Drainage** was improved with gutters and additional gravel below the concrete seating bowl.
- An **accessible path** was added between the promenade and the cross aisle.
- The **lighting towers** were replaced.

Box Office

1955 Renovations to the box office added two additions, one at the north of the front elevation and the other at the rear. Air conditioning was also added.

1991 A bus shelter was added north of the ticket office. It was demolished around 1991.

Entrance

1951 May 25: Plaques were added to the entrance gate stone piers for the re-dedication to Carter Barron.

Statement of Significance

Carter Barron Amphitheater is significant as a pre-Mission 66 project whose design reflects the NPS transition in the 1950s from the rustic to the modern.

Carter Barron Amphitheater, its entrance gate, box office, and guard house are listed as contributing resources in the Rock Creek Park National Register Historic District amended nomination drafted in 2014. They were listed as non-contributing resources in the original 1991 National Register nomination. The original period of significance was from 1791 to 1941. It was extended to 1972 in the 2014 amended nomination draft. The Amphitheater and its related structures have not been individually evaluated for listing in the National Register of Historic Places.

Carter Barron Amphitheater is also listed in the Multiple Property Listing for Missions 66-Era Visitor Centers, Administration Buildings, and Public Use Areas in the National Capital Region of the National Park Service as a pre-Mission 66 project. According to the Mission 66 Multiple Property Listing, "The most substantial facility constructed in NCP after World War II but before Mission 66 was Carter Barron Amphitheater in Rock Creek Park" and it was "unprecedented in National Capital Parks at the time of its construction."[113]

Carter Barron Amphitheater

The Rock Creek Park National Register Historic District amended nomination identifies the Amphitheater as a contributing resource, and describes it as

> *represent(ing) a transition in NPS's architectural paradigm. The ashlar veneer recalled earlier National Park Service architecture and its use of traditional building materials. On the other hand, the amphitheater's*

113 National Register of Historic Places, Multiple Property Documentation Form, *Mission 66-Era Visitor Centers, Administration Buildings, and Public Use Areas in the National Capital Region of the National Park Service*, 2012.

> *poured concrete and concrete block construction and its lack of ornamentation reflects the Modern Movement.*
>
> *The amphitheater retains its integrity as it continues to reflect its historic period of construction. The location and setting of the amphitheater remains intact with minimal changes to the surrounding natural environment or site plan. Alterations to the structure include the addition of steps, replacement of seats, changes to the seating plan, replacement of the curtain track system, and improvements to the bathrooms. All of these changes, however, are typical of modernizations to entertainment venues. The amphitheater continues to be utilized for public performances, thereby retaining its integrity of feeling and association.*

The Amphitheater is architecturally significant and retains a high degree of integrity.

Box Office

The Rock Creek Park National Register Historic District amended nomination also identifies the box office as a contributing resource.

> *The one-story, concrete block ticket office has a rectangular plan with a rear ell. The standing-seam metal roof slopes gently upward toward the façade of the main block of the building. The rear ell features a similar shed roof, but its slope mirrors the main block, resulting in a V-shaped roof plan recalling influences of the Modern Movement. The ticket office has a full-width covered porch supported by square wood posts that functions to shelter patrons while interacting with ticket agents. The seven-bay façade (east elevation) features wood weatherboard siding. An offset single-leaf metal door with single-light sidelights is flanked by single-light wood windows pierced by a speak-through. The bottom rails of the windows are notched to allow for ticket transaction. Each window is delineated by pipe rails extending to the termination of the porch to facilitate the*

> *formation of orderly lines. On the remaining elevations, the concrete block walls are exposed. On the north elevation, fenestration consists of a single ticket window with a brick sill likely installed after the initial period of construction as evidenced by the infill of bricks.*
>
> *The ticket office has integrity of setting and location as it remains in its historic location and its relationship to the amphitheater and parking lots is intact. Alterations to the building have diminished its integrity of design, workmanship, and materials. The ticket office has been expanded to its north by approximately ten feet and a small, sympathetic addition has been constructed on its south elevation (rear). Changes to the façade include the removal and replacement of the original single-leaf door, ticket windows, and light fixtures. Further, the exposed rafters of the porch roof have been covered. A number of character-defining features, however, remain extant, including its shed roof of standing-seam metal, porch supported by square wood posts, and wood siding. These changes, however, are typical with modernizations to entertainment venues in order to provide the necessary level of service. Coupled with its continuous function as the ticket office for the amphitheater, the building retains its integrity of association and feeling.*

The box office also exhibits architectural features reflective of the modern movement. And, while significant changes have been made to the structure, the box office retains some degree of integrity in its location, use, and overall appearance.

Chapter 4: Conditions and Systems

Introduction

Organization

This chapter describes the existing architectural elements and their conditions in the order in which they would be experienced by a visitor moving from the box office, to the gate, to the Amphitheater, then stage, and backstage. All images in this chapter were taken by the consultant team in October and November 2017 unless otherwise noted.

Terminology

The box office is called both the “box office” and the “ticket office” in various sources. This report uses “box office” to be consistent with NPS terminology except when quoting sources. The promenade is called the “promenade,” the “rain shelter,” and the “concourse” in various sources. This report uses “promenade” except when quoting sources.

The Carter Barron Amphitheater stage faces east-southeast. For purposes of simplicity and brevity this report refers to the stage as facing east.

Assessment Criteria

The following condition assessment criteria are used to describe the condition of architectural elements. Definitions are based on the National Park Service’s *Resource Management Plan Guidelines*.[1]

Good
The structure and significant features are intact, structurally sound, and performing their intended purpose. There are no cosmetic imperfections. The structure and significant features need no repair or rehabilitation, and only routine or preventative maintenance.

1 *Preserving Historic Structures in the National Park System: A Report to the President,* U.S. Department of the Interior, National Park Service, October 3, 1997, http://npshistory.com/publications/habs-haer-hals/preserving-historic-structures.pdf.

Fair
The structure is in fair condition if either of the following conditions are present:

- there are early signs of wear, failure, or deterioration, though the structure and its features are generally structurally sound and performing their intended purpose; or,
- there is failure of a significant feature of the structure.

Poor
The structure is in poor condition if any of the following conditions are present:

- the significant features are no longer performing their intended purpose; or,
- significant features are missing; or
- deterioration or damage affects more than 25% of the structure; or,
- the structure or significant features show signs of imminent failure or breakdown.

Accessibility and Building Code

Carter Barron Amphitheater was constructed long before the passage of the Architectural Barriers Act (ABA) in 1968, which required federal facilities to be accessible to the public. The Amphitheater's original design was not fully accessible to all, but NPS has taken measures to improve accessibility through renovation and rehabilitation projects. Remaining accessibility concerns fall into three categories: those that impact access for the public, for performers, and for staff. In addition to accessibility issues Carter Barron Amphitheater also falls short of some building code requirements, such as toilet fixture counts.

Site Context

The Carter Barron Amphitheater and box office are located on the eastern edge of Rock Creek Park in Washington, DC. Rock Creek Park is in a wooded valley. The Amphitheater is sited in a natural bowl surrounded by trees, 480 yards west of 16th Street, NW, a prominent north-south thoroughfare in Washington, DC. The Amphitheater's location provides easy access from the city while still affording a sense of natural seclusion.

The approximately twenty acre site is located on the west side of Colorado Avenue, NW (**Figure 4-1**). The Amphitheater is located on the southern end of the site. The main parking lot for the Amphitheater is located to the north. A semi-circular drive is located between Colorado Avenue and the Amphitheater, and provides direct access to the box office and front gates from Colorado Avenue. The road once provided a bus drop off that is no longer in use. Gently sloped walkways lead from the parking lot to the box office. A second walkway leads from the box office, through the entrance gate and a small wooded area, and down to the Amphitheater promenade. The main walkway splits into three, each leading to a different entrance: one at the north, one in the center, and one at the south. An ABA accessible walkway also leads from the main pathway down to the north entrance. The walkways are paved with asphalt and lined with benches, waste receptacles, and street lights. A small access road leads from the southwest corner of the parking lot to a small staff parking lot and loading dock immediately north of the stage. (**Figure 4-2 - Figure 4-3**).

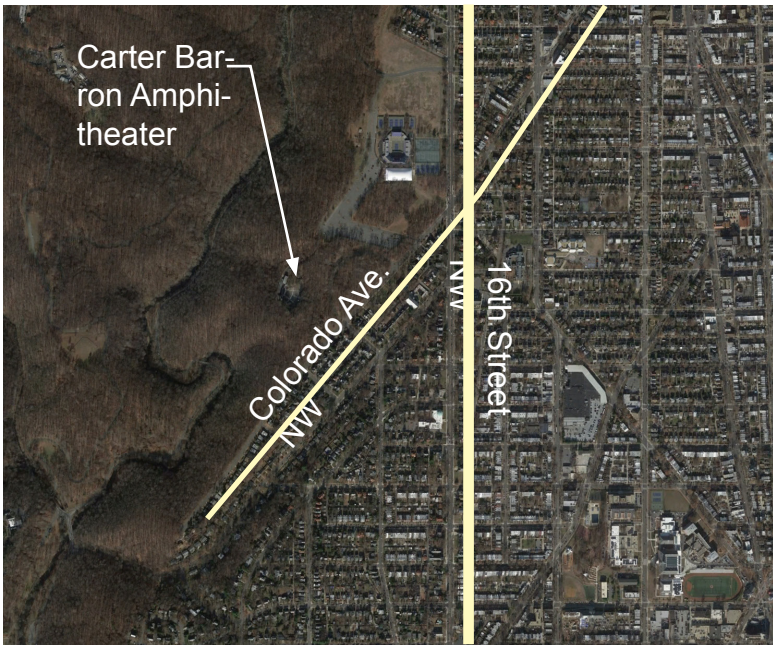


Figure 4-1. The Carter Barron Amphitheater and box office are located on the eastern edge of Rock Creek Park in Washington, DC. Source: "Carter Barron Amphitheater," 38°57'1.00" N and 77° 2'30.00"W. Google Earth. December 19, 2016. June 18, 2018.

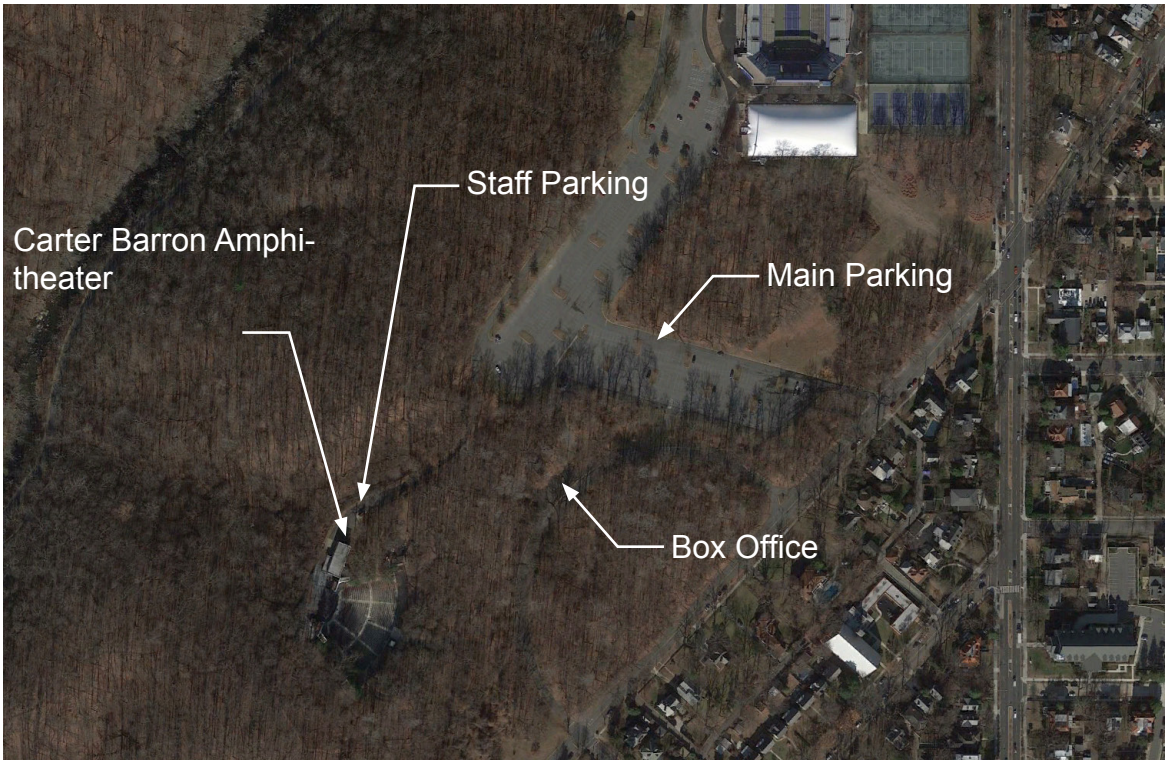


Figure 4-2. The main parking lot is located to the northeast of the Amphitheater. Additional staff parking is located immediately north of the stage. Source: "Carter Barron Amphitheater," 38°57'1.00" N and 77° 2'30.00"W. Google Earth. December 19, 2016. June 18, 2018.

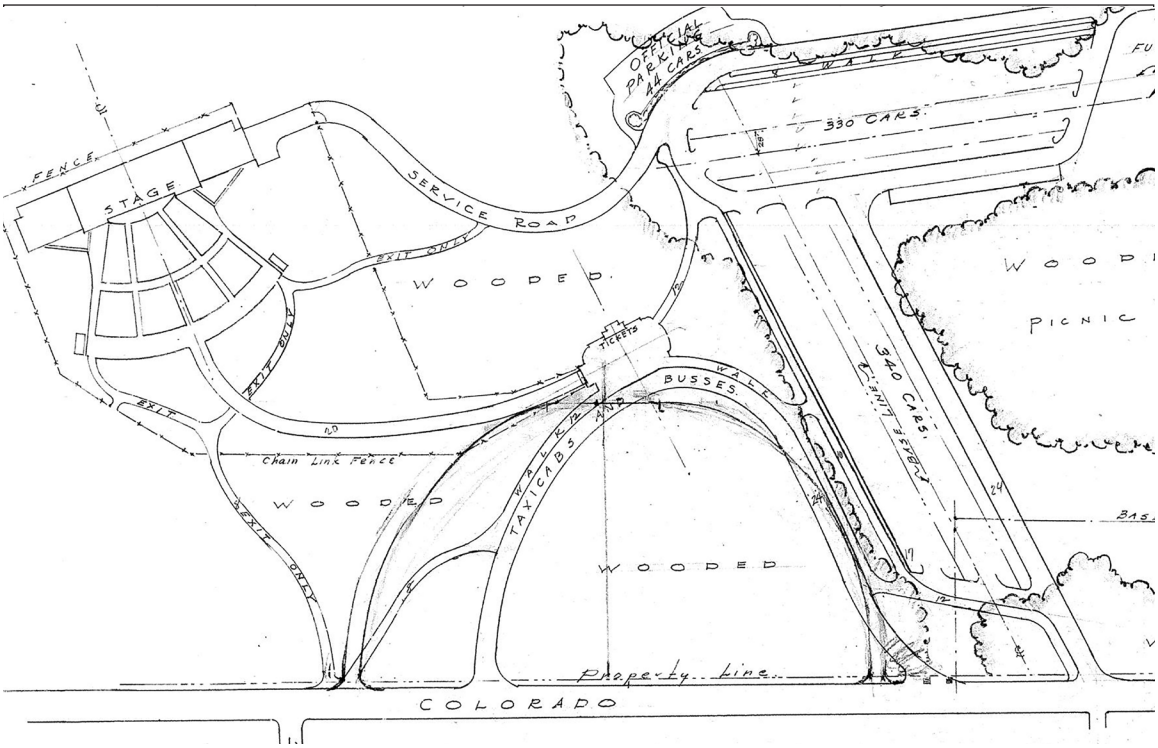


Figure 4-3. Site plan ca 1950. Source: ROCR, ca 1950.

Box Office

Site

The Carter Barron Amphitheater box office is oriented to the southeast and faces a wide, paved plaza, which serves as a waiting area between the parking lot and entrance gate. The plaza is bounded by woods to the north and west and by a small road that serves as a vehicular drop off area and served as a bus drop off. (**Figure 4-4**).



Figure 4-4. The box office is located on a paved plaza and oriented to face southeast.

Exterior

The box office is a small, one-story concrete block building with an L-shaped plan and an upward sloping, built-up membrane roof. Two additions were added to the original box office. One extended the front elevation roughly ten feet to the north. The second extends out from the back, giving the box office an L-shaped plan. The front addition continued the original roof line. The back addition was constructed with a similarly sloped roof, but sloped in the opposite direction, creating a V-shape at the seam. The box office roof extends out to create a full-width, covered porch. The roof is supported by wood posts. The original porch had exposed rafters and was constructed with a total of seven posts. The existing porch roof is finished on the underside and supported by eight posts. The original box office design blended rustic and modern styles, seen throughout the complex. The choice of materials, concrete block and wood post and beam, also reflect this hybrid design. The additions and alterations to the box office were in keeping with the original design intent.

Front Elevation: Southeast

The front, southeast elevation of the box office is composed of seven bays, six with windows, and one with a door and sidelights. All six windows serve as ticket windows, one of which is set lower than the others to provide an ABAAS compliant ticket counter. The elevation is finished with wood weatherboard siding. The original box office had five bays, four with windows and one with a door. Three of the four windows served as ticket windows and were smaller in proportion and spacing. A six-foot tall brick wall extends out from the south wall to enclose a small area. A phone booth with two doors once stood in the space enclosed by the brick wall. The phone booth has been removed. Metal railings divide the covered porch to create areas for lines at each ticket window. (**Figure 4-5 and Figure 4-6**).



Figure 4-5. Box office, southeast elevation.



Figure 4-6. Box office, east corner.

Side Elevation: Northeast

The northeast elevation is composed of two painted, concrete block walls. The front half of the elevation includes two bays, one open at the covered porch, the other with a single ticket window. The window is single pane with a brick sill. A downspout extends from the roof down the wall. The back wall is undisrupted with the exception of two hopper windows below the roof line. The windows are covered by metal screens. (**Figure 4-7 and Figure 4-8**).



Figure 4-7. Box office, northeast elevation. Peeling paint and biological growth are visible along the ground.



Figure 4-8. Box office, north corner.

Rear Elevation: Northwest

The rear, northwest elevation is composed of two painted, concrete block walls, one enclosing the front addition and the other enclosing the back. The front addition wall has a horizontal window with a brick sill that has been enclosed with metal plates. The back addition wall has three double hung windows grouped into one opening with a single brick sill. The windows are covered by metal screens. (**Figure 4-9 - Figure 4-10**).



Figure 4-9. Box office, northwest elevation.



Figure 4-10. Box office, west corner.

Side Elevation: Southwest

The southwest elevation is composed of a painted, concrete block wall, half original, and half part of the back addition. The addition wall has four double hung windows grouped into one opening with a single brick sill. The original wall has a double-hung window. The windows are covered by metal screens. A downspout serving the original roof runs down between the original and the addition walls. (**Figure 4-11 and Figure 4-12**).



Figure 4-11. Box office, southwest elevation.



Figure 4-12. Box office, south corner. Peeling paint can be seen on the wood roof fascia and posts.

Exterior Conditions

Overall the box office exterior appears to be in fair condition. The roof is in poor condition and nearing the end of its service life. The roof's metal flashing is bent and dented. Biological growth is present along the ground of the exterior walls. The metal plate enclosed window is deteriorating. The windows and door are generally in good condition. Utility boxes are unenclosed. The paint system has outlived its serviceable life and is in poor condition. This includes peeling, cracking, and blistering on the wood posts, concrete block walls, window and door frames, wood fascia, and metal railings.

Interior

The box office is entered through a single front door. The door leads into a small corridor that connects all box office rooms. The box office has two front rooms that serve as ticket offices, located north and south of the entrance corridor (**Figure 4-13**). The corridor also extends into the addition, back to a large, L-shaped office and lounge at the rear of the box office. Two small restrooms, a utility closet, and a mechanical closet are located off the corridor between the front and back offices. The front offices and corridor have gypsum board walls and ceilings. The back office has an acoustic tile ceiling. Two of the back office walls are also finished in acoustic tile. The other walls are wood paneled (**Figure 4-15**).

The box office interior is in fair condition with some elements in poor condition. An unfinished ceiling runs through the center of the corridor along the break between the original box office and its addition (**Figure 4-14**). A fire alarm with exposed wires hangs from the ceiling. The bathroom wall has a large hole (**Figure 4-16**). Ceiling tile in the back office is warped and missing. The walls are scuffed. Water staining is visible in the carpet inside the entrance door, and NPS staff indicated that roof leaking has been a problem in the past, likely due to the valley created by the angled roof planes. Wood door frames are deteriorated at the base.

The box office is ABA accessible to the public, but not to staff. The entrance door has a stepped threshold that renders the path inaccessible. The staff restrooms also do not meet ABAAS accessible design requirements including minimum widths and grab bars.



Figure 4-13. The front rooms of the box office.



Figure 4-14. A low, unfinished ceiling runs through the center of the entrance corridor. Water stains are visible in the carpet near the door.



Figure 4-15. Ceiling tiles in the back office are warped and missing.



Figure 4-16. A hole and deteriorated wall are visible on the interior of the bathroom.

Entrance

Gate

The entrance to Carter Barron Amphitheater is enclosed by a decorative cast iron gate set within stone veneer piers. Stone veneer walls curve out from the piers to form planters, each marked with a flag pole. The gate was cast in a symmetrical geometric pattern (**Figure 4-17 and Figure 4-18**).

Each gate bears a gold painted sesquicentennial medallion. The medallions depict the Statue of Freedom, the female statue atop the U.S. Capitol who holds a sword in one hand and laurel wreath in the other. The statue is surrounded with the words "National Capital Sesquicentennial" and "1800 Washington 1950." Each pier bears a plaque. The plaque on the south pier states that Carter Barron Amphitheater is "dedicated to the proposition that all men are created equal," recognizes Oscar L. Chapman as the Secretary of the Interior during the Amphitheater's construction, credits National Capital Parks Superintendent Edward J. Kelly and the National Capital Sesquicentennial Commission with its construction, and is dated 1950. The plaque on the north pier rededicates the Amphitheater, under the authority of President Truman, in the name of Carter Barron. The plaque hails Carter Barron as,

> *Showman, good citizen, gracious gentleman. He spent his talents in service to others. Asking nothing, he received in return the blessing of their esteem. Applause in this theater for acts well done is an echo of the life we here commemorate.*

The plaque was erected by the Variety Club, Tent Number 11 and dated May 25, 1951. **(Figure 4-19 and Figure 4-20)**.

Seven metal railings divide the entrance path into six lines. Each railing is composed of four horizontal and three vertical bars. The center four lines lead to metal turnstiles, which are mounted on the railings.

The entrance gates are in fair condition. They have peeling paint and extensive rust. The rust does not appear to have deteriorated the cast iron below the surface and the gate remains

operable (**Figure 4-21**). The stone veneer is in good condition and shows minimal deterioration. A few small spalls in the stone are visible, but it is not a widespread condition (**Figure 4-24**). Light biological growth is visible particularly around the plaques. Copper staining is visible on the stones surrounding the plaque on the north pier (**Figure 4-20**). The stone mortar is in fair condition. Cracks are visible in the mortar as is efflorescence. Some prior mortar patches have failed. Mortar is also missing from sky-facing joints. (**Figure 4-22 and Figure 4-23**). The gold paint on the sesquicentennial medallions is peeling and they have biological growth (**Figure 4-19**). The entrance railings have some peeling paint but are in good condition. Biological growth is visible on the asphalt paving. The turnstiles remain operable and in good condition, with some areas of peeling paint. (**Figure 4-25 and Figure 4-26**).



Figure 4-17. Entrance gate as seen from the plaza in front of the box office.



Figure 4-18. Entrance gate as seen from the path leading to the Amphitheater.



Figure 4-19. Peeling paint and biological growth can be seen on this sesquicentennial medallion.



Figure 4-20. The plaques on the north (right) and south (left) piers are in good condition. Biological growth (green) and ferrous staining (blue) are visible on the stone veneer below the plaque.



Figure 4-21. The cast iron gate has peeling paint and extensive rust.



Figure 4-22. Mortar has been patched and failed in this location. Biological growth has accumulated around the edges of the mortar, which was applied over the face of the stone. The sky-facing joint is open.



Figure 4-23. Mortar is missing from the sky-facing joints. The stone is in good condition.



Figure 4-24. This mortar crack in the stone veneer has caused a small spall in the stone.



Figure 4-25. The entrance railings have peeling paint but are in good condition otherwise. Biological growth is visible on the asphalt paving.



Figure 4-26. The turnstiles remain operable and in fair condition. They have some areas of peeling paint.

Walkways and Circulation

Gently sloped walkways lead from the box office, through the entrance gate and a small wooded area, and down to the Amphitheater promenade. The main walkway splits into three, each leading to a different entrance: one at the north, one in the center, and one at the south. The walkways are paved with asphalt and lined with benches, waste receptacles, street lights, and picnic tables. A low, split rail fence lines limited portions of the walkway. The walkway location and relationship to the surrounding forest illustrates the integral role of nature in the Amphitheater's design. The walkways respond to the forest, winding between large trees. The surrounding vegetation is maintained, but allowed to grow naturally as other forest areas in Rock Creek Park. (**Figure 4-27 - Figure 4-34**).



Figure 4-27. This view shows the walkway leading from the entrance gate to the Amphitheater looking southwest.



Figure 4-28. This view shows a fork in the walkway leading from the entrance gate to the Amphitheater looking southwest.



Figure 4-29. This view shows the walkway leading down to the Amphitheater's main entrance, centered on the stage.



Figure 4-30. This view shows the walkway leading down to the Amphitheater's north entrance.



Figure 4-31. This view shows the walkway leading down to the Amphitheater's south entrance.



Figure 4-32. This view shows the walkway leading up from the Amphitheater's south entrance. Note the damaged fence.



Figure 4-33. The main path provides a glimpse of the Amphitheater's low roof.



Figure 4-34. Wood stairs lead up from the paved walkway to a picnic table. Biological growth is visible along the edge of the walkway.

An added ABAAS compliant walkway leads from the main pathway down to the north entrance. It is lined with metal railings (**Figure 4-35**).

A sesquicentennial dedication marker is located at the first fork in the walkways. The marker is a metal plaque set in granite block. The marker states that the Amphitheater is dedicated to "the faith of free men everywhere," and recognizes President Truman and the members of the House and Senate who supported the commission (**Figure 4-36**).

The walkways are in fair condition. Some biological growth is visible on the asphalt paving. Some wood fencing is missing

and deteriorated. Paint is peeling along the metal railings. The sesquicentennial dedication marker is in good condition. It has light biological growth on both the metal plaque and stone. NPS Rock Creek Park Staff have reported drainage issues in the location where the ABAAS compliant walkways meets the promenade at the north entrance.[2]

The paths from the main parking lot to the box office appear to meet ABAAS requirements. The original paths from the box office to the Amphitheater do not appear to meet ABAAS requirements. An ABA accessible route is provided from the box office to the north entrance via a non-original path. This path appears ABAAS-compliant.

2 Conversation with National Park Service Staff Rita Gunther, November 2017.



Figure 4-35. An accessible walkway leads from the main pathway down to the north entrance, via this switchback.



Figure 4-36. This plaque marks the first dedication of the Amphitheater in honor of the Sesquicentennial.

Amphitheater

General

The Carter Barron Amphitheater is composed of a concrete bowl and permanent seating. A covered promenade runs behind the back row of seats. Two small control booths flank the center aisle and frame the Amphitheater main center entrance. Concession stands and restrooms are located at both ends of the promenade. The Amphitheater design is symmetrical about the center axis. Both the overall form and the material choice reflect the mix of modern and rustic architecture that informed the design. The Amphitheater is surrounded by tall trees, an effort to convey the sense that the Amphitheater was seated within a wood forest. By contrast, the promenade roof reads as strong, clean horizontal line, a man-made break in an otherwise natural view.

Main (Center) Entrance

The main walkway from the entrance gates to the Amphitheater curves down a gradual hill to the Amphitheater's primary entrance, which is aligned with the Amphitheater's center axis. The approach allows the visitor to catch a glimpse of the promenade, which first appears as a small structure in the woods, before taking in the full view of the Amphitheater with its the modern style stage and the tree line beyond. The entranceway is framed by a low, stone veneer wall, which emerges from the hillside, then turns at the promenade to form the back wall. (**Figure 4-37 - Figure 4-39**).



Figure 4-37. The entrance wall emerges from the hillside as the path slopes down to meet the Amphitheater's promenade walkway.



Figure 4-38. The promenade shelter is a simple post and beam construction with a modern style flat roof.



Figure 4-39. The main entrance provides a view of the stage and wing wall with the natural tree line behind.

The entrance way stone veneer walls are in fair condition with some signs of wear. The mortar is cracking which, in limited locations, has displaced stone. There are some ferrous materials, hardware inserted to hold objects no longer in place, embedded in the stone. Biological growth is visible. (**Figure 4-40 - Figure 4-43**).

The entranceway does not appear to meet ABAAS slope requirements. However, an ABAAS compliant path is provided to the north entrance of the promenade.



Figure 4-40. Mortar cracking has displaced stone in a limited number of locations.



Figure 4-41. Biological growth is visible on the stone veneer.



Figure 4-42. Ferrous materials are embedded in some locations on the stone veneer walls.



Figure 4-43. Mortar cracks are visible in the stone veneer, including in sky-facing joints, which are directly exposed to water penetration.

Promenade

The Amphitheater has a promenade that runs the length of the seating behind the back row. It is composed of twenty three bays, symmetrical about the center line of the Amphitheater. A wood framed shed roof, sloped away from the seating, spans from a series of stone veneer piers to a row of thin metal columns. The roof rafters are reinforced with thin metal trusses. The promenade has a built-up membrane roof. The roof is anchored to the stone veneer piers by metal plates. The roof extends the entire length of the promenade with the exception of the center bay, which is open to the sky and provides a full view of the stage and forest beyond. Stage lights are mounted along the roof's western edge. A follow spot booth was built on top of the north end of the south roof. Both roofs can be accessed by a short metal ladder. A metal truss anchored by concrete curbs spans the opening in the promenade roof. A gutter runs along the eastern edge of the roof and feeds down below grade. The roof line seamlessly extends over the control booths, which frame the entrance at the center, and over the concession stands and restrooms, to create a clean, low horizontal line. A stone veneer wall runs between the piers the length of the promenade, with openings for entrances at the center, north, and south. The stone veneer wall serves as a retaining wall for the wooded hillside behind. Drainage openings are visible in the stone wall at each bay, but the water collection points are not. The metal poles are evenly spaced to align with the stone piers. Their minimal profile

provides maximum views of the stage. The promenade roof extends out past the columns creating a clean read of the roof as a single sloped plane. The promenade floor is poured concrete, and was replaced in 2004. The single plane roof and the low, open promenade reflect the influence of the modern movement, while the stone veneer wall and the surrounding forest illustrate the design's connection to the natural world. (**Figure 4-44 - Figure 4-45**).



Figure 4-44. The promenade lines the back of the seating.



Figure 4-45. This view shows the west face of the southern half of the promenade. Biological growth is visible on the wood beam supporting the roof rafters.

The promenade is in fair condition. It shows the wear expected on materials exposed to the elements. The roof is worn and has been patched over time. Documentation indicates that the roof was last replaced in 1999, suggesting that it is at the end of its service life. The wood roof structure is in fair condition with peeling paint and areas of biological growth. The metal plates anchoring the roof to the stone piers are rusting. In some places the rust has caused cracks and spalls in the concrete. (**Figure 4-46 - Figure 4-50**).



Figure 4-46. The paint on the roof's wood structure is peeling throughout.



Figure 4-47. The paint on the roof's wood structure is peeling throughout.



Figure 4-48. The metal plates anchoring the promenade roof to the stone piers are rusting. In some places the rust has caused cracks and spalls in the concrete.



Figure 4-49. The roof is finished with a rolled asphalt membrane. Stage lights are mounted along the roof's western edge.



Figure 4-50. A metal truss anchored by concrete curbs spans the opening in the promenade roof. The truss was used to run cables from one side to the other, over the main entrance.

The ladders to access the roof have peeling paint and rust. The gutter is bent and dented. The metal poles have peeling paint and rust. In some locations, concrete at the base of the poles is cracked (**Figure 4-51**). The stone veneer walls are in good condition with some signs of wear including consistent biological growth. The mortar is cracking which, in limited locations, has displaced stone. In some locations mortar is missing, in others mortar patches have failed. There are some stone spalls throughout the stone veneer although it is not a common condition. There are some ferrous materials embedded in the stone. Water staining in the concrete floor is visible at locations where drainage openings have been set within the wall (**Figure 4-52 - Figure 4-54**). The follow spot booth on the roof is in fair condition with some signs of wear (**Figure 4-55**).

The promenade is ABA accessible to the public but the follow spot booth and roof lighting is not accessible to staff. The roof ladders do not provide a code compliant means of access.



Figure 4-51. Concrete at the base of the metal poles is cracked. Typical.



Figure 4-52. Water staining in the concrete floor is visible at locations where drainage openings have been set within the wall.



Figure 4-53. The stone veneer walls are in good condition with some signs of wear including consistent biological growth.



Figure 4-54. There are some stone spalls throughout the stone veneer although it is not a common condition.



Figure 4-55. A follow spot booth was built on top of the north end of the south roof. Both roofs can be accessed by a short metal ladder. A gutter runs along the eastern edge of the roof and feeds down below grade.

Control Booths

Two control booths line the entrance to the Amphitheater at the promenade. They were designed so as to continue the expression of the promenade. The original design proportioned the booths so that the back and side wall fit just within the bay as related to the regular spacing of the metal poles. The north control booth retains its original footprint. The south booth has been altered to extend a few feet to the west. The addition is at grade and constructed with materials matching the original booth. The addition has an unglazed window that opens to the promenade. Each booth is entered through a door on the side wall opposite the entrance path and has windows that overlook the seating and stage. The original windows have been replaced. The booths are finished with vertical board and batten wood siding. (**Figure 4-56 - Figure 4-62**).



Figure 4-56. The south control booth has been extended to the west.



Figure 4-57. The south control booth addition is at grade and constructed with materials matching the original booth.



Figure 4-58. The south control booth addition has an unglazed window that opens to the promenade. A display case has been mounted over the window.





Figure 4-59. The interior of the south addition is minimally finished. The exterior matches the original, but variations in the floor level and siding are visible.



Figure 4-60. North control booth.



Figure 4-61. Each control booth is entered through a door on the side wall opposite the entrance path, three steps up from the promenade floor.





Figure 4-62. The north control booth retains its original plan interior.

The control booths are in fair condition overall. Peeling paint is visible on both the wood siding and concrete foundation. The concrete corners have chipped. The exterior wood window frames have deteriorated at the corners. Biological growth, peeling paint, and soft wood are visible on the wood siding of the south booth addition along the ground plane. (**Figure 4-63 - Figure 4-65**).

The raised control booths are entered via a small set of stairs and are therefore not ABAAS compliant.



Figure 4-63. The concrete corners of the control booth foundations are chipped.



Figure 4-64. The exterior wood window frames are deteriorated at the corners



Figure 4-65. Biological growth, peeling paint, and soft wood are visible on the wood siding of the south booth addition along the ground plane.

Concessions & Restrooms

Carter Barron Amphitheater has two concession stands and restroom areas, one at each end of the promenade. They are small concrete block structures organized in a “T” shape plan. These two enclosed structures form book ends to the promenade. The concession stands face the promenade, behind which the restrooms extend symmetrically, forming the top of the “T”. The concession stands are open to the public through windows along the wall facing the promenade, and accessed by staff through a door between the restrooms at the back. The window walls are proportioned to fit exactly within the promenade profile. Each stand has four windows, covered by rolling metal gates. The windows open onto a wood counter. The wall above and below the concession windows, as well as the short side walls of the concession stand, are finished with vertical wood siding. A low, concrete block wall extends out from the counter along the western edge creating a barrier between the concession area and the path that leads to the restrooms. The stone veneer walls serve that purpose on the eastern edge. A concrete block wall extends up past the roof and out past the walls of the concession stand, appearing as a cap to the end of the promenade. A modernist gesture, the wall reads as a single plane and blocks the view of the restrooms. The restroom walls, east and west, are identical. Four casement windows are aligned in one opening and centered on the wall. The back wall serves the restrooms and the concession stand. The center door

accesses the concession stand and the outer doors access the restrooms. The three entrances are visually blocked from one another by a concrete block wall and wood fence. The restrooms are reached by small concrete walkways that lead out and around from the promenade. A water fountain is located along each path. The concession areas have their own loading areas. (**Figure 4-66 - Figure 4-70**).



Figure 4-66. The north concession window wall.



Figure 4-67. The north concession back wall. This door leads to a corridor between the restrooms and up to the concessions windows.



Figure 4-68. The south concession window wall.



Figure 4-69. A concrete block wall extends past the roof and walls of the south concession stand. The wall reads as a single plane and blocks the view of the restrooms. Wood siding over the concession windows has visible biological growth.



Figure 4-70. East elevation at the north concession stand.

The bathrooms were replaced with modernized, ABAAS compliant restrooms in the 1990s. There are no original finishes or fixtures. The concession stands do not appear to be renovated. They are simple, utilitarian spaces with painted walls and a painted concrete floor. The stone veneer walls off the promenade extend into the concession stands to form the lower half of the north walls. The rusticated stone has been left unpainted. (**Figure 4-71 - Figure 4-72**).



Figure 4-71. Women's north restroom.



Figure 4-72. The interior of the concession stand corridor.

Overall, the concession stands and restrooms are in fair condition. The wood siding has visible biological growth. The concrete block walls have significant cracks along the mortar lines, and peeling paint that appears to be caused by water moving through the wall system. Biological growth is visible along the ground plane of the concrete block walls. The restroom interiors are in fair condition overall. Water damage and water damage repairs are visible in the ceiling. The concession stand interiors are in poor condition. Pipes and wires are exposed and electrical panels are uncovered. The finishes applied to the concrete floor are peeling. The walls have some biological growth around sink areas. (**Figure 4-73 - Figure 4-75**).



Figure 4-73. Biological growth is visible along the ground plane of the restroom concrete block walls.





Figure 4-74. Cracking is visible between the window opening and corner on restroom walls on the north (left) and south (right) structures.



Figure 4-75. The concrete block retaining wall along the north restroom is deteriorated.

The restrooms are ABAAS compliant, but their limited number does not adequately serve an audience of 4,000 under current plumbing code. The Amphitheater has a total of ten women's toilets, ten women's sinks, four men's toilets, six urinals, and six men's sinks. The concession stands are ABAAS compliant for the public but not to staff. An ABAAS compliant counter has been added to both the north and south concession stands for visitor access (**Figure 4-76**). The concession stand interiors have ABAAS-compliant clearances when no additional table, furniture, or appliance is placed within the counter service area. The service counter is higher than the maximum counter height allowable by ABA. The entrance on the counter side is narrower than the minimum doorway allowable by ABA.



Figure 4-76. An ABAAS compliant counter has been added to both the north and south concession stands for visitor access.

Seating

The Amphitheater holds an audience of over 4,000 in permanent seating mounted to a concrete foundation. The seats are arranged in seven sections, three in the front and four in the back. A total of four aisles, two side aisles and two edge aisles, run the length of the house. A middle aisle crosses north-south through the seating. A center aisle extends down from the entrance but only as far as the middle aisle. The original concrete bowl was stepped for the seating with a smooth slope along the aisles. The entire seating area was replaced in 2004. The original concrete was replaced and drainage was improved. The new concrete bowl was designed to generally match the original with the exception of the seating aisles. The original aisles were sloped from the promenade down to the front row, with a steep slope at the top and a gradual slope at the bottom. The new concrete bowl replaced the steep slope with steps. The seats were replaced with plastic seating, following a similar profile to the original. The original seating configuration, grades, and sightlines were replicated. Aisle lighting was integrated into the seating. ABAAS compliant seating areas were added. An ABAAS compliant walkway was constructed in 2004 connecting the promenade down to the middle aisle. The walkway is asphalt with metal tube railings and concrete curbs and retaining walls lining portions of the walk. A sound equipment zone was also integrated into the seating, as were designated cable trays. (**Figure 4-77 - Figure 4-80**).



Figure 4-77. The new aisles are stepped until roughly two-thirds from the promenade, at which point they transition to a gradual slope.



Figure 4-78. This aerial photograph shows the original seating arrangement with seven sections. Source: August 1950, MRCE, NCRO Photos, Series 1, Box 92.



Figure 4-79. This aerial photograph shows the Carter Barron Amphitheater in 2016. Source: "Carter Barron Amphitheater," 38°57'1.00" N and 77° 2'30.00"W. Google Earth. December 19, 2016. June 18, 2018.



Figure 4-80. A sound equipment zone is integrated into the seating. Designated cable trays are integrated into the floor.

The seating is in good condition. The concrete is cracked in some areas. NPS staff reports that the plastic seat brackets break with some frequency but they are gradually replacing them with metal. (**Figure 4-81**).



Figure 4-81. The concrete is cracked in some areas, including this location in the lower stretch of the south aisle.

The seating is only partially accessible to the public and does not currently meet ABAAS requirements. The seating as installed in 2004 provides an appropriate dispersal of ABAAS-compliant accessible seating with areas at the back, middle, and front of house, as required by the ABA. Only the back row of seating, however, is accessible via an ABAAS compliant route **(Figure 4-82)**. Other accessible seating areas have been filled in with seating **(Figure 4-83).** A walkway was constructed in 2004 connecting the promenade down to the middle aisle **(Figure 4-84 - Figure 4-85)**. The walkway, however, has run and cross slopes that do not comply with ABA, according to a study by engineers Johnson, Mirmiran & Thompson, Inc (JMT). JMT assessed this path as a walking surface, which requires less than a 1:20 run slope, and not as a ramp, which can have up to a 1:12 run slope but requires handrails. More than half the walkway had slopes greater than 1:20, with some areas greater than 1:12, meaning that even the addition of handrails would not bring the walkway into ABAAS compliance.[3]

3 “Stage Load Assessment & Accessible Handrail Installation,” Johnson, Mirmiran & Thompson, Inc., February 1, 2017.



Figure 4-82. Accessible seating is available along the back row.



Figure 4-83. ABAAS compliant seating was built into the middle aisle of the Amphitheater seating, but it has been infilled with seats for the time being as the accessible path is closed.



Figure 4-84. The ABAAS compliant path runs south, then bends north to reconnect to the Amphitheater.



Figure 4-85. The ABAAS compliant path has a wall and railing at this stretch.

Lighting Towers

The Carter Barron Amphitheater has two lighting towers, one at the north and one at the south end of the seating. Lighting from the towers illuminates the stage. The towers are made of steel with concrete bases. The steel towers were replaced in 2004. The concrete bases are original (**Figure 4-86**).

The lighting towers are in fair condition. The steel has peeling paint and areas of rust. The concrete is cracked and has efflorescence. (**Figure 4-87 and Figure 4-88**).





Figure 4-86. North (left) and south (right) lighting tower.



Figure 4-87. The concrete base is cracked and has efflorescence.



Figure 4-88. The steel has peeling paint and areas of rust.

Landscape

The forest surrounding the Carter Barron Amphitheater was intentionally retained in order to provide a natural setting. But the original design, like that of the architecture, balanced modern design with rustic style. Against the forest backdrop, plantings along the entrance way and along the restroom paths framing the back rows of seating included simple, clean rows of small trees and plants. Much of those original plantings have been lost. (**Figure 4-89 - Figure 4-94**).



Figure 4-89. Hemlocks were planted along the path to the restroom. Source: Photographer Abbie Rowe, July 15, 1950, MRCE, NCRO Photos, Series 1, Box 92.



Figure 4-90. Little formal landscaping is visible along the same path today.



Figure 4-91. This view of the north edge of the Amphitheater shows low landscaping along the edge of the seating. Source: Photographer Abbie Rowe, July 27, 1950, MRCE, NCRO Photos, Series 1, Box 92.



Figure 4-92. Little formal landscaping is visible today at the north edge of the Amphitheater.

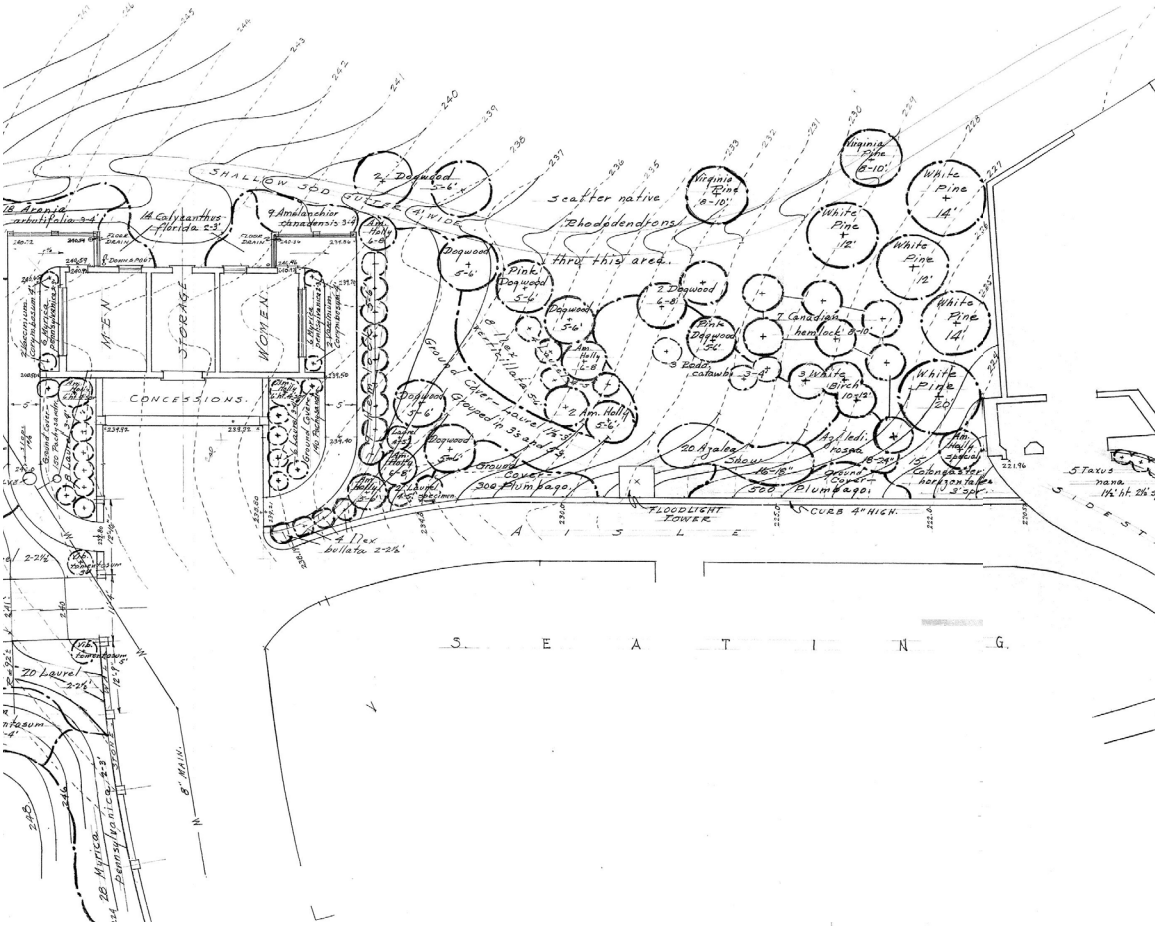


Figure 4-93. Planting plan north of the Amphitheater seating. Source: NPS, ROCR, id152083, March 1, 1950.

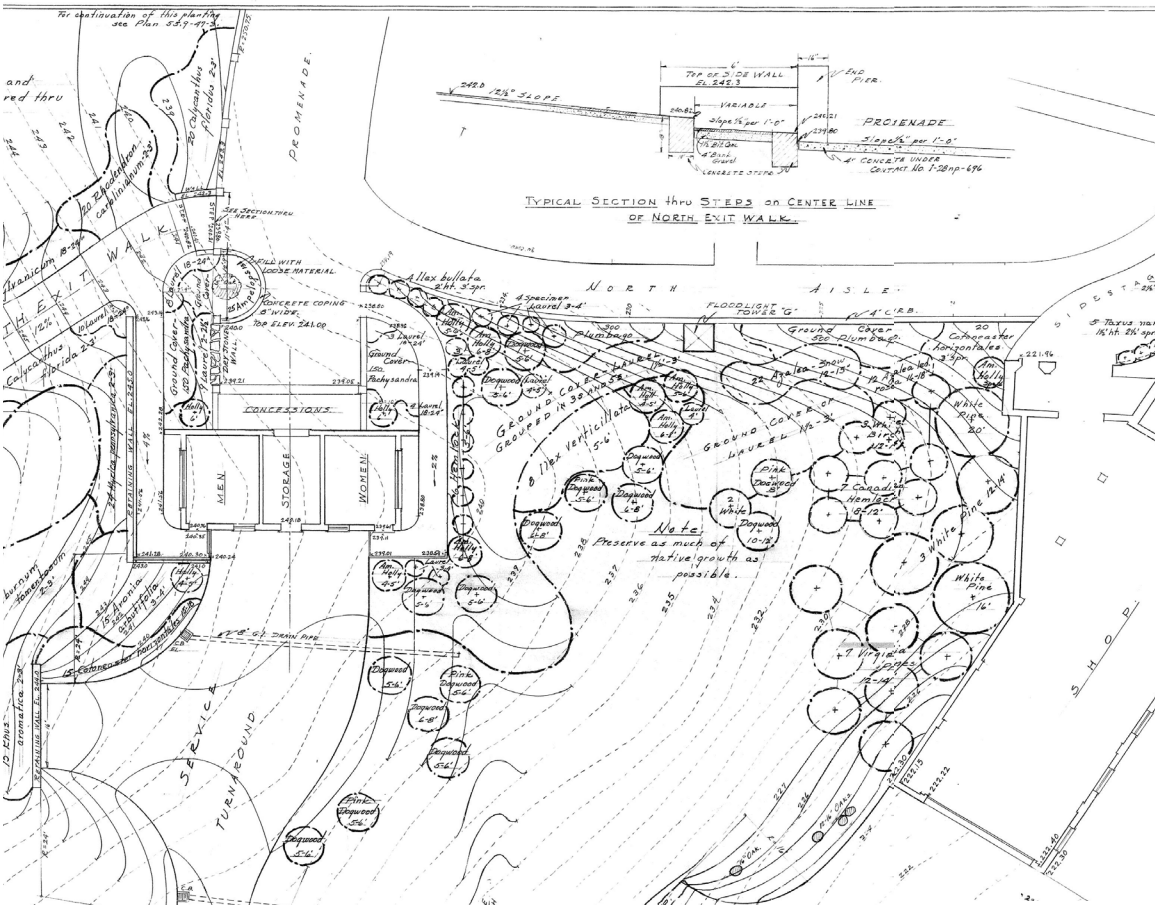


Figure 4-94. Planting plan south of the Amphitheater seating. Source: NPS, ROCR, id152083, March 1, 1950.

Stage

Carter Barron Amphitheater has an open air stage composed of three sub-stages. The center stage extends the full depth of the floor plate and opens to the forest beyond. Two side stages, or wings, extend out from the center stage at an angle and are framed by set walls.

Center Stage

The center stage is composed of cast-in-place concrete and is covered with wood flooring. The stage has two short flights of stairs connecting the seating area to the stage. A gutter runs along its curved front edge. (**Figure 4-95 and Figure 4-97**).

The stage is in poor condition. Reinforcing bars are exposed and rusting along the front edge of the stage floor. Concrete below the stage is spalling at the stairs and a deep crack is visible between the stage plane and the wall.

JMT conducted a structural assessment of the stage in 2017 and deemed the stage concrete structurally insufficient. According to the report

> *JMT performed a structural load analysis using the original design loads from the historic documents. The forces and stresses obtained from this analysis were compared and checked against the structure's capacity based on current Codes and Standards. Concrete strength was indicated on the historic documents and JMT obtained core samples for testing to confirm the material properties of the concrete. Results of the core testing show that the concrete strength is higher than the original design strength and that the concrete is in generally good condition. Based on current Codes, the structural load analysis indicates the structure is currently subjected to forces and stresses above its allowable design capacity in shear strength solely with the dead load of the structure.*

See the structural section, "Unfinished Room," for further analysis.



Figure 4-95. This view shows the stage and wings from the center aisle just after construction was completed. Source: Jay Cee Construction Co, August 5, 1950, MRCE, NCRO Photos, Series 1, Box 92.



Figure 4-96. Two side stages, or wings, extend out from the center stage at an angle and are framed by set walls.



Figure 4-97. A gutter runs along the front edge of the stage.

Wings

The stage's two wings are formed by shallow extensions of the stage, backed by a series of layered, symmetrical walls. The stage floors are concrete and lined with metal railings. The walls form a curved, open "V" shape in plan and are oriented such that the center walls align to one another, parallel to the main stage. The primary curved wall is finished with the same stone veneer found in the entrance gate and promenade walls. Low planters project from the walls and are finished with the same stone veneer. A taller concrete block wall is set behind the stone veneer, and remains flat where the other curves. The stone veneer and concrete block walls are capped with cast stone copings. The back wall was originally finished with limestone paneling and brass-screens, which covered openings for speakers, divided by cast stone. The limestone panels have been painted black at the center and white along the top. The speakers and screens have been removed and replaced with painted plywood.

The primary wall has two openings, one door located near the center stage and one large opening intended for set changes. Following in the modernist tradition, a series of planes divide the wall creating a sense of scale around the openings. Concrete vertical and horizontal planes create projecting lintels and jambs around the center doors and the larger set openings. The original center doors were three paneled wooden doors. The projecting lintels and jambs were likely left as unfinished exposed concrete. The doors have been replaced and the concrete planes have been painted brown. The set opening has a concrete block back wall that opened through a set of double doors. The concrete wall has been painted black and the doors removed. A speaker and speaker screen were once suspended above the openings. The speakers have been removed. Two additional screens have been added to each opening. Stained wood panels originally lined the outside edge of the stone walls. They were designed to pivot to reveal stage lighting. The panels are no longer in use and have been painted.

The stage is uncovered. Several iterations of temporary covers have been employed including a three pole tent and more

recently a truss structure. Both have required some modification to the stage to provide structural anchors.

The mix of modern influence and rustic sensibility culminates in the stage wing walls. The clean lines of the limestone panel were contrasted by the rough stone veneer. The soft wood tones in the door and lighting panels were a balance to the clean lines of modern, concrete panels. (**Figure 4-98 - Figure 4-105**).

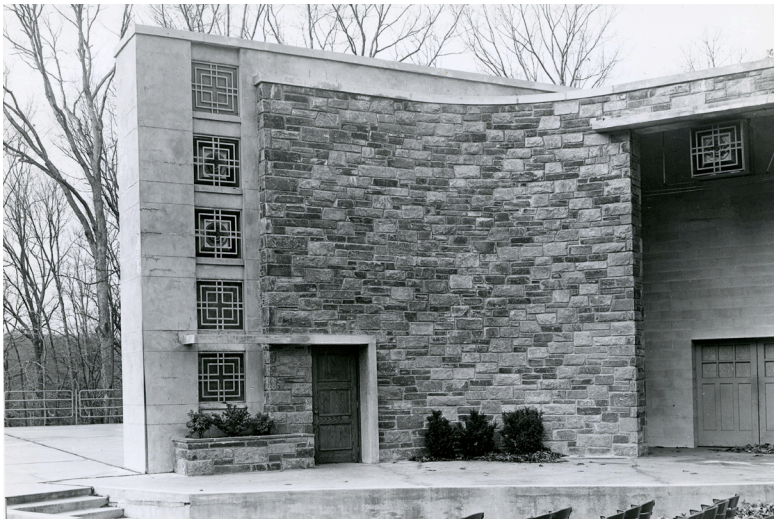


Figure 4-98. North stage wing two years after opening. Source: Photographer Abbie Rowe, February 8, 1952, MRCE, NCRO Photos, Series 1, Box 92.



Figure 4-99. North wing, front.



Figure 4-100. North wing, stage side.

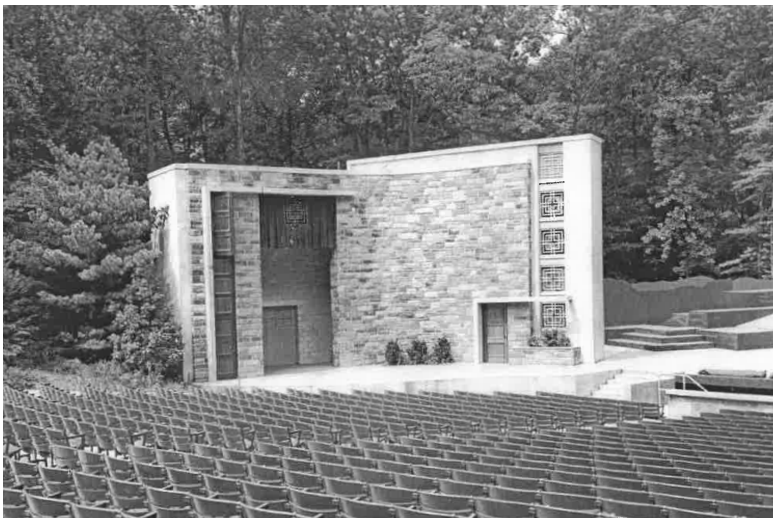


Figure 4-101. South stage wing within two years of opening. Source: ROCR, no date.



Figure 4-102. South wing, front.



Figure 4-103. South wing, stage side.



Figure 4-104. North wing, back.



Figure 4-105. South wing, back.

The wings are in fair condition with some elements in poor condition. The concrete stage and front stage walls are cracked. Efflorescent buildup indicates water damage. The stone veneer is in relatively good condition with some cracks in the mortar and light biological growth. The growth is more prominent and accompanied by efflorescence on the south wing wall, which receives less daylight. The flashing above the stone veneer is bent. The planters are in fair condition but overgrown. The paint on the limestone panels is cracking and makes it difficult to assess the current condition of the panels. The speakers, speaker supports, and speaker screens have been removed. The painted plywood cover is failing. The center door has peeling paint and is not original. The projecting lintels and jambs have spalled and the internal reinforcing bars are rusting. The areas where concrete has been lost have been painted over, but biological growth is present. The concrete block wall has been painted black and the paint is peeling. The double doors are missing. The painted pivot panels appear to be in good condition. (**Figure 4-106 - Figure 4-118**).

The stage does not meet ABAAS requirements for accessibility. It is accessible to performers and staff from backstage, but not to the public. For performers and staff, the path from the staff parking lot to the stage is ABAAS compliant. The path for the public from the seating to the stage, however, is not. Two sets of stairs leading from the seating bowl to the stage provide a path. If access is available from the public seating to the stage by stair, it must also be available by an ABAAS compliant route, to be code compliant.



Figure 4-106. The concrete deck is cracked.



Figure 4-107. Concrete is spalling at the stairs and a deep crack is visible between the stage plane and the wall.



Figure 4-108. Cracking and efflorescence are prevalent throughout the stage front wall.



Figure 4-109. Efflorescent buildup indicates water damage.



Figure 4-110. The flashing above the stone veneer is bent.



Figure 4-111. The planter walls are in fair condition, but the planters are overgrown.



Figure 4-112. Speakers have been removed and the speaker screens have been painted black.



Figure 4-113. This wall was originally finished with limestone paneling and brass-screen covered openings for speakers. The speakers and screens were removed and replaced with painted plywood. The limestone has been painted black.

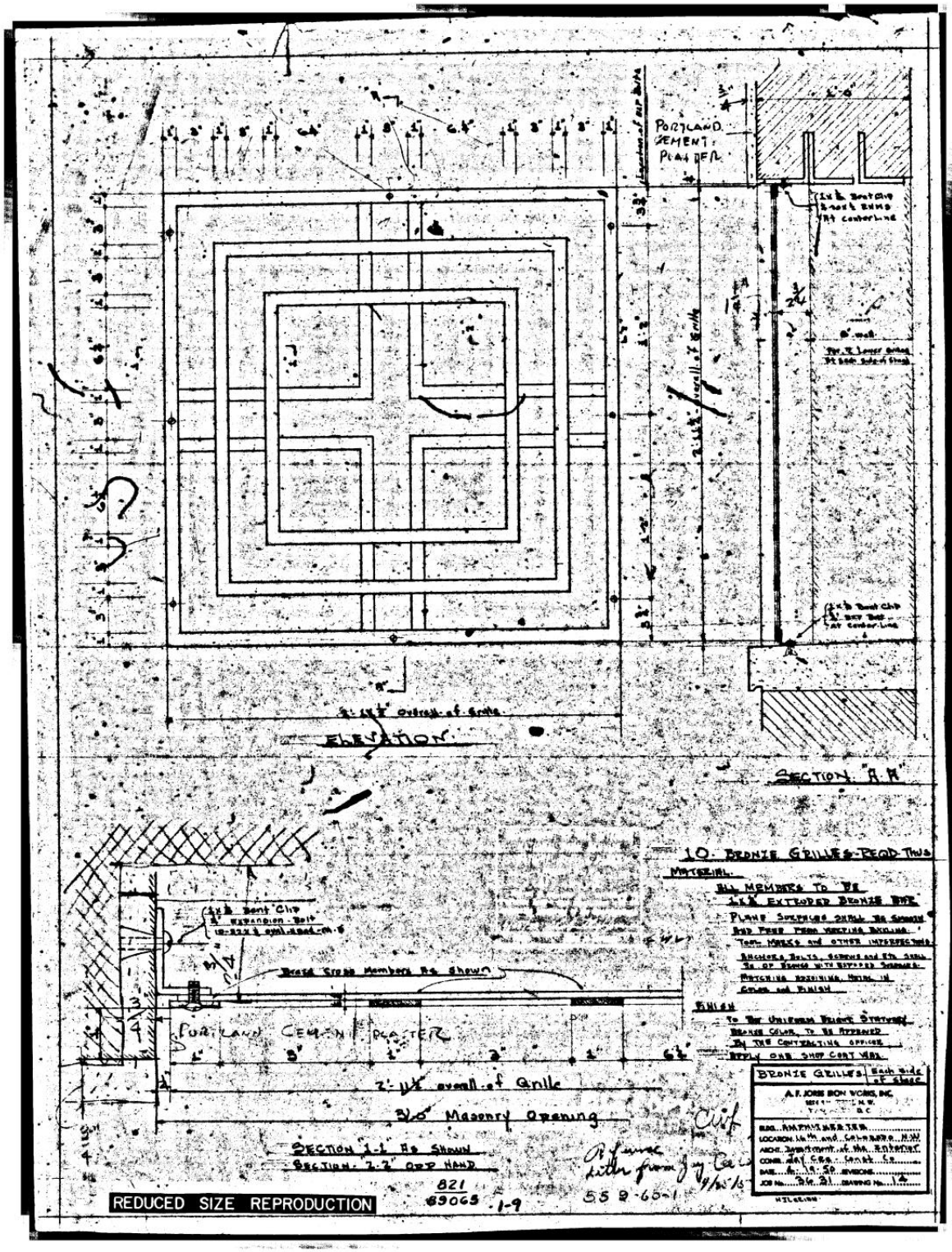


Figure 4-114. Speaker screen shop drawing. Source: January 1, 1950, NPS, ROCR, id152083.



Figure 4-115. Wing doors have been replaced and the projecting lintel and jamb have been painted brown.

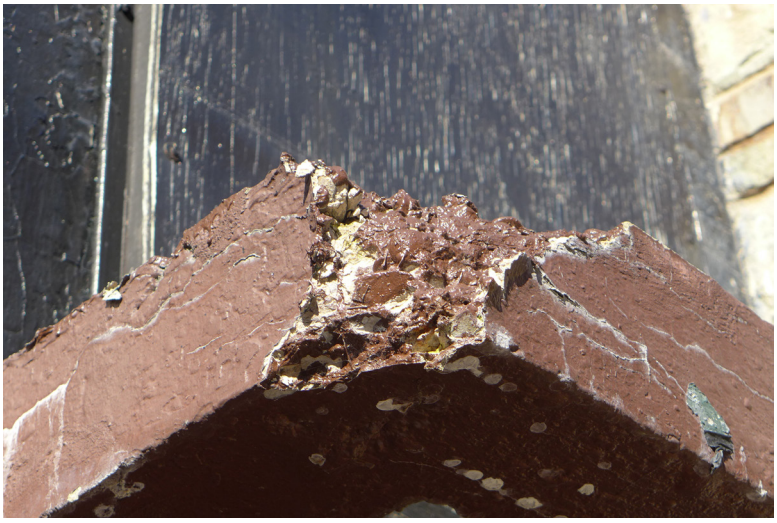


Figure 4-116. The surrounding projecting lintel and jamb have spalled and the internal reinforcing bars are rusting.

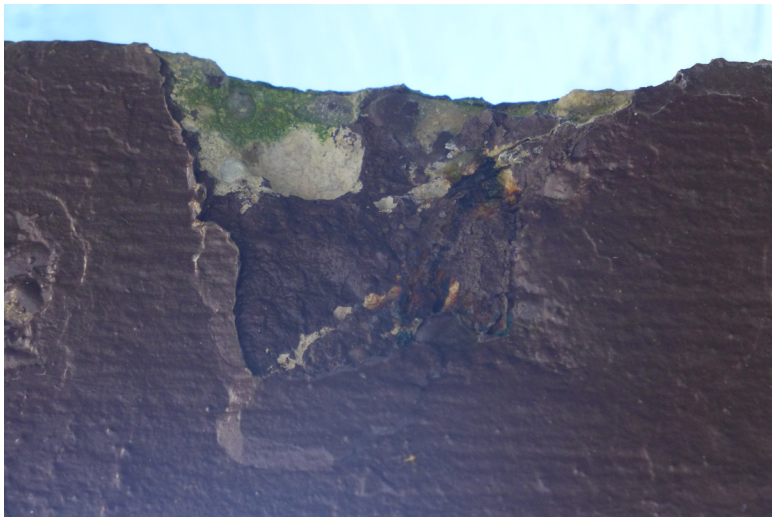


Figure 4-117. The areas where concrete has been lost in the surrounding projecting lintel and jamb have been painted over, but biological growth is present.



Figure 4-118. The concrete block walls inside the wings have been painted black. The paint is peeling.

Orchestra Pit

Carter Barron Amphitheater has an orchestra pit set into the seating area floor along the front edge of the stage. The pit can be entered via stairs from either end of the seating or through doors from the basement below the stage. The orchestra pit has a concrete floor and concrete walls. A concrete curb and metal railing divides the pit from the seating area. The pit, like the stage, is not covered. (**Figure 4-119**).



Figure 4-119. The orchestra pit.

The orchestra pit is in poor condition. The front concrete wall has cracking and efflorescence. The surface of the concrete stage above has spalling concrete and exposed, rusted reinforcing bars. The concrete curb separating the seating from the orchestra pit is cracked and has spalled in some locations. Most, but not all, cracking occurs where the metal railing is anchored to the curb. The metal railings have some areas of peeling paint and rust. (**Figure 4-120 - Figure 4-124**).

The orchestra pit does not meet ABAAS requirement as it does not have an accessible route. The pit can been reached either from the seating via two small flights of stairs, or from the basement, which is also only accessed by stair.



Figure 4-120. The orchestra pit front concrete wall has cracking and efflorescence.



Figure 4-121. Exposed reinforcing bars are rusting in the underside of the stage floor.



Figure 4-122. The concrete curb separating the seating from the orchestra pit is cracked and has spalled in some locations.



Figure 4-123. Most, but not all, cracking occurs where the metal railing is anchored to the curb.



Figure 4-124. The metal railings have some areas of peeling paint and rust.

Curtain Track

The original stage design did not call for a curtain track **(Figure 4-125)**, but one was added a few years after the Amphitheater's opening to accommodate a variety of programming. The track was retractable and slid behind the wing walls when not in use **(Figure 4-126 - Figure 4-127)**. Steel frames support the track and equipment. The steel extends down into the basement below. (**Figure 4-128**).

The curtain track is in poor condition. The track is no longer in operation and the north half of the track has been removed for safety concerns. The south half is retracted. The steel structure has rusted and corroded. **(Figure 4-128 Figure 4-129**).



Figure 4-125. The original design did not call for a curtain track, but one was added a few years after the Amphitheater's opening to accommodate a variety of programming as seen in this 1956 photo. Source: July 11, 1956, MRCE, NCRO Photos, Series 1, Box 92.



Figure 4-126. Curtain track structure behind the north wall.



Figure 4-127. Steel frames and curtain track behind the south wing wall.



Figure 4-128. The curtain track steel extends down into the basement below.



Figure 4-129. The steel curtain track structure has rusted and corroded.

Speakers & Structure

The original design included speakers and structure to support them, mounted to the back of the stage wing walls. The speakers were removed, and the structure recently removed for safety concerns. (**Figure 4-130**).



Figure 4-130. Stains left by the speaker structure can be seen on the back wall.

Backstage

Carter Barron Amphitheater has offices, dressing rooms, restrooms, and mechanical spaces to support its staff and performers. These interior spaces are located on the stage level and in the basement below. The stage level spaces are located behind the wing walls at the north and south end of the stage. Each end has a set of stairs that connects to the basement. Basement spaces were constructed below the entire area of the stage, although the primary space under the stage was never finished.

Stage Level

North Building, Exterior

The north building forms an L-shape in plan and connects to the north wing wall to allow scenery and equipment to move from the loading area to the stage. The building is made of concrete block and has a flat, built-up membrane roof. The west elevation is composed of a one story wall with four pairs of doors and windows and a double height back wall with one door and several larger windows. The windows in the one story wall have been altered to accommodate vents and window air conditioning units. The north and south elevations are each composed of a concrete block wall with a large rolling metal door to allow for theater sets and equipment to be loaded in and then brought on stage. The east elevation has no fenestration or architectural detail.

The north building exterior is in fair condition. The roof is in poor condition and nearing the end of its service life. The concrete block has significant cracks. There is plant growth on the walls and biological growth on the rolling metal doors. The windows and doors are in poor condition. Some have broken glazing panels, others have been removed entirely. (**Figure 4-131 - Figure 4-135**).



Figure 4-131. West elevation of the north backstage building.



Figure 4-132. West elevation of the north backstage building.



Figure 4-133. North elevation of the north backstage building.



Figure 4-134. East elevation of the north backstage building.



Figure 4-135. South elevation of the north backstage building.

North Building, Interior

The north building includes a custodial room, two adjoining offices with a restroom, a large stage storage room, a smaller instrument storage room, and a stairwell. The interior spaces are minimally finished. The offices have painted walls with carpet and vinyl flooring. The storage areas have unfinished concrete block walls and exposed concrete floors. (**Figure 4-136 - Figure 4-141**).

The north building interior spaces, overall, are in fair condition. The offices are currently in poor condition after being closed for an entire season. There are water stains in the ceiling and biological growth on interior doors. The stage storage room is in good condition. The instrument storage room is in fair condition but does not have the climate control required to protect the instruments in storage.

The north building is not ABAAS compliant. The doors to the custodial room and offices have curbs that are a greater height than that required by ABA. The restroom is too small to comply with ABA.



Figure 4-136. Stage level custodial room.



Figure 4-137. Stage level office.



Figure 4-138. Stage level office with restroom.



Figure 4-139. Stage storage room looking north.



Figure 4-140. Stage storage room looking south.



Figure 4-141. The instrument storage room.

South Building, Exterior

The south building is smaller than the north and forms a long rectangle in plan. It does not connect to the south wing wall. The south building is also made of concrete block and has a flat, built-up membrane roof. The west elevation is composed of a one story wall with four pairs of doors and windows. The windows have been altered to accommodate vents and window air conditioning units. The north, east, and south elevations are all simple concrete block walls with no openings or architectural detail.

The south building exterior is in fair condition. The roof is in poor condition and nearing the end of its service life. The concrete block has significant cracks. There is biological growth on the walls. The metal door frames have peeling paint and rust. The windows and doors are in poor condition. Some have broken glazing panels. (**Figure 4-142 - Figure 4-145**).



Figure 4-142. South backstage building.



Figure 4-143. There is biological growth on the walls of the south backstage building.



Figure 4-144. East elevation of the south backstage building.



Figure 4-145. The concrete block walls in the south backstage building have significant cracks.

South Building, Interior

The south building includes three dressing rooms and a stairwell. The interior spaces are minimally finished. The dressing rooms have a finished ceiling, painted walls, and a carpeted floor. The dressing room shower has a tile finish.

The south building interior spaces are in fair condition. (**Figure 4-146 - Figure 4-148**).

The south building is not ABAAS compliant. The doors to the custodial room and offices have curbs that are a greater height than that required by ABA. The restroom is too small to comply with ABA.



Figure 4-146. Dressing room 14 in the south backstage building.



Figure 4-147. Dressing room 15 in the south backstage building.



Figure 4-148. Dressing room 16 in the south backstage building.

Basement Level

The basement level is a single story, concrete block construction structure that runs under the stage. It includes a green room, dressing rooms, restrooms and showers, storage and laundry rooms, two sets of stairs, utility spaces, and an unfinished dirt floor room below the center stage. A long corridor running north-south connects the rooms.

The basement as a whole does not meet ABAAS requirements as there is no ABAAS-compliant path to reach the lower level. The lower level is reached by two flights of stairs with no ramp or elevator alternative. There is a ramp from the back of the stage down to the basement but it is very steep and does not meet ABAAS requirements.

Green Room

The green room is a large, open room with painted concrete block walls and poured concrete columns. The ceiling is also painted concrete and the floor is carpeted. Building systems run exposed overhead. A steel structure to support the curtain track is located in the southeast corner.

The green room is in fair condition, but its east wall is in poor condition. The wall has a large area of efflorescence that has caused the paint to bubble and peel, a sign of water infiltration likely seeping through from the earth on the west side of the wall. (**Figure 4-149 - Figure 4-153**).



Figure 4-149. Green room.



Figure 4-150. Steel structure to support the curtain track is located in the southeast corner of the green room.



Figure 4-151. The green room's east wall has large areas of efflorescence, which cause the paint to bubble and peel.



Figure 4-152. Efflorescence at the green room east wall.

Dressing Rooms

Twelve identical dressing rooms line the west end of the basement. The dressing rooms have painted poured concrete ceilings, painted concrete block walls, and carpeted concrete floors. They each originally had two windows that have since been in-filled with metal panels. The dressing rooms have a wooden door with a vent centered on the west wall. It appears that windows in the west wall were filled in with metal panels. Dressing room mirrors and counters line the north and south wall. Sinks are located on the east wall. (**Figure 4-153 - Figure 4-155**).



Figure 4-153. Dressing Room 1.



Figure 4-154. Dressing Room 2.



Figure 4-155. Dressing Room 3.

The dressing rooms are in fair condition. The concrete block walls between the corridor and Dressing Room 3 and the corridor and Dressing Room 10 are cracked near the locations of the control joints in the concrete beam. Cracks are visible between the concrete block wall and the poured concrete beam. They have been repaired with foam sealant. The infilled window in Dressing Room 12 is failing. Paint is peeling on the metal and surrounding concrete. Staining is visible. Some doors have broken vents. (**Figure 4-156 - Figure 4-162**).

The dressing room counter heights do not meet ABAAS requirements.



Figure 4-156. Dressing Room 5 has a broken vent in the door.



Figure 4-157. The concrete block wall between the corridor and Dressing Room 3 is cracked near the location of the control joint in the concrete beam.

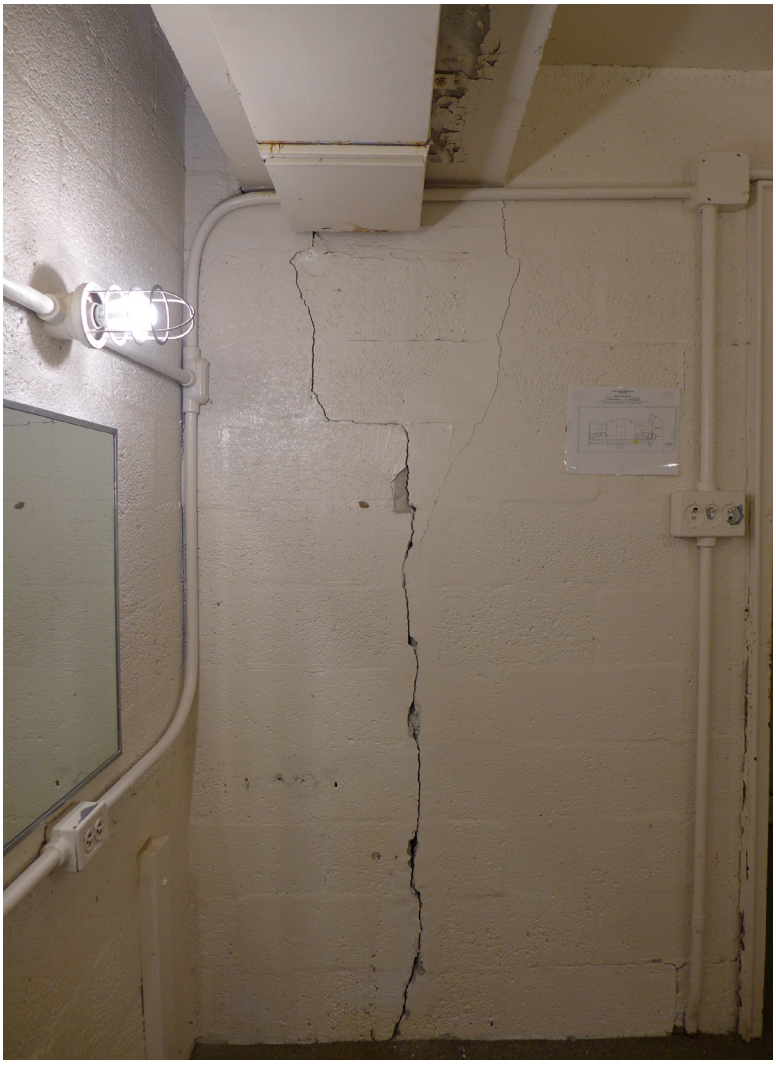


Figure 4-158. The concrete block wall between the corridor and Dressing Room 10 is cracked near the location of the control joint in the concrete beam.



Figure 4-159. Dressing Room 8. Cracks are visible between the concrete block wall and the poured concrete beam. They have been repaired with foam sealant.



Figure 4-160. This crack in concrete block has been repaired with foam sealant. The repair has failed.



Figure 4-161. Dressing Room 9. Crack in concrete block wall.



Figure 4-162. The window infill in Dressing Room 12 is failing in the lower corner.

Corridor

A long corridor runs the length of the basement and connects the twelve dressing rooms to the green room, laundry room, restrooms, and stairs. The corridor has a painted concrete ceiling and walls. The floor is carpeted. The east wall has a railing and appears to have been infilled with a wood construction wall. The structural beams supporting the stage span the corridor ceiling.

The corridor is in fair condition. There are some areas of peeling paint and cracks in the concrete block wall in locations near the control joints in the stage structure. (**Figure 4-163 and Figure 4-164**).



Figure 4-163. Basement corridor looking south.



Figure 4-164. Basement corridor looking north. The east wall has a railing and appears to have been infilled with a wood construction wall.

Stairs

Two flights of stairs, one at each end of the corridor, lead from the stage level down to the basement. The stair halls have painted concrete ceilings and walls. The floors are carpeted. Each stair is composed of two runs with a landing and a metal railing. The basement stair rooms each lead to a pair of emergency exit double doors.

The stairs are in fair condition. Paint is peeling on the concrete walls and railing. Water staining is visible in the basement carpet at the north stair. (**Figure 4-165 and Figure 4-166**).



Figure 4-165. North stair.

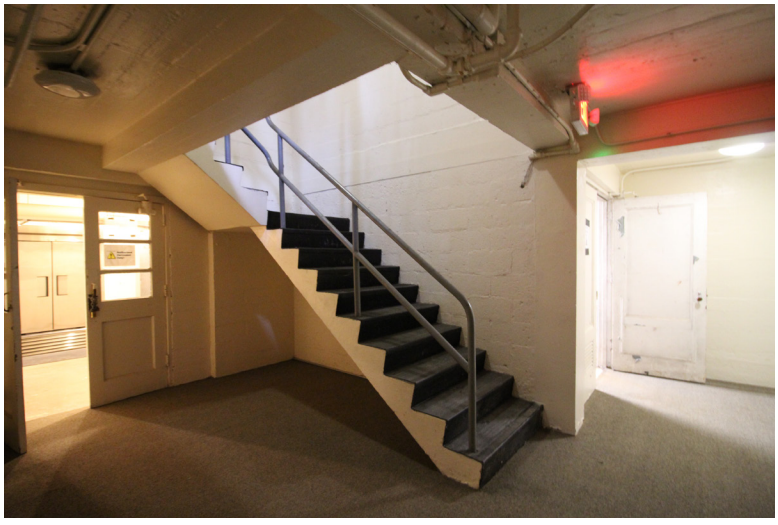


Figure 4-166. South stair.

Women's Restroom and Showers

The women's restroom and showers are two interconnected rooms off the main corridor. They are entered through a small vestibule. Each room has a door that opens into the green room. They have painted concrete ceilings, walls, and floors.

The women's restroom and showers are in fair condition. Some areas of paint are peeling, particularly on the ceiling in the shower room. Two door vents are broken.

The women's restroom and showers are not ABAAS compliant. The showers have a four inch curb at the entrance. There are no ABAAS compliant restroom stalls. (**Figure 4-167 and Figure 4-168**).



Figure 4-167. Women's restroom.



Figure 4-168. Women's shower.

Men's Restroom and Shower

The men's restroom and shower are located at the north end of the corridor. They are entered through a small vestibule. Each room has a door that opens into the laundry room. They have painted concrete ceilings and walls. The restroom floor is painted concrete. The shower room floor has a rubber finish.

The men's restroom and shower are in fair condition. Some areas of paint are peeling, particularly on the floor of the restroom. The doors are in relatively good condition. The vent on the restroom door to the laundry room is broken.

The men's restroom and shower are not ABAAS compliant. The shower has a four inch step at the entrance. There are no ABAAS compliant restroom stalls. (**Figure 4-169 and Figure 4-170**).



Figure 4-169. Men's restroom.



Figure 4-170. Men's shower.

Laundry

The laundry room is simply finished with painted concrete ceilings and walls. The north wall is a wood framed gypsum board wall. The floor is exposed concrete. Building systems run exposed overhead.

The laundry room is in fair condition (**Figure 4-171**). There are areas of peeling paint on the walls below the openings for pipes.



Figure 4-171. Laundry room.

Storage

The storage room is an unfinished utility space with exposed concrete ceilings, walls, and floors. The wall shared with the laundry room is exposed wood construction. A smaller enclosed room is built out in the northwest corner of the storage room. The steel from the curtain track above extends down into the storage room.

The room is in fair condition. Efflorescence has built up along seams in the concrete ceiling. The steel structure is corroded. (**Figure 4-172 - Figure 4-174**).



Figure 4-172. Storage room.



Figure 4-173. A smaller enclosed room is built out in the northwest corner of the storage room.



Figure 4-174. Efflorescence has built up along seams in the concrete ceiling. The steel structure is corroded.

Custodial

The custodial room is located between the laundry and the mechanical and electrical rooms. It also has painted concrete ceilings and walls and an exposed concrete floor. The north wall is lined with chalk boards and has a time clock and a punch card holder.

The custodial room is in fair condition. The ceiling paint is peeling and the concrete has spalled in one location. (**Figure 4-175 and Figure 4-176**).



Figure 4-175. Basement custodial room.

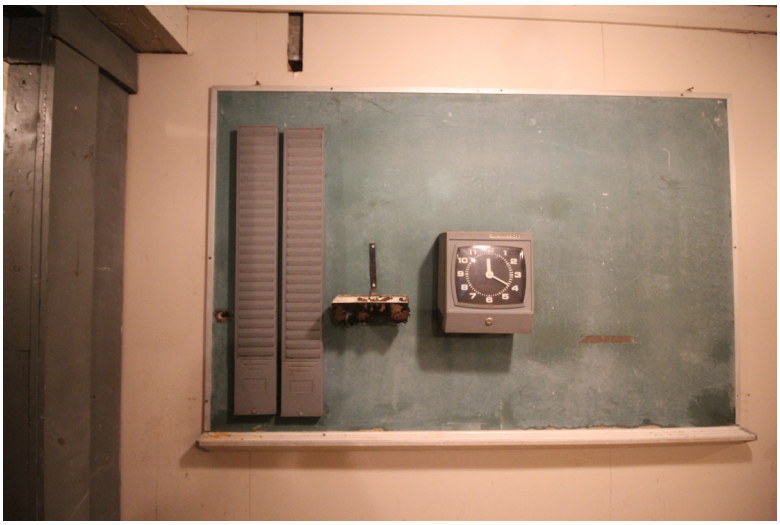


Figure 4-176. The north wall of the basement custodial room is lined with chalk boards and has a time clock and a punch card holder.

Mechanical and Electrical

The mechanical and electrical room is utilitarian space with exposed concrete ceilings, walls, and floors. The floor is roughly two feet below the basement floor level and is accessed by three stairs. At the east end, the floor level is again in line with the basement. The raised floor is accessed by a second flight of stairs.

The mechanical and electrical room is in fair condition. The floor is dirty and there are some concrete spalls. (**Figure 4-177 and Figure 4-178**).



Figure 4-177. Mechanical and electrical room.



Figure 4-178. This portion of the mechanical and electrical room is level with the basement floor

Unfinished Room

The room under the center stage is unfinished. It has an exposed concrete ceiling, columns, beams, and an east wall that divides the room from the orchestra pit at the front of the stage. The north and south walls are concrete block construction. The west wall appears to have once been open to the corridor but is now enclosed with an exposed wood construction wall. The room has a dirt floor below basement grade. The room is accessed through four doors each with a set of concrete stairs. The concrete stairs sit directly on the dirt. Building systems run overhead through the space. Traps in the stage above have been infilled with concrete. Patches are visible in the ceiling above.

The unfinished room is in poor condition. Its opening allows moisture and humidity into the basement. The dirt floor is eroding, both in a trough that leads out the back of the room and in areas under the entrance stairs. The trough has been caused by a path of water, runoff from the Amphitheater's hillside. (**Figure 4-179 - Figure 4-186**).



Figure 4-179. View of the unfinished room from the southeast corner.



Figure 4-180. View of the unfinished room's west wall. The infilled wood wall is visible between the concrete structure.



Figure 4-181. The east wall was made with poured-in-place concrete and has vents out to the orchestra pit.



Figure 4-182. The north (shown here) and south walls are concrete block wall infill.



Figure 4-183. The dirt floor is eroding under the entrance stairs.



Figure 4-184. The orchestra pit is accessed from this concrete platform. The earth is eroding below the platform.



Figure 4-185. The dirt floor is eroding in a trough that leads out the back of the room and down the hillside.



Figure 4-186. Traps in the stage above have been infilled with concrete. The patches are visible in the ceiling above.

Structural Systems

Few structural drawings are available for the facility. Information described herein is based on available drawings, photographs, and visual inspections. A description of the construction and existing material condition of various areas and structural systems in the Carter Barron Amphitheater are described below.

Survey Methods

Site structural inspections were performed by a senior structural engineer from Alpha Corporation, Mr. David Werder, P.E., in conjunction with NPS personnel and other A/E team members, on November 20th, November 30th, and December 7th, 2017. No destructive tests were conducted. Inspections were limited to accessible areas from the ground, the roof, and light towers.

Structural inspections of all shear walls, column baseplates, columns, and hidden steel connections were not possible as many were hidden from view.

Box Office

Construction

The front section of the box office is wood-frame construction with wooden roof joists. The floor is a concrete slab on grade (**Figure 4-187**). The roof joists are supported by the front wall at one end and 6”x6” wood posts and double 2”x12” wood beams. The rear section of the box office is of concrete masonry unit (CMU) block construction, and has similar roof construction as the front section.



Figure 4-187. Front exterior of box office.

Existing Condition

The interior of the box office is finished with a variety of paneling and ceiling types, so that it is not possible to perform a thorough structural inspection of the building. Although the interior treatments are clearly old and perhaps outdated, there is no visible indication of leakage, settlement, or structural degradation of the main structure. In the front porch area, the bases of two of the columns show signs of decay (**Figure 4-188**). Also, as shown in **Figure 4-189**, the paint is peeling in some locations, exposing the wood to moisture. It is not clear whether the wood used in the construction was pressure-treated.



Figure 4-188. Bottom of outside column base is decayed (typical).



Figure 4-189. Paint in overhang beams is failing, but beams are still in good condition.

Promenade

Construction

The promenade consists of rough-sawn oak members supported by tubular steel columns in the front, and fieldstone columns in back. The beams between columns are 8”x12”s and the joists are 2”x12”s spaced 16 inches apart **Figure 4-190**. The fieldstone columns are constructed integrally with a fieldstone wall at the back of the promenade. The floor of the promenade is a reinforced concrete slab on grade, and the roof is constructed of six-inch wooden slats. The promenade includes three structures: two control booths and a follow spot booth. The north control booth includes a small custodian’s closet. These structures are of light wood construction, although the control booths support the central end of the promenade‘s front roof beam. The control booths’ walls are constructed of wooden siding, and the follow spot booth employs corrugated metal walls and roof.



Figure 4-190. Construction of promenade roof utilizes rough-hewn oak 8”x12” beams and 2”x12” joists.

Existing Condition

Although the paint on the promenade beams, joists, and roof is in very poor condition, the wood itself is sound. Rock Creek Park staff indicated that the delay in repainting the promenade is due to availability of funding, as well as the extra costs for removing the peeling paint, which is lead based.

Although the promenade floor slab was replaced in 2004 with renovations to the seating area, the floor slab contains many cracks. Most of the diamond-shaped infills around the column bases are cracked as well (**Figure 4-191**). Although there is a joint containing soft material between the column infill areas and the floor slab, there are many cracks in the main floor slab radiating out from the infill corners. Normally, either straight bars or hoops (local reinforcement) are placed around the diamond-shaped infill areas to prevent this type of cracking. The presence of the cracks indicates that no local reinforcement was placed in the outer slab around the diamond-shaped infill slab.

The fieldstone wall and columns are in fairly good condition. As the example of **Figure 4-192** shows, there are a few minor cracks in the mortar joints around some stones, but not many.



Figure 4-191. Most of the concrete infills for promenade columns are cracked. Similarly, there are many cracks in the concrete walkway. Many of these cracks extend from the column infill areas.



Figure 4-192. The fieldstone wall at the rear of the promenade has several minor mortar cracks.

Retaining Walls

Construction

The low retaining walls adjacent to the paths to the public restrooms are constructed of pressure-treated 8”x12” timbers. Steel reinforcing bars are inserted into drilled holes between the timbers to tie them together.

Existing Condition

The low retaining walls are in poor condition. A timber has completely rotted and failed (**Figure 4-193**). In numerous other places the timbers are misaligned due to decay and/or overload.



Figure 4-193. Timber retaining wall is currently in poor condition. Note reinforcing bar dowel used in retaining wall construction.

Concession Stands and Restrooms

Construction

There is a concession stand and a pair of public restrooms on either end of the promenade. These structures are built of CMU block construction. The ceilings are gypsum wallboard, and the roofs have a multi-ply surface, so the construction of the roof is not clear. Floors are concrete slab on grade.

Existing Condition

The concession stands, although old, are in good structural condition. However, as shown in **Figure 4-194 - Figure 4-198**, the restrooms, which are at the extreme ends of the promenade, have several cracks in their masonry walls, especially the south restroom. As shown in the attached photographs, most of the cracks propagate from reentrant corners at windows and door jambs. The cracks are primarily associated with shear. The restroom structures provide the majority of lateral restraint for the promenade. Most likely, the cracks are associated with either seismic loads or thermal expansion.



Figure 4-194. Crack near roofline in exterior wall of south concession stand.



Figure 4-195. Crack in south restroom wall.



Figure 4-196. Crack in south restroom wall.



Figure 4-197. Crack in south restroom wall.



Figure 4-198. Crack in north restroom wall.

Seating Area

Construction

The seating area was renovated in 2004, including replacement of all concrete and seats. The concrete is all reinforced slab on grade. In the original design, the aisles were sloped, but the sloped aisles were replaced with stairs in the redesign. A long, sloped pathway was added at the south side of the seating area to permit handicapped access and exit from the middle of the

seating area. A modified drainage system was also installed as part of the renovations.

Existing Condition

Although the seating area was reconstructed in 2004, there are many cracks in the existing concrete. Typical cracks are shown in **Figure 4-199 and Figure 4-200**. Carter Barron Amphitheater staff indicated that the condition of the concrete in the seating area is currently worse than it was prior to the renovation.



Figure 4-199. Typical cracks in seating area concrete.



Figure 4-200. Additional cracks in seating area stairs.

Light Towers

Construction

The light towers were replaced in 2004 as part of the seating area renovations. The steel portions of the current towers are approximately 37'-3" high, not including the concrete pedestal that extends about two feet above ground. The towers are welded steel structures composed mainly of square hollow structural sections, with some steel channels at the base. Although the steel portions of the light towers were replaced in 2004, the concrete bases, which are 5'-6" square, were not replaced. One of the towers is shown in **Figure 4-201.**



Figure 4-201. North light tower.

Existing Condition

Although the light towers were replaced in 2004, the paint and other protective coatings are in poor condition and the base metal is beginning to corrode (**Figure 4-202**). The degree of corrosion currently present is not a concern, but if allowed to continue, the corrosion rate should be expected to accelerate. If the coating is not replaced, the steel will eventually have to be replaced.

The concrete bases of the light towers are original, and while in acceptable condition, they have a series of surface cracks (**Figure 4-203**). These cracks provide a mechanism for accelerated freeze-thaw damage to the concrete and corrosion of the reinforcing.

As can be seen in **Figure 4-204** below, there is a cavity adjacent to one of the tower anchor bolts. The anchor bolts are new, so they must be post-installed within the existing concrete foundations.



Figure 4-202. Light towers are in need of repainting and are beginning to corrode.



Figure 4-203. Base of light tower showing concrete surface cracks.



Figure 4-204. One anchor bolt in the left light tower has a large cavity.

Stage Deck

Construction

The stage area is constructed of integral reinforced concrete slab on beams. The formal stage area is shown in **Figure 4-205** and the unfinished room beneath the stage is shown in **Figure 4-248**. The slab for the stage and surrounding areas is 5½ inches thick. A description of the beams, columns, and infill areas is provided in the section below, entitled Unfinished Room.

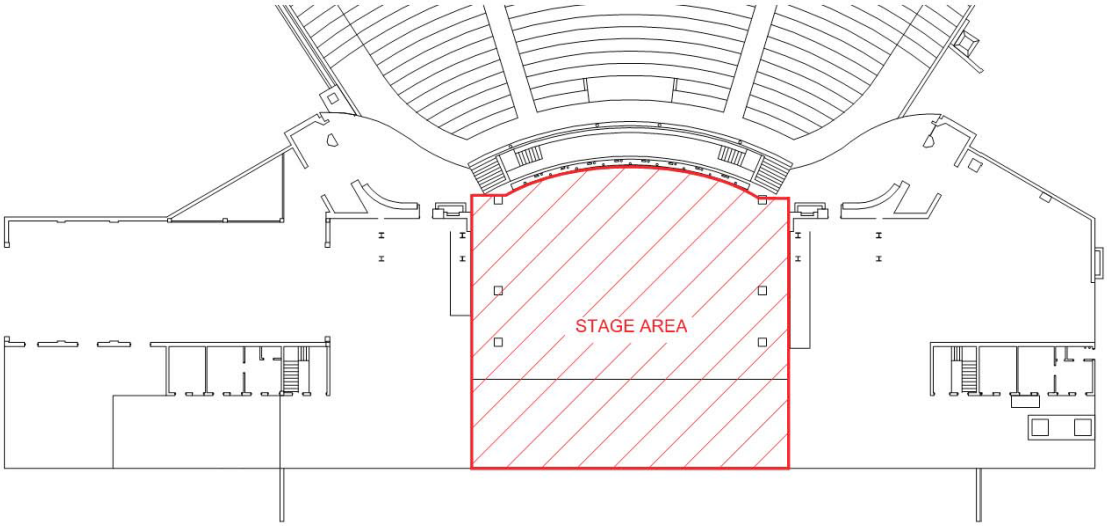


Figure 4-205. Arrangement drawing detailing stage.

Original construction drawings indicated that the stage deck slab was to have a 2-inch thick waterproofing layer. Currently, there is a waterproofing layer on top of the slab, but it is approximately ¼" thick, rather than 2".

Currently, there is a plywood deck covering the performance area of the stage. Construction documents from 2001 indicate that the decking is formed of ¾ inch painted and treated tongue and groove plywood panels placed on 2"x 4" sleepers spaced 24 inches on center. In turn, the sleepers rest on 6" x 6" x ¾" rubber isolation pads placed at 12-inch spacing.

Existing Condition

The plywood stage deck is nearing the end of its useful life. It is not clear what condition the sleepers beneath the plywood deck are in; they may also need replacement. Neither the plywood deck nor the sleepers are considered major structural elements, because the stage could function without them. However, failure of the deck could cause injury to the performers.

More important to the structural integrity of the stage is the reinforced concrete deck slab, and associated beams. These members are discussed in the "unfinished room" section of this report, which describes the condition of the space beneath the stage area.

Stage Wings

The location of the stage wings is shown in **Figure 4-206**.

Construction

The stage wings are composite construction of fieldstone and CMU block walls. The fieldstone walls are exposed to the public while CMU walls are used backstage. The wings have concrete slab roofs. Composite fieldstone plus CMU walls are 28 inches thick; plain CMU walls are 12-inches thick. The front of the left wing wall is shown in **Figure 4-207.**

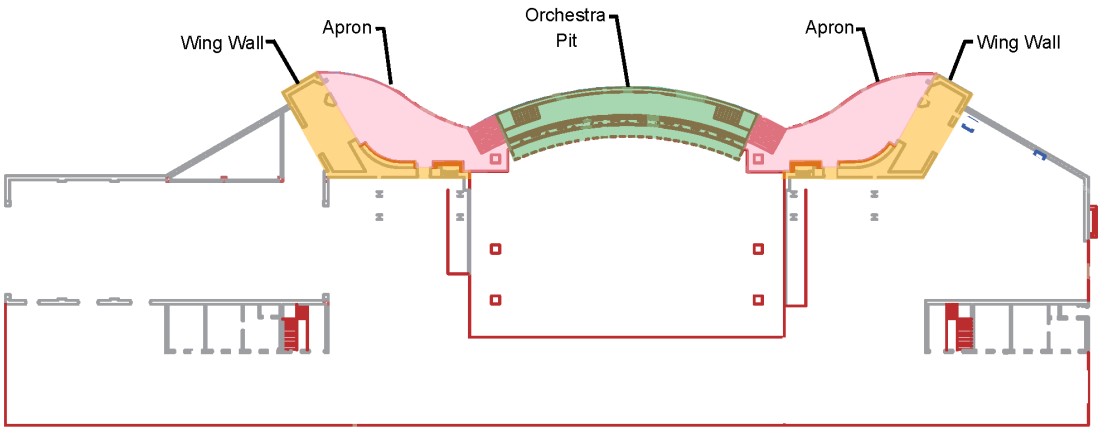


Figure 4-206. Front stage area.



Figure 4-207. North wing wall.

Existing Condition

Although original construction, the condition of the fieldstone walls is very good. The CMU walls within the interior of the wings (dark area of **Figure 4-208**, shown again in **Figure 4-209**), have severely peeling paint, but the condition of the CMU walls themselves, which are somewhat protected from the weather, is good. However, the rear CMU wall faces have several cracks and signs of moisture-related degradation.

Each of the wing walls has a projecting lintel and jamb (small concrete frame) in front. The lintels and jambs are original construction, and their purpose is unclear, and currently serve no structural function. The lintel and jamb to the right of the stage has damage to one corner, apparently mechanical damage. This condition has evidently existed for a long time without getting worse. The lintel and jamb at stage right is intact, and is visible in **Figure 4-207**, and the damaged stage left frame is shown in **Figure 4-214**.

There are several cracks in several areas the backstage face of the CMU walls, especially the south wall. Several of these cracks are shown in **Figure 4-209 - Figure 4-212**. There is also a spalled area of CMU blocks shown in **Figure 4-214 and Figure 4-217**. The cause of the cracking is not clear, but since it does not affect the fieldstone walls or areas of CMU walls that are protected from the elements, the cracks are most likely moisture-related. **Figure 4-215 and Figure 4-216** show backstage areas of the wing walls showing moisture-related damage and staining.



Figure 4-208. Interior of stage wing has peeling paint, but CMU wall remains in good condition.



Figure 4-209. Crack in back of stage wing wall. The discoloration is indicative of algae or moss.



Figure 4-210. Crack in CMU portion of stage wing wall. Also note small spall above doorway.



Figure 4-211. Large crack in CMU portion of wing wall.



Figure 4-212. Crack in CMU portion of stage wing wall.



Figure 4-213. Damage to concrete frame for stage left wing wall. Damaged area is evidently not new, since it has been painted over several times.



Figure 4-214. Spall above doorway in stage wing wall.



Figure 4-215. Moisture-related degradation of stage wing wall.



Figure 4-216. Moisture related damage to rear face of wing wall.



Figure 4-217. Moisture-related damage in CMU portion of stage wing wall.

Orchestra Pit

Construction

The orchestra pit adjoins the front of the stage, and is accessed by stairs from the house seating area. The orchestra pit is fairly narrow and is not used during productions.

The stage deck extends over a portion of the orchestra pit, terminating with a gutter intended to collect rainwater from the stage. The gutter terminates where it intersects with the wing wall platforms on either side of the stage.

All components of the orchestra pit are formed of reinforced concrete. (**Figure 4-218 and Figure 4-219**).

Existing Condition

A large crack is present at the south end of the orchestra pit where the gutter intersects with the wing wall (**Figure 4-220**). JMT reports that this crack is evidence that the stage is overloaded in shear.

As can be seen in **Figure 4-221 and Figure 4-222**, the walls of the orchestra pit show many surface cracks. Also, at both ends of the pit, the 4-inch masonry walls at the edge of the stairs have missing and loose blocks (**Figure 4-223**).



Figure 4-218. South entrance to orchestra pit.



Figure 4-219. Overhang in orchestra pit forms a gutter to drain rainwater from the stage. Drain pipes convey water into the understage area.



Figure 4-220. Crack in edge overhang at north end of orchestra pit.



Figure 4-221. Concrete wall below stage apron showing surface cracking.



Figure 4-222. Orchestra pit wall facing seating area also shows many surface cracks.



Figure 4-223. Masonry walls beneath stairs to orchestra pit have missing and loose CMU blocks. North stair.



Figure 4-224. Masonry walls beneath stairs to orchestra pit have missing and loose CMU blocks. South stair.

Curtain Track

Construction

A mechanical system that enabled curtains to be drawn across the stage was added within three years of the Amphitheater's opening. This system includes two structural steel towers approximately 33 feet high, each capable of extending a boom supporting a curtain or stage scenery. Due to the size and weight of the towers, they are mounted on concrete pier foundations, rather than secured to the 5½" thick concrete stage slab. The base of the stage left tower is in the green room, and the base of the stage right tower is in the storage room. The towers are welded steel construction (**Figure 4-225**).

Penetrations are placed in the stage slab to allow the tower columns from the outside to extend into the green room and the storage room. The gap areas between the columns and the slab were filled with a dark filler material, which is now hard in texture. The curtain frame system is in disrepair, and has not been used for many years.

Existing Condition

The curtain frames are corroded and in disrepair. As can be seen by comparing **Figure 4-226** with **Figure 4-225**, the majority of the curtain arm for the stage left frame has been removed. While the degree of corrosion for the outside portion of the tower is not severe, the areas where the columns pass through the penetrations are more severely corroded, especially for the stage right tower. (**Figure 4-227 and Figure 4-228**). The curtain frame columns are W8 sections. In 2014, Protection Engineering Group estimated a reduction in area of 31% and a reduction in section modulus of 42%. Based on observations during this 2017 inspection, this estimate remains reasonable.

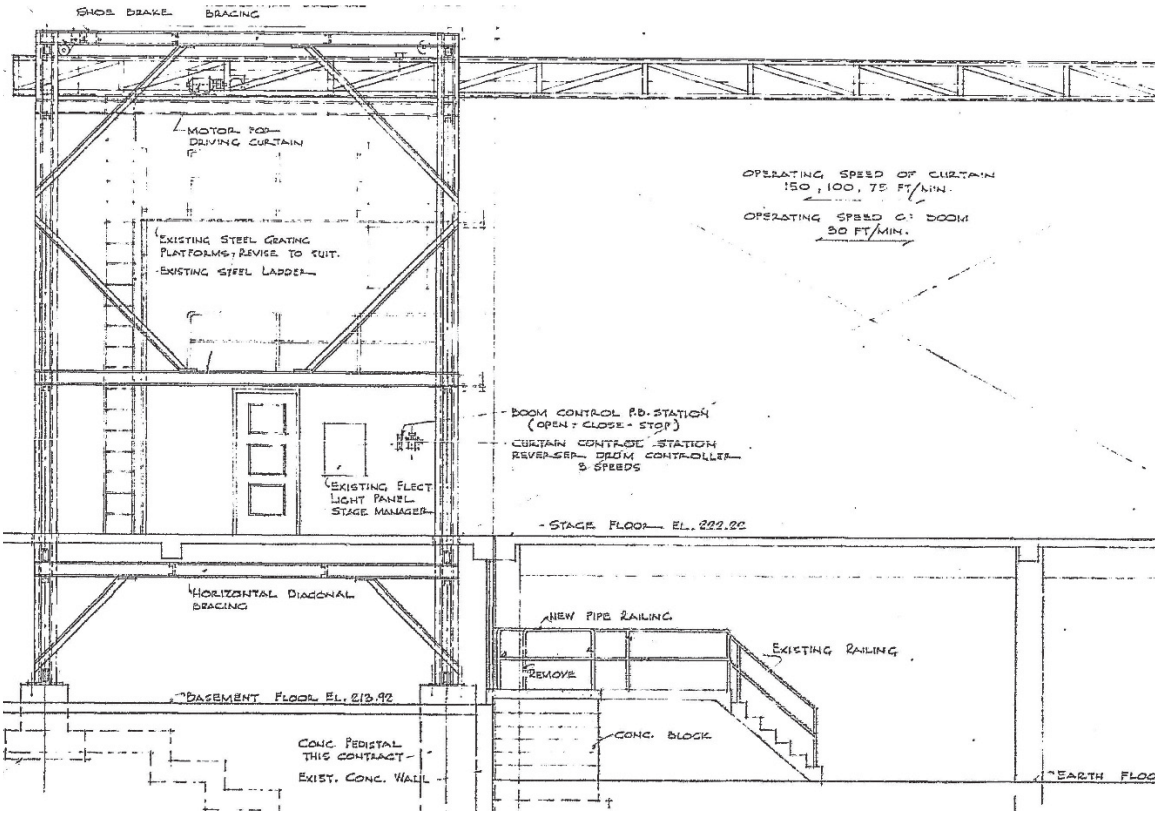


Figure 4-225. Configuration of stage left curtain frame. Stage right frame is similar but opposite hand.



Figure 4-226. Stage left curtain frame. Curtain arm has been partially removed.



Figure 4-227. Column of curtain frame shows evidence of corrosion.



Figure 4-228. Superstructure of curtain frame is also corroded.

From the condition of the frame and the concrete slab in the green room and especially in the storage room, all of the penetrations have been leaking for an extended period of time, and the moisture has caused long-term corrosion. A column base is shown in **Figure 4-229**, and locations where the columns pass through the slab are shown in **Figure 4-230 - Figure 4-232**. It should be noted that estimates of the degree of material loss are based on observable areas. It is not possible to observe the portion of columns passing through the concrete slabs since concrete patching has been packed into the penetration from below, and dark sealant has been placed in the penetration from above (**Figure 4-233**). It may be possible that the degree of corrosion in un-inspectable areas within the penetration is more severe than the level of corrosion indicated in the above estimate.



Figure 4-229. Column base of curtain frame in green room. Degree of corrosion of column base is typical.



Figure 4-230. Limestone deposits on column beneath failed slab repair.



Figure 4-231. Column of stage right curtain frame showing severe corrosion in vicinity of penetration through storage room ceiling. Estimated material loss is 31%.



Figure 4-232. Degree of corrosion on other curtain frame columns is significantly less than that shown on Figure 4-231. Typical column in shown here. Note that ceiling penetration has been repaired, but moisture leakage is still evident.



Figure 4-233. Penetration in stage deck for curtain frame column. Sheet metal sleeve was used as concrete form. Dark material used as filler has hardened and is leaking in many places.

North Building

Construction

The north building is constructed of 8-inch Concrete Masonry Unit (CMU) block with narrow pilasters in the long walls. The main stage storage (i.e. garage) area is a single-story structure, approximately 19 feet tall. Large roll-up doors are located in the north and south ends of the building. Openings for the roll-up doors are framed with concrete lintels. The roof construction of the main stage storage area is not visible, but there is a void of more than two feet between the warehouse ceiling and the roof.

The north building roof is structurally stiff, and is likely concrete.

To the east of the stage storage area are musicians' storage area and additional miscellaneous stage storage spaces. As is visible in **Figure 4-235**, a reinforced concrete lintel spans the south end of the east wall due to the doors and openings into the musicians' equipment and miscellaneous storage spaces. The roof of the musicians' and miscellaneous storage areas are composed of a reinforced concrete slab without a steel deck. The floor of the majority of the stage storage, musicians' storage area, production office, and janitor's office is a concrete slab on grade. The remainder of the Carter Barron Amphitheater, including the miscellaneous storage area, is built on an elevated slab above a lower level.

Relative locations of the stage storage area, musicians' storage area, and the miscellaneous storage area are shown in **Figure 4-234.**

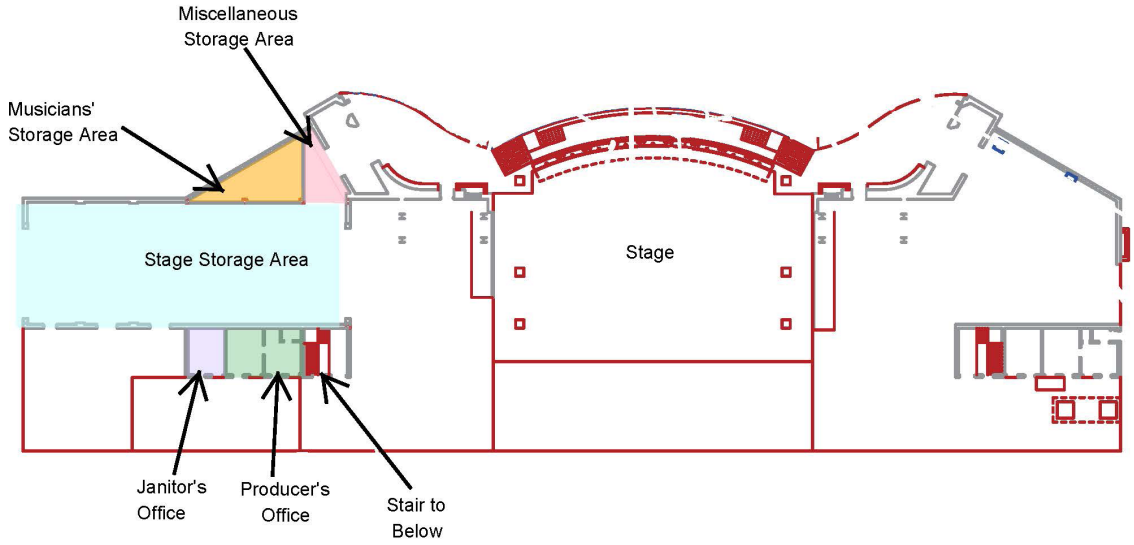


Figure 4-234. Carter Barron Amphitheater building arrangement in vicinity of stage storage area.



Figure 4-235. South end of stage storage area, showing entrances to musicians' storage and miscellaneous storage areas.



Figure 4-236. West side of stage storage area above production office and janitor's office. Note moisture-related damage of mortar between the near windows.

Existing Conditions

Overall, the stage storage area is in good condition structurally. As shown in **Figure 4-237 and Figure 4-238**, there is a large vertical crack near the center of the east wall. This crack is in a location of a stress-concentration near the end of the musicians' storage area. Rock Creek Park staff indicated that this crack is not new, and repairs have been attempted on portions of the crack. The crack extends through-wall.



Figure 4-237. Crack in east wall of stage storage area at north end of musicians' storage area.

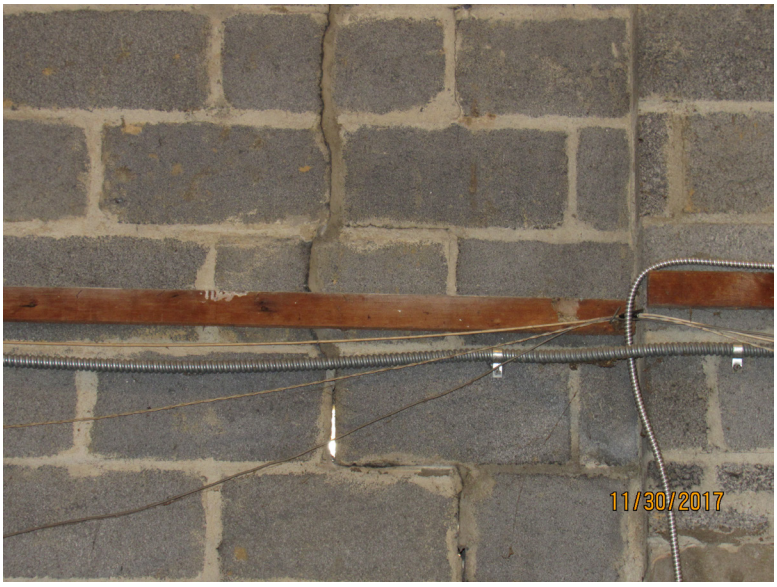


Figure 4-238. Close-up of crack showing that it extends through-wall.

One area of the west wall of the stage storage area shows signs of moisture-related damage, as shown in **Figure 4-239**. It appears that rain water is penetrating into the cavities of the masonry block. This may indicate a problem with the roof gutters or the roofing in the area. No problem with the gutters or roofing was immediately evident during the site visit.

In 2011, the ceiling of the stage storage area was replaced on an emergency basis. Since the original ceiling was Portland cement stucco plaster, it was replaced in kind, except that the wooden lath and furring were replaced with a metal equivalent. Records indicate that the original ceiling was failing, and posed a safety risk to personnel due to the potential that large pieces could fall. Rock Creek Park staff indicated that the degradation of the plaster ceiling was due to a leak in the roof that was repaired, but the roof repairs were not performed at the same time as the ceiling replacement.



Figure 4-239. West wall of stage storage area showing moisture-related damage to masonry. Area is beneath area shown in Figure 4-236.

Production Office, Janitor's Office, and North Stairwell

Construction

The production office and janitor's office are formed of 8-inch CMU block walls. It is not possible to determine the construction of the roof because of hard ceilings, but based on the similar constructions elsewhere, it is likely composed of a concrete slab on either timber or steel joists. The floor of the production office and janitor's office is a concrete slab on grade. The adjacent space contains the north stairwell which employs an elevated slab.

Existing Condition

The condition of the production office and janitor's office is relatively good. **Figure 4-240** shows some evidence of moisture damage in the ceiling of the janitor's office. There are a few minor cracks in the masonry block walls of both offices (**Figure 4-241**). Except for these minor cracks, the CMU units and mortar are still intact and in good condition.



Figure 4-240. Moisture damage in the ceiling of the janitor's office.



Figure 4-241. Crack in masonry wall of production office.

South Building

As shown in **Figure 4-242** below, dressing rooms 14 and 15 are located to the south of the stage, adjacent to the south stair. There is no dressing room 13.

Construction

Dressing rooms 14 and 15 are located in a separate building that includes the south stairs (**Figure 4-242**). The building is of 8-inch CMU block construction. It is not possible to determine the construction of the roof since the building has plaster ceilings, but based on the rigidity of the roof, it is likely a concrete slab on joists. **Figure 4-244** shows a damaged area of the ceiling revealing wooden lath backing behind the plaster. The building rests on the 5½ inch thick reinforced concrete stage slab. Dressing rooms 14 and 15 are located above the mechanical and electrical room.

Existing Condition

Although the building is aging and needs some superficial repairs, structurally, the condition of dressing rooms 14 and 15 is good. It is not possible to inspect the building roof construction, but from above the roof seems very firm, and no leaks were observed. The block walls are in good condition. There is some staining at the bottom of the exterior walls related to algae or mold as seen in **Figure 4-243**.

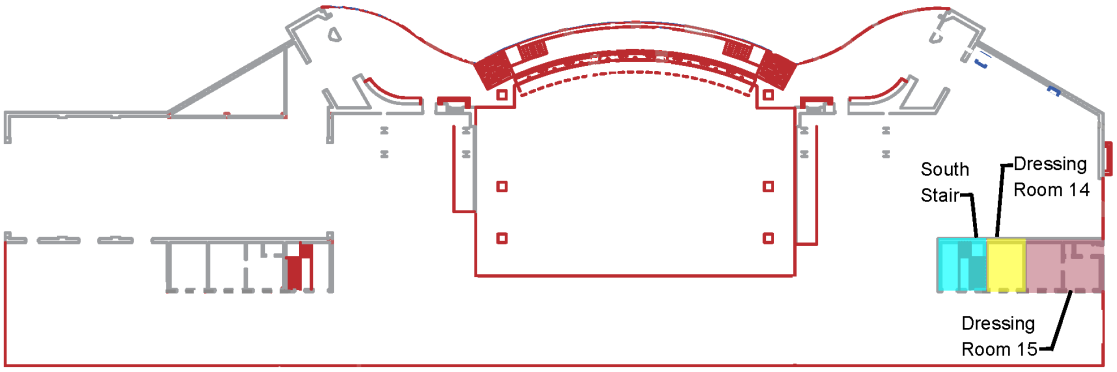


Figure 4-242. Location of dressing rooms 14 and 15.



Figure 4-243. Exterior south building.



Figure 4-244. Damage to dressing room 14 ceiling shows plaster and lath construction.

Green Room

Construction

Like the remainder of the Carter Barron Amphitheater lower level, the green room is of reinforced-concrete beam and column construction, with an integral slab ceiling and a concrete floor slab Most walls are non-structural, made of concrete masonry units. According to the original drawings, the east wall of the green room is non-load bearing. To the east of the green room is the unexcavated void beneath stage left wing wall. The east wall of the green room is formed of CMU block masonry units.

Existing Conditions

Structurally, the overall condition of the green room is good, (**Figure 4-245**). There are no significant cracks in the beams or columns, and similarly no cracks in the ceiling slab. Concrete members are painted and in good condition.

The east wall of the green room is a masonry wall (**Figure 4-246 and Figure 4-247**). As indicated above, it is not clear whether the wall is load-bearing or not. However, lower portions of the wall show extensive moisture-related damage. The damage affects both the mortar and the masonry units. Behind the CMU wall is the unexcavated area beneath the stage left wing wall. The source of moisture is not clear.



Figure 4-245. Interior of the green room, looking to the southeast. The bottom level of the stage left curtain track frame is visible toward the rear.



Figure 4-246. Portion of masonry wall with moisture-related damage. The damage affects both mortar and CMU blocks, and may have been made worse by coating the wall with paint, preventing the wall from drying.



Figure 4-247. Additional area in the green room that has been damaged by moisture.

Dressing Rooms 1 Through 12

Construction

Dressing rooms 1 through 12 line the west end of the Carter Barron Amphitheater lower level. Each of the rooms is nearly identical, with 8-inch CMU wall construction. The ceilings of the dressing rooms consist of a 5½" thick concrete slab. The floor of the dressing rooms consists of an elevated concrete slab. There is an open crawl-space beneath the dressing rooms. Both ceiling and floor elevated concrete slabs are supported by reinforced concrete beams and columns. The CMU walls are non-load bearing, but many are constructed between the concrete roof beams and floor beams. While these walls can transfer some of the load from the roof beams to the floor beams, the original design intent is not clear, because some of the walls are above an open slab rather than a beam, so that they are clearly non-load bearing.

Existing Conditions

Structurally, the condition of the dressing rooms is good. Concrete and masonry members are painted, and no cracks are visible in the support beams or concrete ceiling slab. A few cracks exist in the masonry walls of the dressing rooms, as shown in **Figure 4-249 and Figure 4-250**.There are some additional masonry cracks in dressing room walls that are associated with the expansion joints; these cracks will be discussed in the following section devoted to the expansion joints.

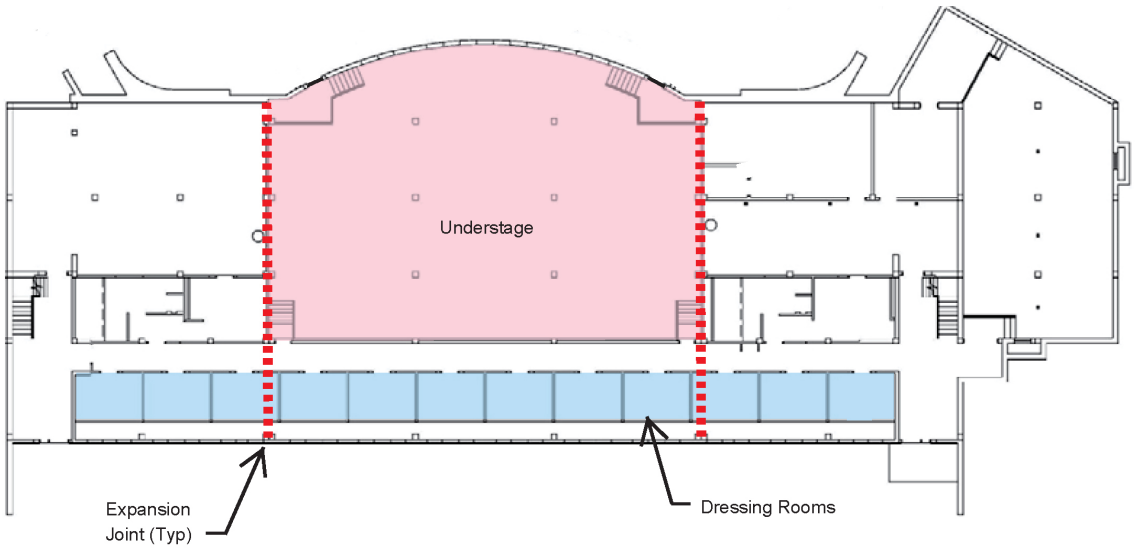


Figure 4-248. Basement level arrangement drawing showing dressing rooms, unfinished understage room, and expansion joints.

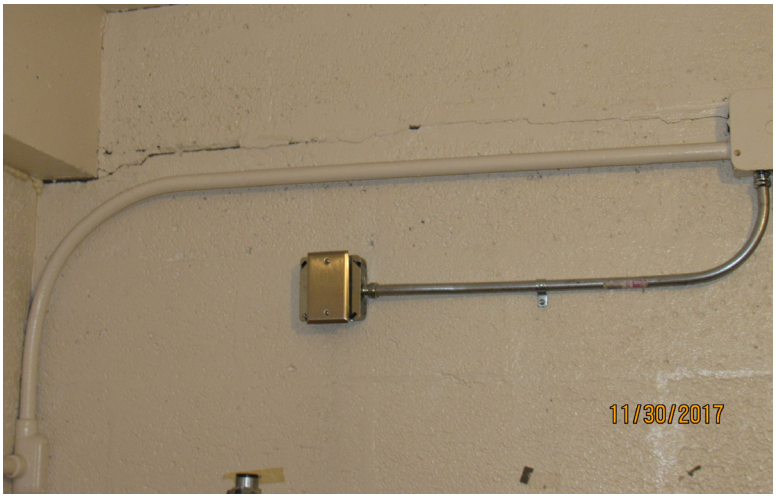


Figure 4-249. Dressing rooms. Crack exists between beam and masonry wall.



Figure 4-250. Dressing room 7. Crack exists between beam and masonry wall.

Expansion Joints

Construction

The lower level of the Carter Barron Amphitheater is approximately 205 feet long, including the 78-foot long central stage section. Expansion joints at each end of the central stage area separate the Carter Barron Amphitheater building into three independent structures. Twin columns and beams are used at the expansion joints, one serving each structure. A gap of approximately 1½ inches is present between the twin columns and twin beams. Likewise, the stage deck slab is divided into three portions. The gap between the sections of the slab is filled with soft filler material, and covered with a metal plate for protection (**Figure 4-251**). The plate is free to slide on one side of the slab. No evidence of recent moisture leakage from the expansion joints was observed during the inspections, so the filler material seems to be effective.



Figure 4-251. Cover plate protecting expansion joint. Cover plate is secured to an embedded angle on one side of the joint.

Existing Conditions

It is evident that the expansion joints have leaked for a long time. As shown in **Figure 4-252 and Figure 4-254**, a sheet metal gutter has been installed in the dressing room beneath the expansion joint between the twin beams to catch rainwater. In other areas (particularly in the hallway outside the dressing rooms) soft filler material has been placed between the gap between the twin beams. While this approach to control leakage may be acceptable, it remains important that any material placed between the twin beams and columns remain flexible enough for the joint to be able to move through its design travel.

Another concern is that the masonry walls between the dressing rooms and the hallway span across the expansion joints. As shown in **Figure 4-253 and Figure 4-254**, cracks have developed in the walls adjacent to the expansion joint. The primary purpose of the expansion joints is to allow for the stage deck slab to expand and contract to a greater degree than lower portions of the building. The joints also allow some flexibility during lateral load conditions. The building is designed to act as three independent structures. Installing the CMU wall across the expansion joints interferes with the expansion joint function. Normal expansion and contraction of the building results in cracking of the CMU wall as shown.



Figure 4-252. Columns on either side of the expansion joint in dressing room 10. It is not necessary to seal the joint between the columns. Note sheet metal trough to collect moisture leaking through the slab and between the double beams.



Figure 4-253. Crack in masonry wall beneath expansion joint. Masonry wall should also have an expansion joint to prevent this type of cracking.



Figure 4-254. Columns on either side of the expansion joint in dressing room 10. It is not necessary to seal the joint between the columns. Note sheet metal trough to collect moisture leaking through the slab and between the double beams.

Restrooms and Showers

Construction

The performers' restrooms and shower areas are located in the lower level of the Carter Barron Amphitheater. Both facilities utilize reinforced concrete beam and column construction, concrete slab ceilings, and non-load bearing CMU walls.

Existing Conditions

The structural condition of the restrooms and shower areas is good. There are no visible cracks in ceiling beams or columns, or cracks in the ceiling slabs. As shown in **Figure 4-255**, there is staining on the men's restroom wall indicating the presence of moisture. The wall showed no evidence of moisture during the visit, and the wall condition has not degraded due to the moisture.



Figure 4-255. The CMU wall in the men's restroom shows signs of moisture coming from above. The wall blocks and mortar in the area are still in good condition.

Laundry Room

Construction

The laundry room is of reinforced concrete beam and column construction, with a reinforced concrete slab ceiling and concrete floor. Walls are composed of non-load bearing CMU block.

Existing Conditions

The structural condition of the laundry room is good. There are no significant cracks in the beams or columns, and no cracks in the ceiling. One small crack was noted near the top of the north CMU wall, where some small pipes pass beneath a structural beam (**Figure 4-256**). This crack may have been created when the penetration for the pipes was made.



Figure 4-256. Crack in wall beneath beam and small piping. Crack may have occurred when pipe penetration was made.

Storage Room

Construction

The storage room is built using reinforced concrete beam on column construction, with a reinforced concrete ceiling and floor slabs. The walls are generally concrete masonry unit construction, but there is one specially-heated area used for the storage of paint enclosed by gypsum board walls.

Existing Conditions

The ceiling of the storage room exhibits several leaks. The base of the stage right steel curtain frame is located in the storage room, and the penetrations where the frame columns penetrate the ceiling all show signs of leakage, even though repairs have been attempted (**Figure 4-257**). An additional leak occurs at a location where a hole had been drilled (**Figure 4-258**). All of these leakage locations show signs of deposits (weeping). Passage of water through the concrete dissolves calcium hydroxide (lime) from the cement paste. When the water droplet is again exposed to air, the lime-water solution reacts with carbon dioxide in the air to form calcium carbonate (limestone). This leaching process weakens the concrete and should be corrected.



Figure 4-257. Repaired area of storage room ceiling shows evidence of moisture leakage and associated limestone deposits.



Figure 4-258. Hole in ceiling of storage room shows evidence of water leakage and lime deposits.

Custodial Room

Construction

The custodial room is constructed using reinforced concrete beams on columns, with a reinforced concrete ceiling and floor slabs. The walls are non-load bearing CMU block. The north wall is covered with gypsum wallboard, so it is not possible to inspect its condition.

Existing Conditions

The custodial room is generally in good structural condition. As shown in **Figure 4-259**, there is one moderate-sized spall in the ceiling. The spall is unusual in that one of the reinforcement bars has broken at the spall. Above the broken reinforcement bar is a plug of silicon sealant. It is likely that the spall and the broken reinforcement bar were caused when it was attempted to drill a hole in the backstage deck, and the bit struck the reinforcement bar.

In addition to the ceiling spall, evidence of moisture was noted at a location in the south wall (**Figure 4-257**).The concrete and mortar remain in good condition.



Figure 4-259. Crack in wall beneath beam and small piping. Crack may have occurred when pipe penetration was made.



Figure 4-260. Masonry wall in the custodial room shows evidence of moisture.

Mechanical and Electrical Room

Construction

The mechanical and electrical room construction is composed of reinforced concrete beams on columns, with a reinforced concrete slab ceiling and concrete slab floor. The walls of the room are non-load bearing CMU block (**Figure 4-261**). In addition to electrical and HVAC equipment, the room is used for storage of chair components.

Existing Conditions

The condition of the mechanical and electrical room is generally good. The beams and columns are in good condition. The ceiling has a few cracks, some of which have been ineffectively repaired, with signs of moisture leakage, including lime deposits and efflorescence (**Figure 4-263**). In addition, there is one area where a repair was made that also shows leachate deposits. This repair may be a location where a concrete core was sampled during a previous assessment (**Figure 4-262**). As shown in the following photographs, the texture of the deposits in the room are unusual in some areas, resembling wispy cotton fibers (**Figure 4-263**). As indicated previously, these deposits are likely limestone, and the process that creates the visible deposits damages the concrete. In addition to the ceiling areas showing leakage and limestone deposits, one small spall was noted (**Figure 4-264**).



Figure 4-261. Hole in ceiling of storage room shows evidence of water leakage and lime deposits.



Figure 4-262. Repaired area of storage room ceiling shows evidence of moisture leakage and associated limestone deposits.



Figure 4-263. Unusual deposits from ceiling crack have a wispy texture.



Figure 4-264. Small spall in ceiling of mechanical and electrical room.

Unfinished Room

Construction

The area beneath the performance area of the stage is unfinished, with a dirt floor covering spread footings. Finished and unfinished spaces flank this large area, located beneath the ends of the stage.

The slab over the stage and surrounding areas is 5½ inches thick and the girders and beams are 12 inches wide and 14 to 24 inches deep (**Figure 4-265**). Reinforced concrete columns on spread footings support the beams. Columns range from 12”x12” to 16”x16” in size. The original stage area had seven openings in the concrete slab which have been subsequently filled-in with concrete (**Figure 4-266 to Figure 4-268**). The infilled areas represent about 15% of the stage area, with the one larger slab infill area in the forward central portion of the stage.

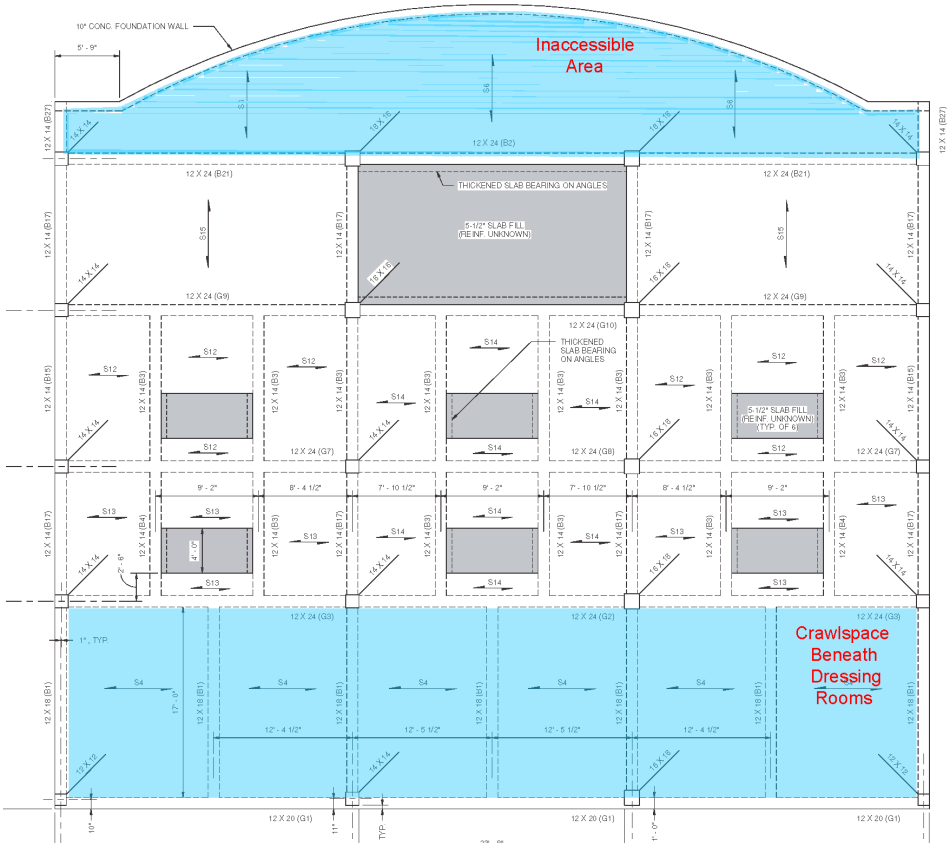


Figure 4-265. Structural drawing of understage area showing infilled areas (shaded gray) and configuration of concrete columns, girders, and beams.



Figure 4-266. One of the smaller infill areas in the stage. Steel angles support the turned-down ends of the slab.



Figure 4-267. End of large infill section. Steel angle supports turned-down end of slab. Note sheet metal catch basin beneath the girder.



Figure 4-268. Underside of original stage slab. Wooden planks were used for concrete forming, as was done for the entire facility. Efflorescence can be seen at crack location.

Johnson, Mirmiran & Thompson (JMT), an engineering company, performed calculations in 2016-2017 that indicate that all concrete girders and many of the beams are overstressed in shear and torsion under design loads. Because of these calculations, Carter Barron Amphitheater was closed to performances in 2017. There are several reasons for the conclusion that beams and girders are overstressed in shear. As indicated previously, about 15% of the stage area has been infilled with new concrete slabs. Since the stage dead load is composed of the weight of the stage slabs plus the beams and girders, infilling 15% of the stage slabs increases the dead load only about 10%. A more important factor is that the spacing of stirrups in many members does not meet current ACI 318 requirements; because of this, recent JMT calculations ignore the stirrups when calculating shear capacity. This effect increases the degree of overstress, but most of the beams would be overstressed even if the stirrups were considered. A third reason is that the current design method for calculating shear capacity is more conservative than the methods used in the 1950 design of the Amphitheater. JMT has recommended repair strategies, and the NPS is currently developing a repair plan to design and implement the necessary repairs required to reopen the Amphitheater.

Although the 2017 JMT report concluded that the stage beams and giders are overloaded in shear, the condition of the beams and girders themselves is good. No significant defects were observed in the beams or girders. The stage deck slab has some cracks which permit moisture to leak through, resulting in limestone deposits and efflorescence on the underside of the slab (**Figure 4-268**). In addition, as shown in Photograph 4-81, there are a few spalls in the underside of the slab, including some in the new infilled panels, but as a whole, the slab is in fairly good condition. There are several sheet metal gutters beneath beams and girders that apparently are to collect water, but there are no downspouts to convey rainwater from the gutters. Since some of these gutters are adjacent to the infill panels, it is possible that they were installed to collect water when wooden trapdoors were in place and prior to concrete infills being placed.

There is a dirt floor in the unfinished room. A large gully has been eroded through the center of the dirt floor in the unfinished room (**Figure 4-269**). The gully is over 40 inches deep and 48 inches wide at the largest location. The gully runs between the center column footings in the understage area, so that it does not appear to undermine the footings. However, the dimensions of the spread footings are not known, so it is not clear how close the gully is to undermining structural footings for the stage. The source of water that created the gully is not clear, but Rock Creek Park staff have indicated that the gully has been present in the understage area in recent years. It is possible that the source of water that created the gully was corrected when the seating area and associated stormwater collection systems were replaced in



Figure 4-269. Large eroded gully running though the center of the understage area.

2004.

There are stair landings at the northeast and southeast corners of the understage area. As shown in **Figure 4-270** these landings do not have perimeter walls supporting the edges of the landing slabs. Because of the lack of walls supporting the slab edges, the soil beneath the landings is sloughing down, undermining the landings.

One column in **Figure 4-271** shows what appears to be erosion over about a one-foot depth at the point where the column goes below ground. While the amount of material loss is small relative to the column area, the erosion reduces protective cover of reinforcement.

As seen in **Figure 4-272,** one column shows a crack at the construction joint at the face where the column intersects a grade beam. The cause of the crack is unknown. The column is in good condition at this time; however, continued exposure to moisture and oxygen will cause corrosion of the column



Figure 4-270. Stairway platform at northeast corner of understage area. Neither of the platforms at the east side of the understage area have endwalls beneath the edges of the slab, and both slabs are severely undermined.



Figure 4-271. Eroded column in understage area.



Figure 4-272. Column at west side of understage with crack at column base construction joint.



Figure 4-273. One of several cracked areas in the understage slab where moisture and efflorescence are present.



Figure 4-274. Underslab of stage showing spalled areas with exposed reinforcing bars.

reinforcement at the joint.

Structural References

1. Protection Engineering Group, Structural Assessment of Carter Barron Amphitheater Condition Assessment Report, February 2014.

2. Johnson, Mirmiran, & Thompson, Inc., Stage Load Assessment & Accessible Handrail Installation at the Carter Barron Amphitheater, Final Report, February 1, 2017.

Mechanical Systems

Air conditioning is provided for the occupied, lower level areas that consist of two separate 2-1/2 ton split air conditioning systems serving the corridor area and one 4 ton split system serving the green room (**Figure 4-275**). The condensing units for all three systems are located below the stage in the unconditioned area as seen in **Figure 4-276**. No positive outside air ventilation is provided for the occupied spaces. These units have reached the end of their useful life.



Figure 4-275. Two split systems serving the green room.



Figure 4-276. Condensing units.

Window air conditioning units are provided for the control booth, sound room, and separate upper level office spaces, which can been seen in **Figure 4-277**. These window units have reached the end of their useful life.



Figure 4-277. Window air conditioning units for the control booth, sound room and office spaces

Electric wall heaters are located in some of the storage and service areas in the lower level. (**Figure 4-278)**. The electric heaters have reached the end of their useful life.



Figure 4-278. Electric wall heaters.

The lower areas are ducted to a central centrifugal exhaust fan located in the area below the stage that was not operational.

Two standing floor fans and standalone dehumidifiers were located in the lower level corridor to provide supplemental ventilation and dehumidification. These units have reached the end of their useful life.

The laundry dryer is vented to the open area beneath the stage. The dryer vent ductwork is suitable for reuse if the dryer stays in its current location.

Exterior public toilet rooms are ventilated using ceiling mounted circulating fans which can be seen in **Figure 4-279**. The circulating fans do not provide code compliant ventilation and should be replaced.



Figure 4-279. Ceiling mounted circulating fans in restrooms.

A 2 ton split system gas furnace provides the heating and cooling for the box office and office building. This unit has reached the end of its useful life.

Plumbing Systems

A 3” domestic water service enters the lower level on the north end of the building through the exterior wall of the green room. (**Figure 4-280**).

Electric water heaters are provided to produce the domestic hot water: one 80 gallon water heater is located in the green room, and a second 80 gallon water heater is located in a lower level storage area on the south end of the building near the laundry equipment. (**Figure 4-281**). The concessions areas each have separate electric water heaters. The water heaters are all reaching the end of their useful life.



Figure 4-280. 3” domestic water service.



Figure 4-281. The laundry dryer is vented to the open area beneath the stage.

Plumbing fixtures provided in the lower level include water closets, urinals, lavatories and showers, all of which have been retrofitted to low flow (**Figure 4-282**). A service sink is located in the lower level storage room area. There are ABAAS compliant fixtures located in the public men's and women's rooms located off the promenade adjacent to the concessions area. These fixtures are suitable for reuse.



Figure 4-282. Lavatory.

Water coolers are located outside of the public toilet rooms. An electric water cooler is provided in the box office. The water coolers are reaching the end of their useful life.

The sanitary main runs north-south under the stage on the back, east end of the building where it connects to the sanitary sewer. (**Figure 4-283**).

Natural gas is available in the box office for the split system furnace. Instant hot electric water heaters are used to provide domestic hot water for the building lavatories. The hot water heater is reaching the end of its useful life.

Area drains located throughout the Amphitheater and seating areas are connected to storm piping mains that connect to the storm sewer on the east end of the Amphitheater. See **Figure 4-284** for one of the area drains.



Figure 4-283. Sanitary mains.



Figure 4-284. Area drains.

Electrical Systems

The Potomac Electric Power Company, also known as Pepco, provides the Carter Barron Amphitheater with a 1,600 Amp three phase 120/208V service. The 1,600A main switchgear is located in the main electrical room located in the south end of the lower level. The main switchboard is approximately 5 years old and is in good condition and suitable for reuse. See **Figure 4-285** for the main switchgear.

The main switchgear provides 120/208V to branch circuit panelboards located throughout the center. Most of the panelboards are original and are reaching the end of their useful life. See **Figure 4-286** for photos of panelboards.

The box office, each concession stand and each of the control booths are all provided with dedicated branch circuit panelboards.

The Carter Barron Amphitheater is provided with a 26kW/33kVA 120/208V 3 phase life safety generator. The emergency generator has been disconnected and is no longer used. See **Figure 4-286** for the generator. When emergency power is needed a temporary generator is provided at the upper level stage area and temporary feeders are provided from the temporary generator to a 100A automatic transfer switch located in the main electrical room. This transfer switch serves an emergency panel that feeds egress lighting and other emergency loads. See **Figure 4-287** for the generator.



Figure 4-285. Main switchgear.



Figure 4-286. Panelboards.



Figure 4-287. Emergency generator from 2004 rehabilitation. No longer functional or tied into lighting systems.

Most of the lighting in the Carter Barron Amphitheater was retrofitted under an energy saving project a few years ago. All of the fixtures themselves are reaching the end of their service life, although they have recently been retrofitted with LEDs. All interior fixtures are obsolete.

- The lower level consists of surface mounted lensed fixtures retrofitted with LEDs. (**Figure 4-288**).

- The box office, concession stands and exterior bathrooms utilize 1x4 fluorescent fixtures. (**Figure 4-289**).

- The dressing room lighting has been retrofitted with LED lamps. (**Figure 4-290**).

- The pathway lighting is illuminated with both light bollards and pole mounted fixtures. Most of these fixtures have been replaced recently and are suitable for reuse. **(Figure 4-291).**

- Self-contained beam battery lights are located throughout the facility to provide egress lighting when power is lost. These self-contained light fixtures have reached the end of their useful life. (**Figure 4-292**).

- In the seating area, lights are attached to the seats along the egress path to illuminate the walkway. (**Figure 4-293**).

- The promenade canopy is provided with surface mounted fixtures mounted to the wood structure. It is unclear if these fixtures were retrofitted with LED lamps. (**Figure 4-294**).

- Exit signs are located throughout the facility.

There is no fire alarm system serving the Carter Barron Amphitheater.



Figure 4-288. Surface mounted fixtures with LEDs.



Figure 4-289. Fluorescent fixtures.



Figure 4-290. Dressing room lamps.





Figure 4-291. Light pole (left) and battery powered light (right).



Figure 4-292. Light fixture.



Figure 4-293. Seating area lights.



Figure 4-294. “Quiet Please” sign.

Hazardous Material

Arc Environmental, LLC (Arc Environmental) performed a limited pre-alteration hazardous material survey at the Carter Barron Amphitheater located at 4850 Colorado Avenue, NW in Washington, DC (site) to evaluate building materials for the presence of asbestos and lead-based paint. The survey included the assessment and sampling of accessible, suspect asbestos-containing materials (ACMs); on-site testing of painted coatings for lead-based paint (LBP); and inventorying universal wastes. The survey was performed on November 20, 2017 and revisited on November 30, 2017 and December 7, 2017.

During the survey, a total of 119 bulk samples were collected from 50 suspect homogeneous areas identified throughout the site. Based on the findings of the asbestos survey, one of the sampled homogeneous materials was confirmed by laboratory analysis to be asbestos-containing materials. Identified ACMs include 12”x12” white floor tile and associated mastic, mudded pipe fittings, air-o-cell pipe insulation, shower caulk, exterior window caulk, roof seam caulk, transite panel and 9”x9” floor tile. Additionally, four suspect materials were presumed to be asbestos-containing: fire door, roof exhaust caulk, chalkboard mastic and canvas wire wrap. These materials were not sampled due to inaccessibility and/or to maintain the integrity of the materials. Section 2.0 provides additional details regarding the findings of the asbestos survey.

The lead-based paint screening was conducted at the site using a portable X-ray Fluorescence (XRF) device. On-site testing revealed the presence of lead-based paint on several building components and/or surfaces including metal window casing, metal pipe, metal door, metal door components, metal support beam, wooden door and metal support frame. Section 3.0 provides detail regarding the LBP survey.

Visual inspections were performed to identify and quantify universal and regulated wastes associated with the site. Potentially regulated and/or Universal wastes inventoried include potentially mercury-containing fluorescent light tubes and high intensity discharge (HID) light bulbs; potentially polychlorinated biphenyl (PCB)-containing ballasts; hydraulic door closures suspected of containing oils/lubricants, window ac unit suspected

of containing Freon and exit and emergency lighting potentially containing batteries. Section 4.0 details the locations of the identified Universal and potentially regulated wastes.

See Appendix B for the full hazardous materials report.

Mortar Analysis

At the request of Quinn Evans Architects, Conservation Solutions, Inc. performed analysis of mortar samples collected from the Carter Barron Amphitheater located in Washington, DC. CSI was tasked with analysis of up to two (2) representative samples. Four (4) samples were collected by a CSI conservator on November 30, 2017 and three (3) samples were fully processed.

Overall, there is consistency in the samples collected and it is the conclusion of this analysis that the three samples are representative of a similar mortar mix type at Carter Baron Amphitheater. This is based on the high degree of similarity between samples with regards to mortar color, reactivity to acid, aggregate characteristics, and percentages of fines, reclaimed aggregate, and soluble components. The one distinction is between the samples taken from the north and south wings of the Amphitheater, which display a slight variance in aggregate size. Sample 002 contained a greater amount of very fine sand particles compared to the other two samples.

See Appendix C for the full mortar analysis report.

Chapter 5: Treatment Analysis

Ultimate Treatment and Use

The Secretary of the Interior has established standards and guidelines for the appropriate treatment of historic properties. These standards identify three approaches that might be considered for treatment and use of the Carter Barron Amphitheater and box office: preservation, restoration, and rehabilitation. The fourth approach, reconstruction, is not an applicable treatment approach for this site.

Preservation

Preservation is defined by the Secretary of the Interior as:

> *the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project*.[1]

Under preservation, the Carter Barron Amphitheater and box office complex would be maintained in more or less its present state, with the minimal maintenance necessary to continue in its present condition. It would continue to have the additions and alterations that have occurred. Simply repairing and preserving the complex in its current state would not meet the mandates of the enabling legislation or the needs of the park, and therefore preservation is not an appropriate approach.

1 "The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, and Reconstructing Historic Buildings," U.S. Department of the Interior National Park Service, Technical Preservation Services, Revised by Anne E. Grimmer, 2017, https://www.nps.gov/tps/standards/treatment-guidelines-2017.pdf.

Restoration

Restoration is defined by the Secretary of the Interior as:

> *the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.*[2]

This approach as applied to the Carter Barron Amphitheater and box office would likely mandate its restoration to the period of significance, its original construction date. Although restoration is an appropriate approach given the significance of the Amphitheater, it would not address ongoing issues with conducting performances, meeting technical requirements, and accommodating visitors. Restoration is therefore not a viable approach.

Rehabilitation

Rehabilitation is defined by the Secretary of the Interior as:

> *the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.*[3]

A rehabilitation approach to treatment would provide the most flexibility in the use of the Carter Barron Amphitheater and box office. This approach emphasizes the retention and repair of historic materials, but more latitude is provided for replacement because it is assumed the property is more deteriorated prior to work. Like those for preservation, the standards for rehabilitation focus attention on the preservation of those materials, features, finishes, spaces, and spatial relationships that, together, give a

2 Ibid.
3 Ibid.

property its historic character. Therefore, rehabilitation is the recommended approach to treatment for the Carter Barron Amphitheater and box office.

Proposed Use

The Carter Barron Amphitheater and box office were constructed as a performing arts facility. Given the facility's location and historic use, it is most appropriate to continue its use as a performing arts facility. No other alternative uses have been identified, nor are there plans for construction of a new facility. The Amphitheater is not addressed in the Rock Creek Park General Management Plan. The Carter Barron Amphitheater and box office are historic structures. They are listed as contributing resources to the Rock Creek Park Historic District in the Draft Amended Nomination and Boundary Increase. This HSR has been prepared to guide the future rehabilitation of the Carter Barron Amphitheater and box office with that assumption.

There will always be a need for additional historic and architectural research as conditions change, but the data so far collected provides a good foundation of knowledge on which to plan for the building's future.

Preservation Zones

To aid in future planning and work, the areas and features within the Carter Barron Amphitheater and box office have been categorized into preservation zones. Zones are defined as follows:

> **Primary**: Primary zones are those that were designed as important public spaces, were original to the design of the Carter Barron Amphitheater and box office, and retain integrity to the period of significance. Great care should be taken to preserve the character-defining features of these spaces when undertaking any future work. Necessary alterations should be concealed or complementary to the original design but remain distinct from the character of the original fabric. Examples of primary zones include the stage, wing walls, and the promenade.

Secondary: Secondary zones are defined as those that were designed as important public spaces but have subsequently lost some degree of integrity through alterations, or that were added after the period of significance but designed to complement the character of the original design. Greater latitude is permitted in making necessary alterations in these areas, but work should remain complementary to the original design. Examples of secondary zones include the Amphitheater seating bowl, the box office, and the orchestra pit.

Tertiary: Tertiary zones are defined as those that were designed as utilitarian or non-public spaces, or have been significantly altered in a manner not complementary to the character of the original design. Significant alterations are permissible in these spaces, but care should be taken to ensure that material selections are compatible with the original construction and that alterations do not impact the character of the primary and secondary zones. Examples of tertiary spaces include the restrooms at the promenade and the backstage and basement rooms.

Diagrams illustrating the preservation zones are provided at the end of this chapter.

Character-Defining Features

Character-defining features are the visual and physical features that give a building its identity and distinctive character. They may include the overall building shape, its materials, craftsmanship, decorative details, interior spaces and features, and aspects of its site and environment. Character-defining features can occur in primary, secondary, and tertiary zones and are intended to serve as another reference to guide future treatment.

Site/Landscape

- Sloping topography
- Wooded hillsides

Location/Siting

- Amphitheater set within a natural bowl
- Parking lot, box office, and entrance gate
- Amphitheater surrounded by tall, mature trees
- Box office set between the Amphitheater and the parking lot

Massing

- Amphitheater's form as a bowl nested at the base of a hillside
- Vertical structures mark the stage as a focal point
- Promenade formed by long horizontal lines

Texture and Materials

The Amphitheater employs a limited palette of materials and colors meant to harmonize with the surrounding landscape while reflecting the grandeur of Washington, DC's other monuments including:

- Limestone
- Field stone
- Brass
- Concrete
- Wood

Box office

- Cabin-like but with slope roof offering a mix of rustic and modern in miniature
- Wood and concrete block construction
- Roof shelter over ticket window

Entry Gate

- Field stone veneer piers decorated with plaques in memory of Carter Barron
- Stone veneer matching that used at the promenade walls and in the stage wing walls
- Cast iron decorative gate, decorated with Sesquicentennial medallions

Walkways

- Walkways fork off from the entrance path, connecting the box office and entrance gate to three points of entry in the promenade
- Walkways wind through the woods

Promenade

- An open, single story promenade that lines the back of the Amphitheater
- Roof spans from north to south covering the back walkway
- Open center bay provides view from the wooded path down onto the stage, a preview of the full view granted at the top of the Amphitheater's center aisle
- Exposed post and beam construction.
- Partial height stone veneer wall with piers
- Partial wood construction

Seating and Aisles

- Amphitheater seating formed in bowl that curves up and out from the stage
- Poured concrete aisle and seating floor

Stage

- Center stage which opens into the woods beyond, flanked by two wing stages each with a modern designed back wall
- Wing walls framing the center stage, finished with rustic stone veneer matching that used on the entrance gate and the promenade wall and detailed with modern touches including smooth limestone corners, brass speaker covers, a stone veneer planter, and doors framed with a projecting jamb and lintel
- Two small flights of stairs between the stage and the Amphitheater aisles, one at either edge of the center stage
- Open-air orchestra pit in front of the center stage, sunken below the Amphitheater floor; stairs at each end of the pit connecting the pit to the Amphitheater aisles

Back of House

- Dressing rooms, restrooms, showers, a lounge, and storage support the stage
- Rooms are massed behind the stage and stage wings, hidden from public view

Requirements for Treatment and Use

A number of laws, regulations, and functional requirements circumscribe treatment and use of the historic structures in the National Parks. In addition to protecting the cultural resource, these requirements address issues of human safety, fire protection, energy conservation, abatement of hazardous materials, and accessibility. Some of these requirements may contradict or be at cross purposes with one another if they are rigidly interpreted. Any treatment must be carefully considered in order that the historic fabric of the structure be preserved.

Authorizing Legislation

Congress established Rock Creek Park on September 27, 1890 under The Rock Creek Park Authorization Act, Fifty-First Congress, Session 1, Chapter 1001. It was one of the first federal parks established. The Park's founding legislation cites the area's natural beauty and high public value and states that it is to be "dedicated and set apart as a public park or pleasure ground for the benefit and enjoyment of the people of the United States."

Rock Creek Park was managed by the U.S. Army Corps of Engineers, then transferred to the Office of Public Buildings and Parks. In 1916, Congress created the National Park Service, which took over administration of Rock Creek Park in 1933.

The Carter Barron Amphitheater and box office were constructed under the management of NPS but with guidance and funding from the National Capital Sesquicentennial Commission, established by Congress in 1947. The Commission was established by Joint Resolution 129, Public Law 203, to "provide for the appropriate commemoration of the one hundred and fiftieth anniversary of the establishment of the seat of the Federal Government in the District of Columbia in the year 1800." The Commission selected a site for the Sesquicentennial Amphitheater, later renamed for Commission leader Carter Barron, in Rock Creek Park, already identified by NPS for an amphitheater.

Foundation Document

NPS published the Foundation Document for Rock Creek Park in September 2015 that identifies the fundamental resources and values (FRVs) associated with the park. According to the Foundation Document, FRVs

> *are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to warrant primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance. Fundamental resources and values are closely related to a park's legislative purpose and are*

> *more specific than significance statements. Fundamental resources and values help focus planning and management efforts on what is truly significant about the park.*

The Foundation Document identifies four FRVs: Rock Creek and Tributaries, Ecological Communities, Cultural Landscapes, and Opportunities for Recreation and Respite. Carter Barron Amphitheater is identified as an "activity-specific facility" that supports the Opportunities for Recreation and Respite FRVs. The Amphitheater is described as having "structural issues [that] have been identified and are unresolved."

Purpose Statement

Park purpose statements outline the reasons an area was set aside and the purposes the park is to serve. Rock Creek Park's purpose statement, as of the 2005 General Management Plan, is as follows.

> *Rock Creek Park exists to provide opportunities for recreation appropriate to the park's natural and cultural resources. Park areas that contain tributaries to Rock Creek exist to preserve forests and natural scenery in and around Washington, DC. Rock Creek Park exists to preserve and perpetuate for this and future generations the ecological resources of the Rock Creek Valley in as natural a condition as possible, the archaeological and historic resources in the park, and the scenic beauty of the park. Park areas that contain tributaries to Rock Creek exist to preserve the flow of water in Rock Creek. Park areas that contain tributaries to Rock Creek exist to prevent the pollution of Rock Creek and the Potomac River. Rock Creek Park exists to provide opportunities for the public to experience, understand, and appreciate the park in a manner appropriate to the preservation of its natural and cultural resources.*

As contributing resources to the Rock Creek Park Historic District, the Carter Barron Amphitheater and box office are cultural resources.

Park Significance

Significance statements express why Rock Creek Park resources and values are important enough to merit national park unit designation. Statements of significance describe why an area is important within a global, national, regional, and system wide context. These statements are linked to the purpose of the park unit and are supported by data, research, and consensus. Significance statements describe the distinctive nature of the park and inform management decisions, focusing efforts on preserving and protecting the most important resources and values of the park unit.

The Rock Creek Park significance statements were developed during the 2009 Long-Range Interpretive Plan workshop and include the following:

- *Rock Creek Park is one of the last remnants of wild scenic landscape in the Nation's Capital.*
- *Rock Creek Park preserves an exceptional collection of designed landscapes that are exemplars of a variety of significant trends and movements illustrative of American park and landscape philosophies.*
- *Rock Creek Park's forests and open spaces help define the character of the Nation's Capital.*
- *Rock Creek Park is the first urban national reserve managed as a national park.*
- *Rock Creek Park helps protect Rock Creek and its tributaries and offers an important opportunity for watershed education.*
- *Rock Creek Park preserves over 2000 acres of plant and wildlife habitat, providing protection for a variety of flora and fauna species within the Nation's Capital.*
- *Rock Creek Park preserves evidence of a 5,000 year continuum of human interaction with the environment.*

- *Rock Creek Valley was important in the development of the Nation's Capital, and cultural properties in the park illustrate that history.*
- *Rock Creek Park is an urban oasis offering opportunities for recreation, refreshment, and revitalization in the Nation's Capital.*
- *The Rock Creek and Potomac Parkway is the first federally constructed parkway and an excellent example of early parkway design.*
- *Located in the heart of a densely populated metropolitan area, Rock Creek Park serves as an ambassador for the national park idea, providing outstanding opportunities for education, interpretation, and recreation to foster stewardship of natural and cultural resources.*

General Management Plan

The General Management Plan does not address Carter Barron Amphitheater.

National Historic Preservation Act

The National Historic Preservation Act of 1966, as amended (NHPA), mandates federal protection of significant cultural resources, including buildings, landscapes, and archaeological sites listed in or eligible for listing in the National Register of Historic Places.

Section 106

A routine step in the park's planning process for the treatment of cultural resources is compliance with Section 106 of NHPA. This requires that prior to any undertaking involving National Register-listed or National Register-eligible historic properties, federal agencies "take into account the effect" of the undertaking on the property and give the Advisory Council on Historic Preservation (Advisory Council) "a reasonable opportunity to comment with regard to such under-taking." To satisfy the requirements of Section 106, regulations have been published (36 CFR Part 800, "Pro-

tection of Historic Properties") that require, among other things, consultation with local governments, State Historic Preservation Officers, and Indian tribal representatives. They also establish criteria under which the Advisory Council may comment, but as a practical matter, the vast majority of Federal undertakings do not involve review by the Advisory Council. The Section 106 review is intended to ensure that all interested parties have a voice in the treatment of our nation's cultural heritage.

The Secretary of the Interior's Standards

The Secretary of the Interior's Standards for the Treatment of Historic Properties (Standards) provide a philosophy to underpin historic preservation that is widely understood and almost universally accepted in the United States. By separate regulation, the Secretary has required the application of the Standards in certain programs that the Secretary administers through the National Park Service. They have also been widely adopted by state and local governments and by the private sector, and are intended to be applied to a wide variety of resource types, including buildings, sites, structures, objects, and districts. The Standards were revised in 2017. The revision replaced the 1978, 1983, and 1995 versions of 36 CFR 68 entitled "The Secretary of the Interior's Standards for the Treatment of Historic Properties". The Standards are neither technical nor prescriptive, but are intended to promote responsible preservation practices that help protect the nation's irreplaceable cultural resources. For example, they cannot, in and of themselves, be used to make essential decisions about which features of the historic building should be saved and which can be changed. But once a treatment is selected, the Standards provide philosophical consistency to the work.

The Standards describe four broad approaches to the treatment and use of historic properties. These are, in hierarchical order:

- **Preservation**, which places a high premium on the retention of all historic fabric through conservation, maintenance and repair. It reflects a building's continuum over time, through successive occupancies, and the respectful changes and alterations that are made.

- **Rehabilitation**, which emphasizes the retention and repair of historic materials, but provides more latitude for replacement because it is assumed the property is more deteriorated prior to work. (Both Preservation and Rehabilitation standards focus attention on the preservation of those materials, features, finishes, spaces, and spatial relationships that, together, give a property its historic character.)

- **Restoration**, which focuses on the retention of materials from the most significant time in a property's history, while permitting the removal of materials from other periods.

- **Reconstruction**, which establishes limited opportunities to re-create a non-surviving site, landscape, building, structure, or object in all new materials.

Regardless of treatment approach, the Standards put a high priority on preservation of existing historic materials and not just the architectural form and style. The Standards also require that any alterations, additions, or other modifications be reversible, i.e., be designed and constructed in such a way that they can be removed or reversed in the future without the loss of existing historic materials, features, or character.

As noted under "Ultimate Treatment and Use," rehabilitation has been identified as the most appropriate overall approach to the treatment of the Carter Barron Amphitheater and box office. Within the overall approach, treatments adhering to other standards may be deemed appropriate for individual elements.

Architectural Barriers Act (ABA)

The Architectural Barriers Act Accessibility Standards (ABAAS) apply to facilities designed, built, altered, or leased with certain federal funds. Passed in 1968, the Architectural Barriers Act is one of the first laws to address access to the built environment. The law applies to federal buildings, including post offices, social security offices, federal courthouses, prisons, and national parks. Coverage is limited to those funding programs that give the federal agency awarding grants or loans the authority to establish facility standards.

The Carter Barron Amphitheater and box office do provide a level of universal accessibility with some deficiencies. Accessible seating is not distributed throughout the Amphitheater. Seating that meets ABAAS requirements has been constructed at the back, middle, and front of the Amphitheater but only the back seating can be reached by an accessible route. The park has identified and studied this problem. Performer spaces, especially those below the stage and including the orchestra pit, are not accessible as they can only be accessed by stair. Other deficiencies for staff spaces occur throughout the facility.

International Building Code

Building codes are generally applicable to all buildings whether they are historic or not. For the purpose of reviewing building code requirements, the Carter Barron Amphitheater and box office are considered historic buildings. As a matter of policy, the NPS and the District of Columbia are guided by the International Building Code, which includes this statement regarding codes and historic buildings:

3406.1 Historic Buildings: “The provisions of this code related to the construction, repair, alteration, addition, restoration and movement of structures, and change of occupancy **shall not be mandatory for historic buildings** where such buildings are judged by the building official to not constitute a distinct life safety hazard [emphasis added].”

Threats to public health and safety should always be eliminated, but because the Carter Barron Amphitheater and box office are historic, alternatives to full code compliance are always sought where compliance would needlessly compromise the integrity of the historic buildings.

NFPA Codes

The National Fire Protection Association (NFPA) has promulgated codes that include theater and assembly uses. These include: NFPA 1, Uniform Fire Code, NFPA 101, Life Safety Code, and NFPA 5000, Building Construction and Safety Code.

NFPA Code 914. The NFPA has promulgated codes for historic buildings, most notably NFPA 909, “Code for the Protection of Cultural Resources Properties - Museums, Libraries, and Places of Worship,” and NFPA 914, “Code for Fire Protection of Historic Structures.”

National Park Service Management Policies

The NPS General Management Policies (2006) guide overall management of historic properties, especially Chapter 5 “Cultural Resource Management.” Based upon the authority of some nineteen Acts of Congress and many more Executive orders and regulations, these policies require planning to ensure that management processes for making decisions and setting priorities integrate information about cultural resources, and provide for consultation and collaboration with outside entities. These policies also support good stewardship to ensure that cultural resources are preserved and protected, receive appropriate treatments (including maintenance), and are made available for public understanding and enjoyment.

Section 5.3.5, “Treatment of Cultural Resources,” provides specific directives, including a directive that “the preservation of cultural resources in their existing states will always receive first consideration.” The section also states that treatments entailing greater intervention will not proceed without the consideration of interpretive alternatives.

The appearance and condition of resources before treatment, and changes made during treatment, will be documented. Such documentation will be shared with any appropriate state or tribal historic preservation office or certified local government, and added to the park museum cataloging system. Pending treatment decisions reached through the planning process, all resources will be protected and preserved in their existing states. The management policies lay out rules for use of historic properties under the control of the National Park Service. Chapter 5 of this document directs that “compatible uses for structures will be found whenever possible [to] help prevent the accelerated deterioration of historic structures due to neglect and vandalism,” but goes on to warn against uses of structures that would “threaten

the…character of a structure…or that would entail alterations that would significantly compromise its integrity."

Director's Order-28

Also circumscribing treatment and use of historic properties in the National Parks is Director's Order 28, Cultural Resource Management Guideline. It requires that the NPS plan for the protection of cultural resources such as the Carter Barron Amphitheater and box office and reinforces the requirement to use existing buildings for NPS purposes. In Chapter 8, "Management of Historic and Prehistoric Structures "observes that "[t]he primary preservation issue…is the compatibility of the use with the structure." DO-28 also requires that no historic structure be rehabilitated or restored without an appropriate Historic Structure Report.

Building Code Summary

The recommendations in this document are in accordance with the International Code Council (ICC) Model Codes and Standards, 2015 editions and the NFPA National Fire Codes, including but not limited to the following:

Building: 2015 ICC International Building Code (IBC); 2015 ICC International Existing Building Code; ANSI/ASSEZ117.1, Safety Requirements for Confined Spaces; 2015 NFPA Life Safety Code (NFPA 101) – the most restrictive requirement will dictate.

Mechanical: 2015 ICC International Mechanical Code (IMC)

Plumbing: 2015 ICC International Plumbing Code (IPC)

Fire: 2015 ICC International Fire Code (IFC); NFPA National Fire Codes, Including Annexes (except NFPA 5000)

Energy: 2015 ICC International Energy Conservation Code (IECC)

Fuel gas: 2015 ICC International Fuel Gas Code (IFUGC)

Other Guidelines, Codes, Regulations and Local Utility Requirements:

- NFPA 70, 2017 National Electrical Code

Federal Government Legislation, Regulations, Standards and Guidelines:

- 2004 Architectural Barriers Act and ABAAS Guidelines
- ANSI A117.1 2003
- Uniform Federal Accessibility Standards (UFAS)
- Occupational Safety and Health Administration (OSHA)

The authority having jurisdiction (AHJ) for the National Capitol Region is James King, Branch Chief Fire and Emergency Management.

Codes Introduction

The following summary is an initial analysis to inform alternatives that might be explored during the design of any proposed renovation work. This analysis is not comprehensive and should continue to be updated and expanded throughout the design process. Additional information regarding code requirements and fire life safety for National Parks Service projects can be found at https://www.nps.gov/dscw/ds-safety-fre.htm#bcis. The final code analysis should include all elements listed on this site.

Occupancy Type

(Chapter 3 IBC: Use and Occupancy classification): the Carter Barron Amphitheater and box office have multiple use groups:

- A-1 – Assembly (assembly use with fixed seating)
- B – Business (staff support spaces, ticket office)
- S-1 Storage (moderate hazard storage)

Construction Type

The building is a Type III construction. According to the IBC, Type III construction is "that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of any material permitted by this code."

Fire-Resistance Ratings

Building Element	Type III
Primary structural frame	0
Bearing walls - Exterior	2
Bearing walls - Interior	0
Nonbearing walls and partitions - Exterior	0
Nonbearing walls and partitions – Interior	0
Floor construction and associated secondary members	0
Roof construction and associated secondary members	0

Stages greater than 50 feet require a 2-hour proscenium wall with a fire curtain (Sections 410.3.4 and 410.3.5). Between the stage and the back-of-house spaces (e.g. dressing rooms, storage rooms, green rooms, etc.) also requires a 2-hour separation (Section 410.5.1).

Occupancy Load Factor (Chapter 7, 2015 NFPA 101):

- Assembly use, concentrated use with fixed seating = 7(sf/person) net (Table 7.3.1.2)
    - Auditorium – occupants
- Business use = 100 (sf/person) net; Concentrated business use = 50 (sf/person)net (Table 7.3.1.2)
    - Box office
    - Backstage rooms

- Exits shall be sufficient for simultaneous occupancy of both the assembly occupancy and the other parts of the building, except where the AHJ determines that the conditions are such that simultaneous occupancy will not occur (12.1.3.3 2015 NFPA 101).

Egress

Egress element requirements are based on the prescriptive provisions of the 2015 NFPA Life Safety Code. A performance based option is available and can be explored as a project moves forward.

Means of Egress

- The number of means of egress from any story or portion thereof shall be not less than two, except under one of the following conditions (7.4.1.1)
- The number of means of egress from any story or portion thereof, other than for existing buildings as permitted in Chapters 11 through 43, shall be as follows (7.4.1.2):
    - Occupant load more than 500 but not more than 1000 – not less than 3.
    - Occupant load more than 1000 – not less than 4.

Arrangement of Means of Egress

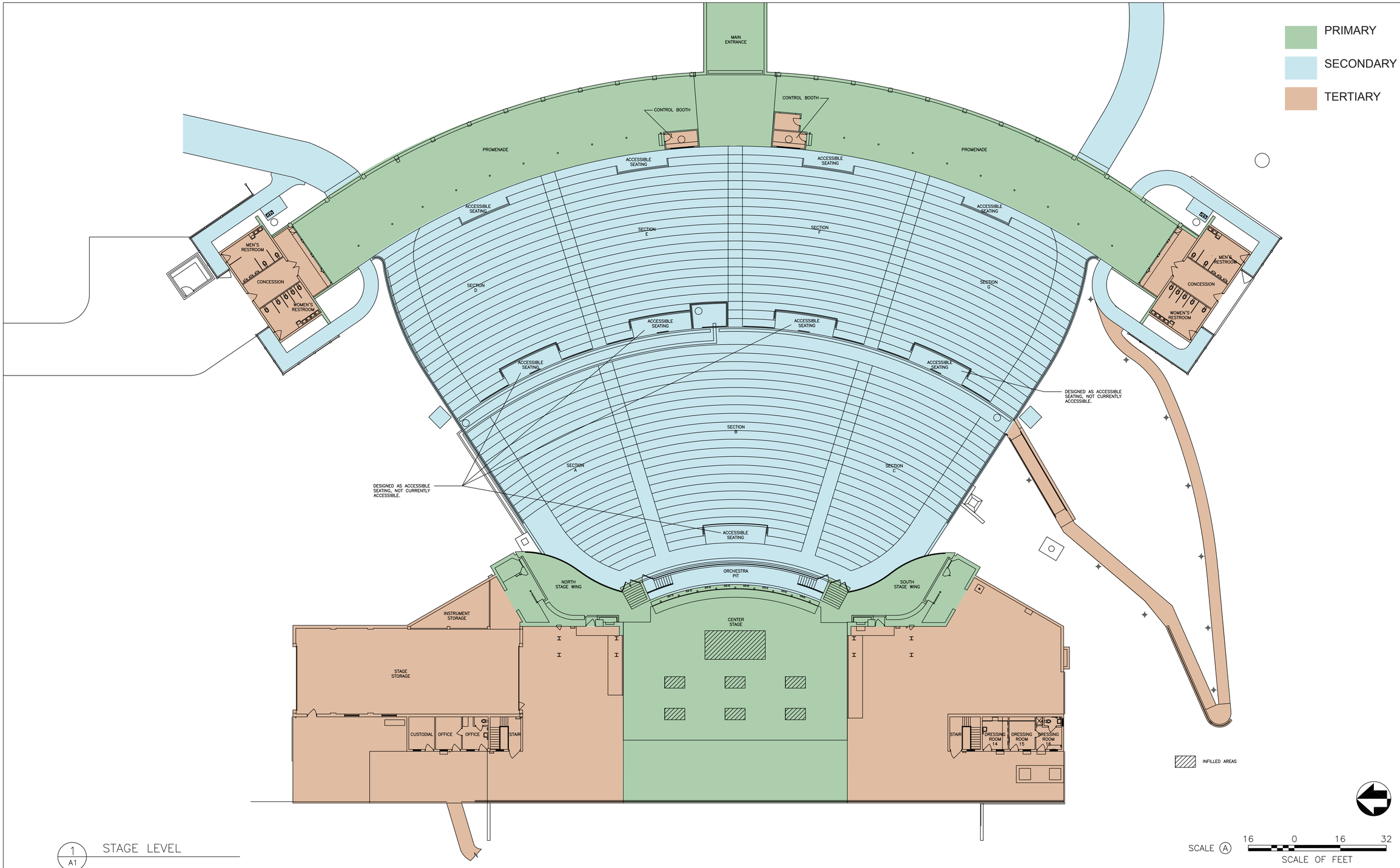
- Where two exits, exit accesses or exit discharges are required, they shall be located at a distance from one another not less than one-half the length of the maximum overall diagonal dimension of the building or area to be served, measured in a straight line between the nearest edge of the exits, exit accesses, or exit discharges, (7.5.1.3.2).
- Areas accessible to people with severe mobility impairment, other than existing buildings, shall have not less than two accessible means of egress, unless otherwise provided in 7.5.4.1.2 through 7.5.4.1.4 (7.5.4.1).

- Common path limit for unsprinklered building (Table A7.6):
    - Assembly 20 ft (>50 people) or 75 ft (< 50 people)
    - Mercantile (Class A, B, C) 75 ft
    - Business 75 ft
- Dead End Corridor limit for unsprinklered building (Table A7.6):
    - Assembly 20 ft
    - Mercantile (Class A, B, C) 20 ft
    - Business 20 ft
- Travel Distance Limit for unsprinklered building (Table A7.6):
    - Assembly 200 ft
    - Mercantile (Class A, B, C) 150ft
    - Business 200 ft.
- In assembly occupancies, other than those listed in 12.2.3.6.2(1), the main entrance/exit shall be of a width that accommodates one-half of the total occupant load (12.2.3.6.2(2)).
- Where the main entrance/exit from an assembly occupancy is through a lobby or foyer the aggregate capacity of all exits from the lobby or foyer shall be permitted to provide the required capacity of the main entrance/exit, regardless of whether all such exits serve as entrances to the building (12.2.3.6.5).
- In assembly occupancies where there is no well-defined main entrance/exit, exits shall be permitted to be distributed around the perimeter of the building provided that the total exit width furnishes not less than 100% of the width needed to accommodate the permitted occupant load. (12.2.3.6.6).

Egress Components

Per Table 7.3.3.1, the capacity factor for stairways is 0.3 inches/person. The capacity factor for level components and ramps is 0.2 inches/person.

The Carter Barron Amphitheater and box office are in compliance with these requirements.



1/A1 STAGE LEVEL

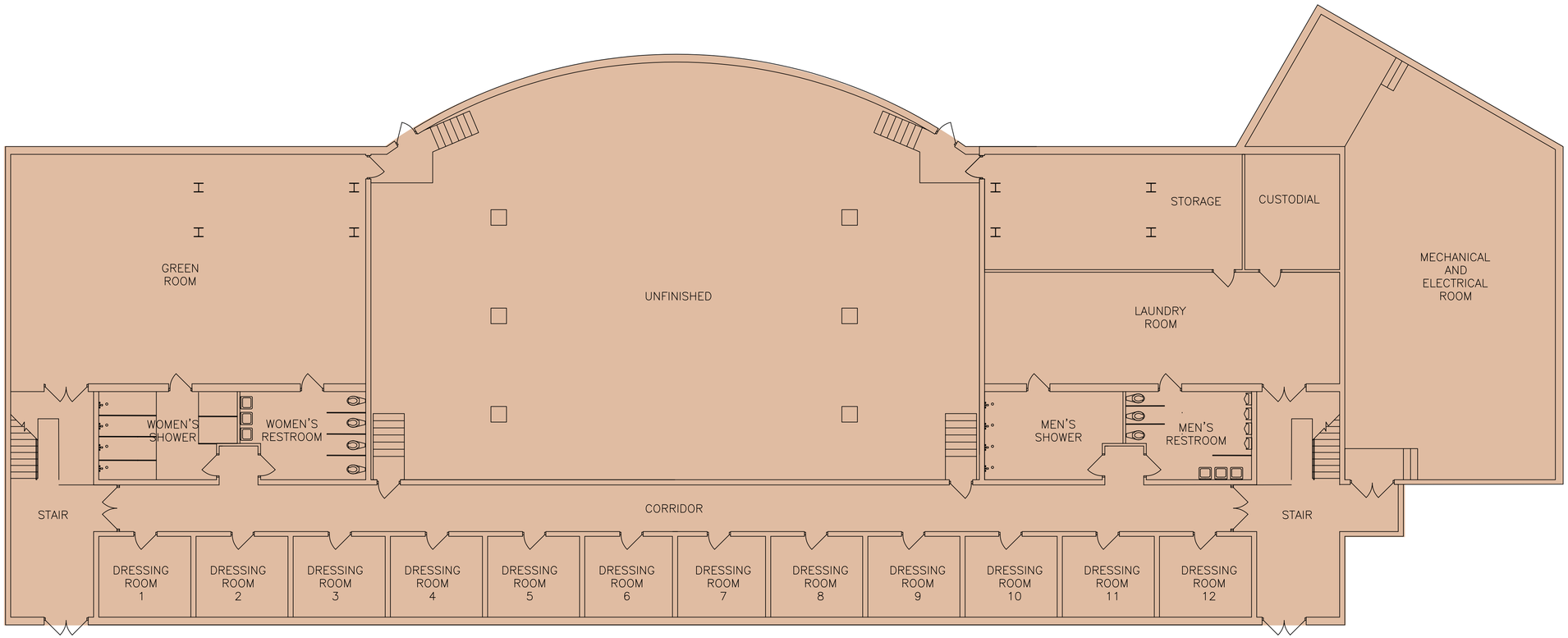
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PRIMARY

SECONDARY

TERTIARY

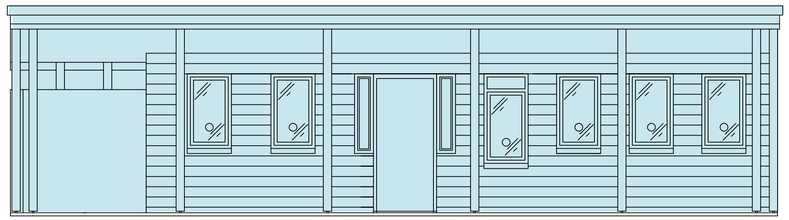


1 / A2 BASEMENT

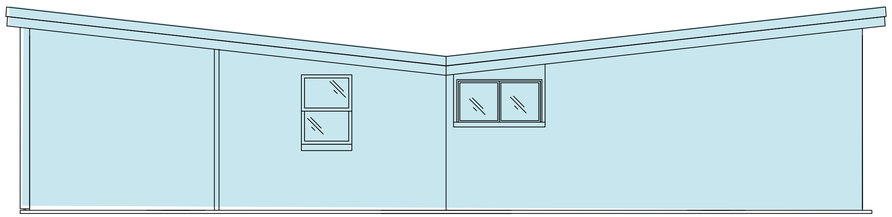
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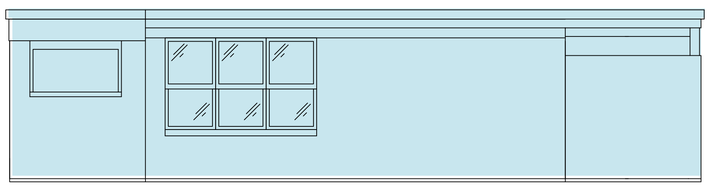
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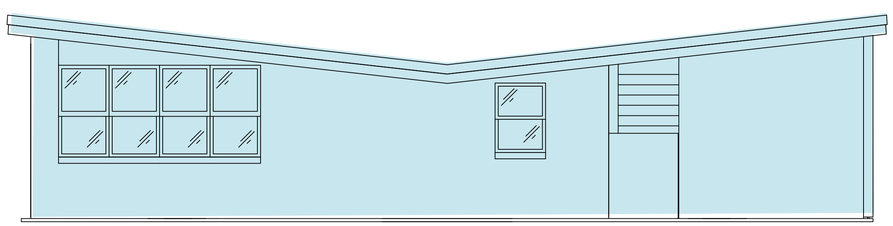
1 A5 SOUTHEAST ELEVATION



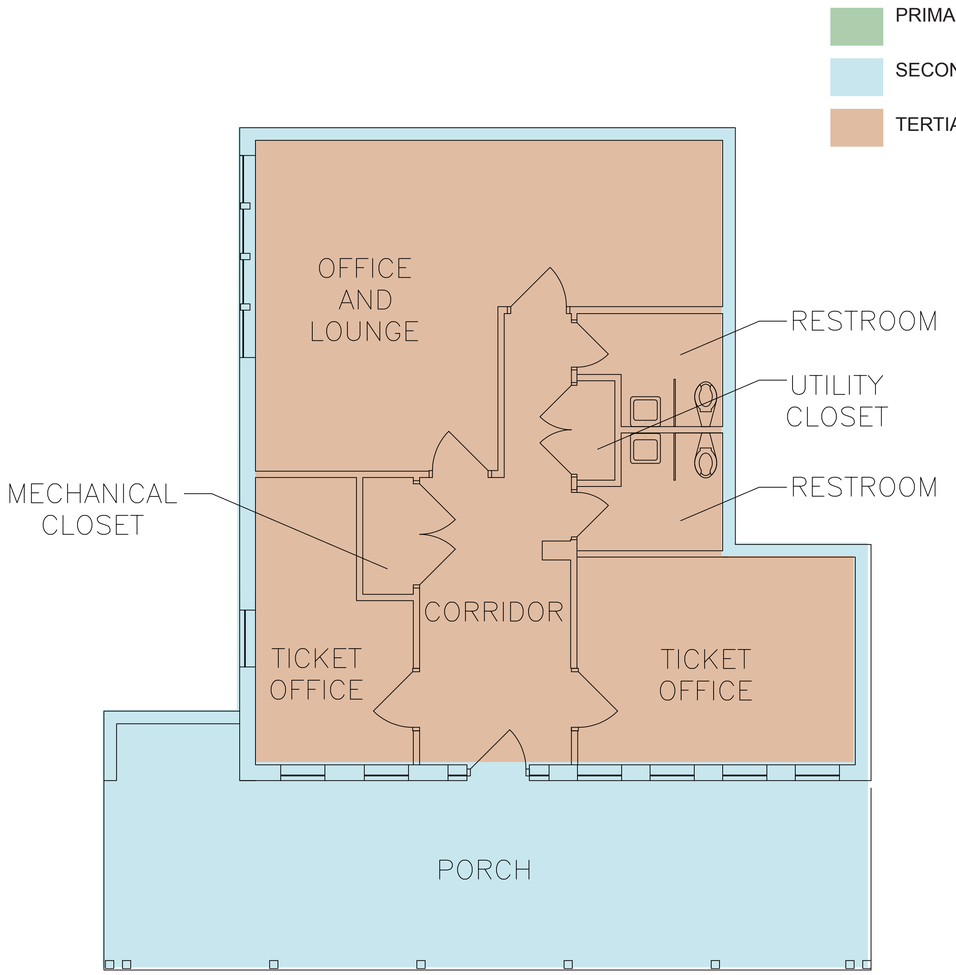
2 A5 NORTHEAST ELEVATION



3 A5 NORTHWEST ELEVATION



4 A5 SOUTHWEST ELEVATION



5 A5 FLOOR PLAN

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SCALE OF FEET

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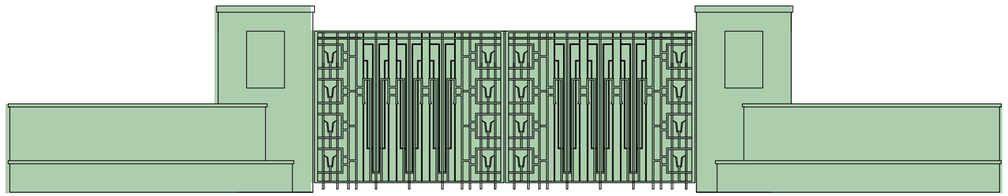
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SECONDARY

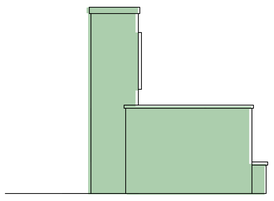
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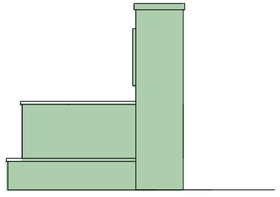
1 A6 PLAN



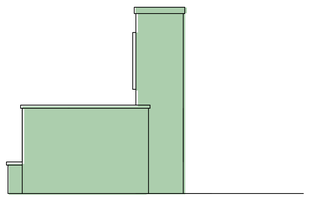
2 A6 FRONT ELEVATION



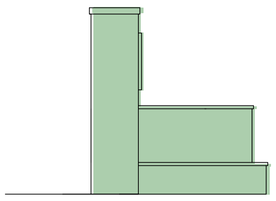
3 A6 SOUTH PIER, SOUTH ELEVATION



4 A6 SOUTH PIER, NORTH ELEVATION



5 A6 NORTH PIER, NORTH ELEVATION



6 A6 NORTH PIER, SOUTH ELEVATION

SCALE Ⓒ 4 0 4 8 1/4" = 1'-0"

SCALE OF FEET

DESIGNED: EADD TECH. REVIEW: DATE: 6/29/2018	SUB SHEET NO. A6	TITLE OF SHEET ENTRANCE GATE HISTORIC STRUCTURE REPORT FOR THE CARTER BARRON AMPHITHEATER & BOX OFFICE	DRAWING NO. PMIS/PKG NO. SHEET 6 OF 6

Chapter 6: Treatment Recommendations

Introduction

The overall treatment approach for the Carter Barron Amphitheater complex is rehabilitation. Within that general approach, there is some flexibility to permit a greater degree of intervention in areas with a lesser degree of significance and/or integrity, while areas with greater significance and integrity should be treated with a greater degree of care to preserve character-defining features. See the preservation treatment zone diagrams in Chapter 5.

Organization

This chapter describes the existing architectural elements and their conditions in the order in which they would be experienced by a visitor moving from the box office, to the gate, to the Amphitheater, then the stage, and finally the backstage areas.

Terminology

The box office is called both the “box office” and the “ticket office” in various sources. This report uses “box office” to be consistent with NPS terminology except when quoting sources. The promenade is called the “promenade,” the “rain shelter,” and the “concourse” in various sources. This report uses “promenade” except when quoting sources.

The Carter Barron Amphitheater stage faces east-southeast. For purposes of simplicity and brevity this report refers to the stage as facing east.

Accessibility and Building Code

Carter Barron Amphitheater was constructed long before the passage of the Architectural Barriers Act and its Accessibility Standards (ABAAS) in 1968, which required federal facilities to be accessible to the public. The Amphitheater’s original design was not fully ABAAS compliant to all, but NPS has taken measures to improve accessibility through renovation and rehabilitation proj-

ects. Remaining accessibility concerns fall into three categories: those that impact access for the public, for the performers, and for the staff. As a public facility, design issues that impede public accessibility should be given the greatest priority, with those impeding performers and staff given secondary and tertiary priority.

In addition to accessibility issues, Carter Barron Amphitheater also falls short of some building code requirements including fixture counts. Building improvements compatible with the original design and character, such as additional restrooms, could improve the Amphitheater's overall performance and patron comfort.

By addressing key accessibility and code issues the Carter Barron Amphitheater could regain the prominence it held in its early years.

Box Office

Exterior

The box office exterior is a secondary feature. It was designed as the first structure the public would see upon arrival at the Amphitheater and reflects the stylistic blend of modern and rustic design seen throughout Carter Barron Amphitheater. It has, however, been altered since its original construction, though the alterations have been in keeping with the original design. The box office exterior repair recommendations include:

- Replace the roof and flashing. Consideration should be given to modifications to the rear roof profile that would direct water towards the gutters and away from the center of the roof.
- Scrape, clean, and paint all painted surfaces.
- Check for and replace any rotted wood.
- Repair, or replace windows with composite (not vinyl) windows. Match original one-over-one design and existing locations and proportions.

- Replace the metal plate enclosing the window on the northwest elevation. Install with flashing and water proof seals. Consideration should be given to filling the opening with concrete block if the opening is expected to be permanently closed.

- Replace the missing cover on the utility box on the northwest elevation.

- Investigate the foundation and wall at site of water infiltration. Repair to prevent water infiltration. Investigation and repair should precede interior work.

Interior

The box office interior is a tertiary zone. It was not designed as a public area and has been altered. The box office interior requires some repair. Repairs include the following:

- Provide ceiling finish at the dropped ceiling.

- Replace missing or damaged ceiling tile.

- Install fire alarm.

- Inspect interior walls for mold or deteriorated wallboard. Repair or replace as needed.

- Patch the hole in the bathroom wall.

- Repaint the gypsum wallboard walls. Paint is not recommended on the wood paneling.

- Scrape and paint the wooden door frames where paint is missing and chipped

- Replace the carpet.

The box office entrance and restrooms are not ABAAS compliant. While the box office is not open to the public, consideration should be given to making the box office ABAAS compliant for NPS and event staff. These changes would include providing a ramp at the entrance door and replacing the existing pair of restrooms with one larger, ABAAS compliant restroom that meets the clearance and fixture height requirements.

Entrance

Gate

The entrance gate is a primary feature. All visitors to the Amphitheater pass through this gate. Its design also reflects the stylistic blend of modern design and rustic architecture with the rectilinear metal gate and its stone piers. The gates have not been altered since their original construction, and they bear plaques in honor of the Sesquicentennial and the rededication of the Amphitheater to Carter Barron. Recommended repairs include the following:

- Scrape cast iron gates. Remove rust back to solid metal. If rust removal reveals an extensive loss of material, the damaged areas should be patched. Repaint.

- Clean stone and remove biological growth, efflorescence, and copper staining. Remove failing mortar and mortar patches. Selectively repoint. Repoint all stone wall coping joints. New mortar should match the composition, texture, and profile of the original. Remove loose material and spalls. Spalls observed in the promenade are small and do not detract from the integrity of the wall or its rough appearance.

- Clean, carefully remove paint from, and repaint the sesquicentennial medallions. Clean Carter Barron dedication plaques. Medallions and plaques should be evaluated by a conservator to develop further appropriate treatment recommendation including cleaning and protective coatings.

- Scrape and paint railings and turnstiles. Consideration should be given to modifications that consider access,

security, and ticket scanning. Modifications should be compatible with original architecture.

- Clean asphalt paving to remove biological growth.

Walkways and Circulation

The walkways that lead from the box office to the Amphitheater promenade and their surrounding landscape are secondary features. They should be cleaned to remove biological growth. Wood fencing that lines small portions of the walkways should be repaired.

The sesquicentennial dedication marker located at the first fork in the walkways is a primary feature. Clean stone and metal to remove biological growth.

The ABAAS compliant walkway that leads from the main pathway down to the north entrance is a tertiary feature in terms of preservation but is important to the overall accessibility of the Amphitheater. Drainage at the location where the ABAAS compliant path meets the promenade at the north elevation should be studied further as part of any future work in that area. Clean to remove biological growth and repair cracks.

Amphitheater

Main (Center) Entrance

Recommended repairs to the entrance way stone veneer walls include the following:

- Clean stone and remove biological growth, efflorescence, and ferrous staining.

- Remove abandoned anchors from masonry walls and fill with a compatible composite patch matching the color and texture of the stone.

- Remove failing mortar and mortar patches. Selectively repoint. Repoint all stone wall coping joints. New mortar

should match the composition, texture, and profile of the original. See Mortar Analysis in Appendix B.

- Remove loose material and spalls. Spalls observed in the promenade are small and do not detract from the integrity of the wall or its rough appearance.

Promenade

The promenade is a primary preservation treatment zone. Recommended repairs include the following:

- Replace roofs. Although there were no visible signs of water damage below, the roof at almost twenty years old is reaching the end of its anticipated lifespan and it should be replaced within the next few years.

- Clean, scrape, and paint wood surfaces. Check for and repair any rotted wood.

- Clean, remove rust from, and paint metal plates anchoring the roof to the stone piers.

- Remove loose concrete at metal plate anchors. Patch areas of lost concrete.

- Replace ladders with ladders that more closely meet Occupational Safety and Health Administration (OSHA) standards.

    - The ladder should be mounted to the east face of the stone clad columns so that they extend from the ground to the roof.

    - Rungs must be spaced at a distance greater than 10 inches.

    - Side rails must be 16 inches apart at a minimum.

  - The ladder must extend at least 42 inches above the roof.

  - See the OSHA *Stairways and Ladders* guide: https://www.osha.gov/Publications/osha3124.pdf

- Clean, scrape, remove rust from, and paint metal columns on seating side.

- Repair cracks in concrete at base of poles.

- Clean concrete floor to remove biological growth.

The promenade has a half-height stone veneer wall with stone veneer piers that are also primary features. Recommended repairs include the following:

- Clean stone and remove biological growth, efflorescence, and ferrous staining.

- Remove abandoned anchors from masonry walls and fill with a compatible composite patch matching the color and texture of the stone.

- Remove failing mortar and mortar patches. Selectively repoint. Repoint all stone wall coping joints. New mortar should match the composition, texture, and profile of the original.

- Remove loose material and spalls. Spalls observed in the promenade are small and do not detract from the integrity of the wall or its rough appearance.

- Snake drains to make sure they are functioning properly.

Control Booths

Two control booths frame the main entrance to the Amphitheater at the promenade. The exteriors of the control booths are primary features as they contribute to the overall promenade character

and integrity. The interiors are tertiary as they are not public spaces nor aesthetically significant to the original design. Recommended repairs include the following:

- Clean, scrape, and paint wood siding and concrete foundation.
- Replace deteriorated wood siding, match existing.
- Repairs chips in the concrete foundation.
- Replace window including wood window frames.

The control booths are raised and entered via a small set of stairs. Therefore, the control booths are not ABAAS compliant. A lift or ramp could be provided at each control booth, but the alterations required would be significant compared to the accessibility gains. A removable lift could also be available on hand when access is required.

Concessions & Restrooms

Carter Barron Amphitheater has two concession stands and restroom areas, one at each end of the promenade. The exterior of the concession stands are a primary feature. The exterior of the restrooms, out of view from the promenade, are tertiary, as are the concession stand and restroom interiors. The concession stands are not public spaces and the restrooms have been significantly modified from their original design to provide ABAAS compliant facilities. Recommended repairs include the following:

- Replace the roof.
- Repair cracks in concrete block walls. See structural recommendations, below.
- Clean, scrape, and paint concrete block walls.
- Improve drainage around the concrete block walls.

- Clean and paint wood siding and posts.
- Remove water damaged ceiling plaster. Repair and repaint.
- Remove failing concession stand floor finish. Replace with water proof, slip-resistant finish.

The restrooms are ABAAS compliant, but their limited number does not adequately serve an audience of 4,000 under today's plumbing code. The fixture count likely met code at the time of construction. Contemporary code requires a greater number of fixtures. In past theater design completed by Quinn Evans Architects, the code minimum has been found to under serve theater audiences. Because restrooms are used at concentrated times including intermission and just before and after the performance, best practice theater design calls for a far larger restroom facility.[1] The chart below outlines the number of fixtures and their estimated required area for the existing facility, a facility that meets the minimum code, and a facility that reflects best practices, assuming 4,000 seats.

1 Best practice numbers are estimates based on past theater design completed by QEA including projects such as theater renovations within the Kennedy Center.

	Number of Toilets		Estimated Area (SF)		
	Women's	Men's	Women's	Men's	Total
Existing	10	10	442	442	884
Current Code	30	16	1,500	640	2,140
Best Practice	107	53	5,350	2,120	7,470

NPS should expand the restrooms to meet the current code minimum and consider meeting best practices standards. Restroom numbers should be determined based on a comprehensive assessment of fixture count needs, circulation, existing infrastructure and infrastructure needs, and a site assessment.

The new restrooms could be added near the existing restroom locations, or in a new location northeast of the Amphitheater. Location selection should be assessed in relation to desired circulation, impact on concession access, and topography. The spatial orientation of the walkways should be maintained, if at all possible. Routes between the Amphitheater and restrooms should be ABAAS compliant.

The concession stands are ABAAS compliant for the public. On the interior, the service counter is higher than the maximum counter height allowable by the ABAAS. Should NPS make the concession stands accessible to staff, the counter at the eastern edge, where the floor-to-counter height is already the lowest,

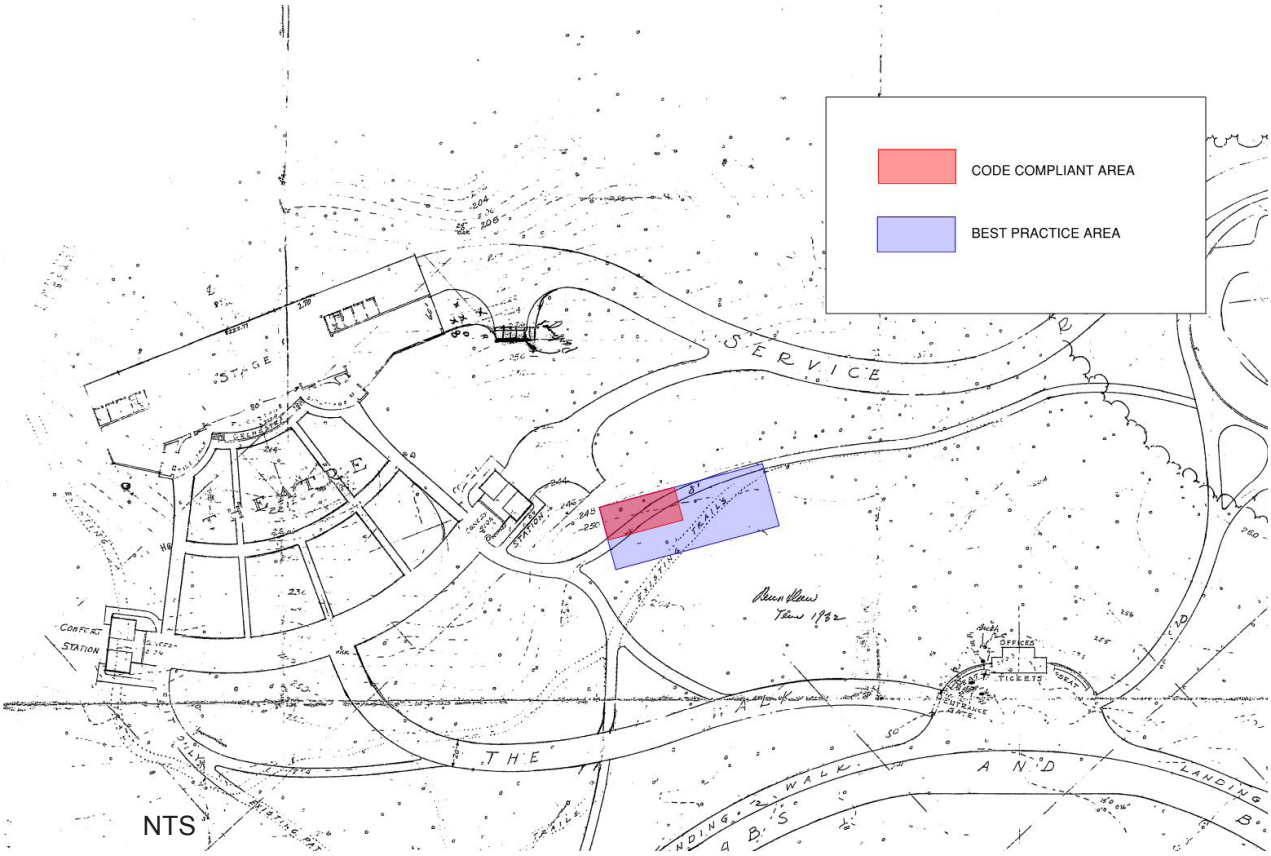
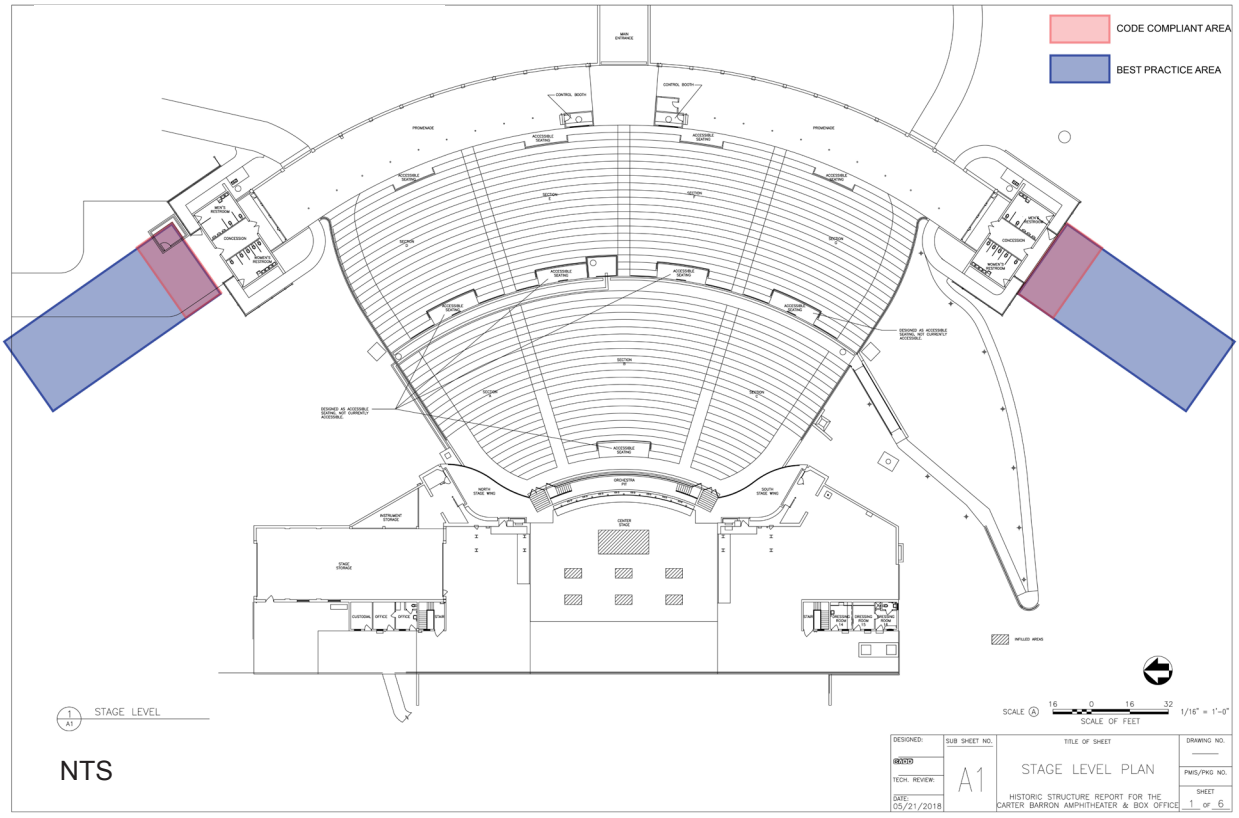


Figure 6-1. Additional restrooms could be added near the existing restrooms (opposite page) or near the existing service road northeast of the north restrooms (above). Note that the two diagrams are not to scale and are at different scales to provide relevant context.

could be modified to align with the existing exterior ABAAS compliant counter. The doorway to the promenade should be widened. The corridor should be kept clear.

The existing concession stands may provide limited service for the volume of potential visitors for larger shows. Should additional locations for concessions be desired, NPS should consider stands that are both reversible and compatible with the existing architecture, similar to that proposed but not constructed in 1950 **(Figure 6-2).**



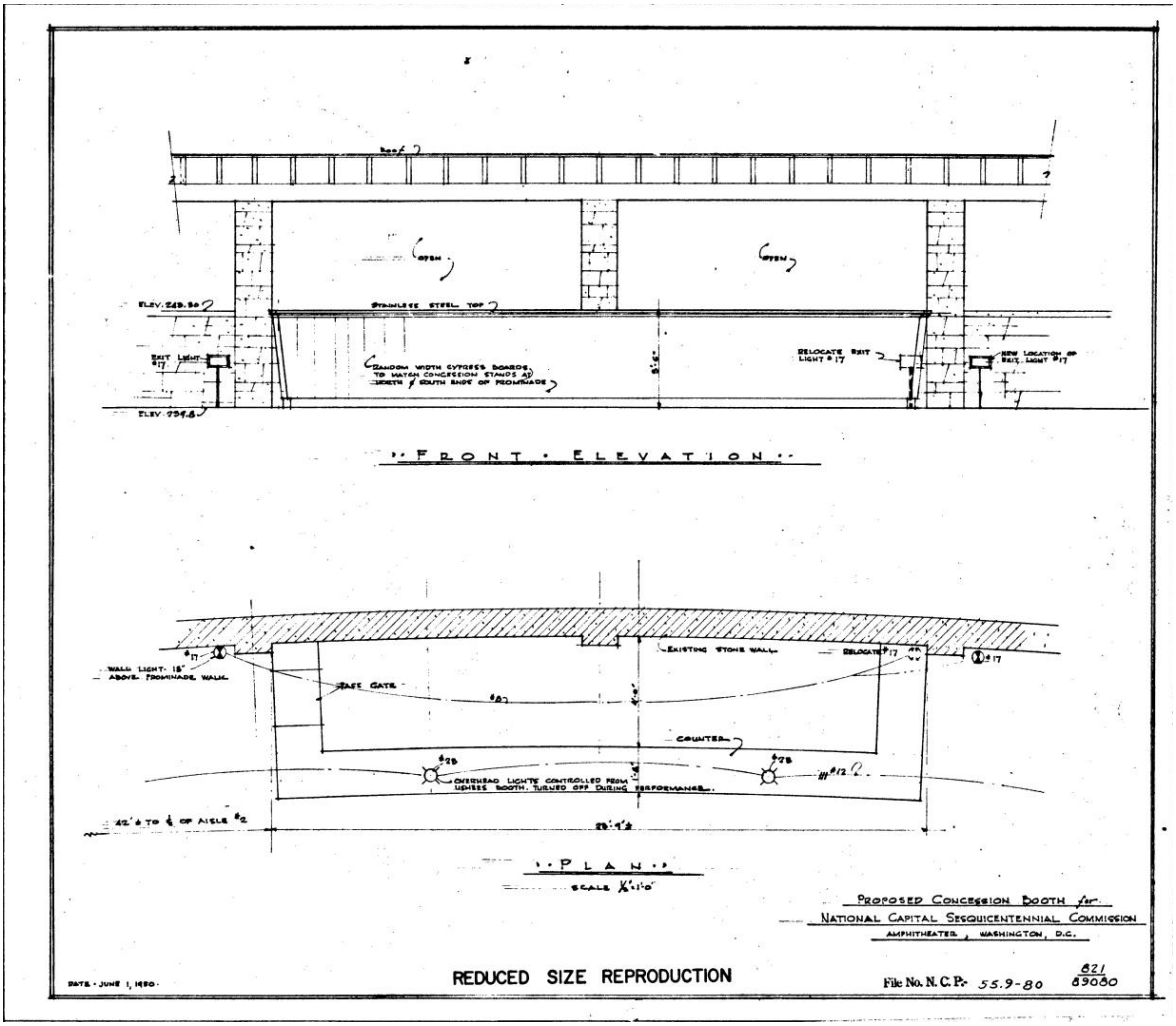


Figure 6-2. Proposed Concession Booth elevation and plan. Source: June1, 1950, NPS, ROCR, id253059.

Seating

The seating is a secondary feature. Although the seating is the core public space of the Amphitheater, the seats and foundation are not original. Recommended repairs include the following:

- Repair concrete cracks.
- Continue to replace plastic seat brackets with metal seat brackets. Note, NPS already has replacement metal seat brackets in stock.
- Evaluate and improve aisle egress lighting.

The seating as installed in 2004 provides an appropriate dispersal of ABAAS compliant seating with areas at the back, middle, and front of house; however, only the back seating can be accessed via an ABAAS compliant route. A route intended to be ABAAS compliant was constructed in 2004 but does not meet ABAAS requirements for cross and run slopes.[2]

ABAAS compliant routes to the ABAAS compliant seating added in 2004 should be a priority as it would contribute to a greater equality of experience for all Carter Barron Amphitheater patrons. Recommendations to address seating accessibility include the following:

- Modify or replace the existing 2004 walkway so that it meets ABAAS requirements including:
    - Cross-slope ≤ 1:48
    - Run-slope ≤ 1:20 or 1:12 with hand rails
    - Clear width of ≤ 60 inches or with passing zones

2 "Stage Load Assessment & Accessible Handrail Installation," Johnson, Mirmiran & Thompson, Inc., February 1, 2017.

- The 2017 JMT report found that the walkway cross-slopes were not compliant the entire length of the walkway. The cross-slope will need to be altered either by re-poring or modifying the existing path.

- Railings should be added at all points of the path that are greater than 1:20 in slope.

- Remove infill seating mounted in ABAAS compliant areas.

Lighting Towers

The lighting towers are secondary features. Recommended repairs include the following:

- Clean, remove rust from, and paint the steel structure. Repair any areas where corrosion poses structural concerns.

- Clean concrete and remove biological growth and efflorescence.

- Remove paint from concrete.

- Repair cracks in concrete.

- See structural recommendations.

Landscape

The Amphitheater is surrounded by forest but originally had designed planting beds that transitioned between the constructed Amphitheater and the natural forest. The landscape is a secondary feature as it was part of the original design but is no longer intact. The National Park Service should re-establish formal landscaping around the seating, entrance gate, and walkways using species that provide the same effect as that which were

originally planted but failed. For example, Eastern Red Cedar could be substituted for hemlocks. Plantings should complement the original planting plan.

Stage

Carter Barron Amphitheater has an open air stage composed of three sub-stages: the center stage and two side stages, or wings, backed by wing walls. The stage, wings, and wing walls are primary features and should be restored. Black and brown paint has been applied to hide deterioration through the stage and wing walls. All paint should be removed and surfaces returned to their original finish.

Center Stage

See Structural, “Unfinished Room” for stage structural recommendations. Modifications to the stage should retain its overall massing and profile. If stage modification requires the railing along the back of the stage to be replaced, the replacement rail should meet current code but replicate the original relationship of the gate to the view of the woods over the stage. The railing should be a simple design with metal rail or light steel cables.

The stage needs to support modern production equipment for lighting, sound, and stage cover. The design of the structure for equpiment should be compatible with the surrounding architecture. Its scale should complement the wing walls and its structure should provide views of the tree line behind and of the wing walls on either side.

Wings

Recommended repairs to the wing stage floors and walls include the following:

- Clean concrete and remove biological growth and efflorescence.
- Remove paint from concrete.

- Repair cracks in concrete walls and floor.

- Remove spalled and failing concrete back to solid concrete. Patch concrete with mix that matches the original in color and composition.

The wing stages are lined with metal railings that were added after the 1960 season to accommodate public seating. The existing railings were designed to follow stepped platforms that are no longer in use. If NPS does not plan to allow public seating on the stage wings going forward, remove the railings. If NPS plans to continue to use the wing stages for public seating the railings should either be replaced with metal railings of a similar style and proportion or preserved. To preserve the existing railings, remove paint and rust back to solid metal. If rust removal reveals an extensive loss of material, the damaged areas should be repaired. Repaint the railings. Replacement railings should meet current code requirements including height and maximum openings.

Recommended repairs to the stone veneer walls and planters include the following:

- Clean stone and remove biological growth, efflorescence, and ferrous staining.

- Remove failing mortar and mortar patches. Selectively repoint. New mortar should match the composition, texture, and profile of the original. See Mortar Analysis in Appendix B.

- Remove loose material and spalls. Spalls observed in the promenade are small and do not detract from the integrity of the wall or its rough appearance.

- Restore and repoint cast stone coping.

Recommended speaker screen repairs include the following:

- Remove plywood.

- Restore speaker screens and cast stone panels. See shop drawing (Figure 4-123).

- Remove paint from screens. Restore to original metal finish.

- Remove paint from cast stone surrounding the speaker screens.

- Restore or replace panels behind the top and the lowest two speaker screens, matching the original configuration.

- Restore or replace limestone panels. Paint should be removed from a test panel and the condition evaluated. If minimal additional repairs are required, the limestone panels should be restored. If the removed paint reveals extensive damage, the limestone panels should be replaced. Match original.

Recommended repairs to projecting lintels and jambs include the following:

- Clean concrete and remove biological growth and efflorescence.

- Remove paint from concrete.

- Repair cracks.

- Remove spalled and failing concrete back to solid concrete.

- Remove rust from exposed reinforcing bars back to solid steel. Repair reinforcing bars where metal has been lost.

- Patch concrete with mix that matches the original in color and composition.

Recommended repairs to projecting lintels and jambs at large openings include the following:

- Clean concrete and remove biological growth and efflorescence.
- Remove paint from concrete.
- Repair cracks.

Additional recommended treatments include the following:

- Replace the existing painted wooden door with a stained, three paneled wood door to match the original.
- Restore the double doors at the large openings. Match original. If original does not provide necessary functionality, provide alternate wood door or curtain.
- Clean concrete block walls at large openings to remove biological growth and efflorescence. Remove paint.
- Remove paint from wood panels beside large openings. Stain to match original.

The planters should have weeds and soil removed and replaced with fresh soil. It is recommended that planter be replanted with low shrubs that resembles those planted in 1950 but are best suited to the local climate.

Orchestra Pit

The orchestra pit is a secondary feature. Although it is part of the stage it is, by design, largely hidden from public view. Recommended repairs include the following:

- Clean concrete and remove biological growth and efflorescence.
- Remove paint from concrete.

- Repair cracks.

- Remove spalled and failing concrete back to solid concrete. Patch concrete with mix that matches the original in color and composition.

Recommended repairs to the orchestra pit railings include the following:

- Remove paint from cast iron railings.

- Remove rust back to solid metal. If rust removal reveals an extensive loss of material, the damaged areas should be patched.

- Repaint.

The orchestra pit does not meet ABAAS requirements as there is not an ABAAS compliant route to the pit. An ABAAS compliant route could be provided by adding an elevator connecting the backstage stage level and basement level. A clear path would then need to be provided from the elevator to the pit. This could be achieved by constructing, at minimum, an enclosed corridor, at grade with the basement level, in the unfinished room to connect the existing corridor to the existing orchestra pit doors, or by finishing the unfinished room.

Curtain Track

A retractable curtain track mounted behind each wing wall was installed a few years after the Amphitheater's opening. The curtain track is a secondary feature as it is not original but was added within the three years of the Amphitheater's opening and framed the stage during the performances of many great musicians. The curtain track is in poor condition and no longer operational. The curtain track and structure should be removed, including the structure that extends into the basement. The curtain track is not original to Carter Barron Amphitheater and is not an essential character-defining feature. In turn, NPS can either proceed without a curtain or reinstall a new curtain track. If a new

curtain track is desired, consider a curtain system similar in style to that installed in 1955 but with current technology.

Backstage

The backstage areas, including those on the first floor and basement, are tertiary spaces. They are not public and function as service spaces to the stage. All backstage rooms should be repainted and the carpet replaced.

Accessibility

All back stage areas should be modified to meet ABAAS requirements. This includes door thresholds, restroom fixture heights, and clearances, and accessible routes. There is currently no accessible route to the basement backstage rooms and orchestra pit. An elevator should be provided. The exact location and size should be studied to meet programing needs and to correspond with related renovations. Two location options are recommended.

Option 1 would place the elevator south of the stage.

Benefits: This option would require minimal renovation to the existing plan.

Challenges: This option would provide access on the far side of the stage from the stage entrance.

Option 2 would place the elevator just south of the north stairs.

Benefits: This location places the elevator close to the stage entrance.

Challenges: This location would require relocating and redesigning the basement restrooms.

Both options would require systems evaluation **(Figure 6-3)**.

The proposed completion of the unfinished room (see page 295) should maintain the same floor level to provide ABAAS compliant

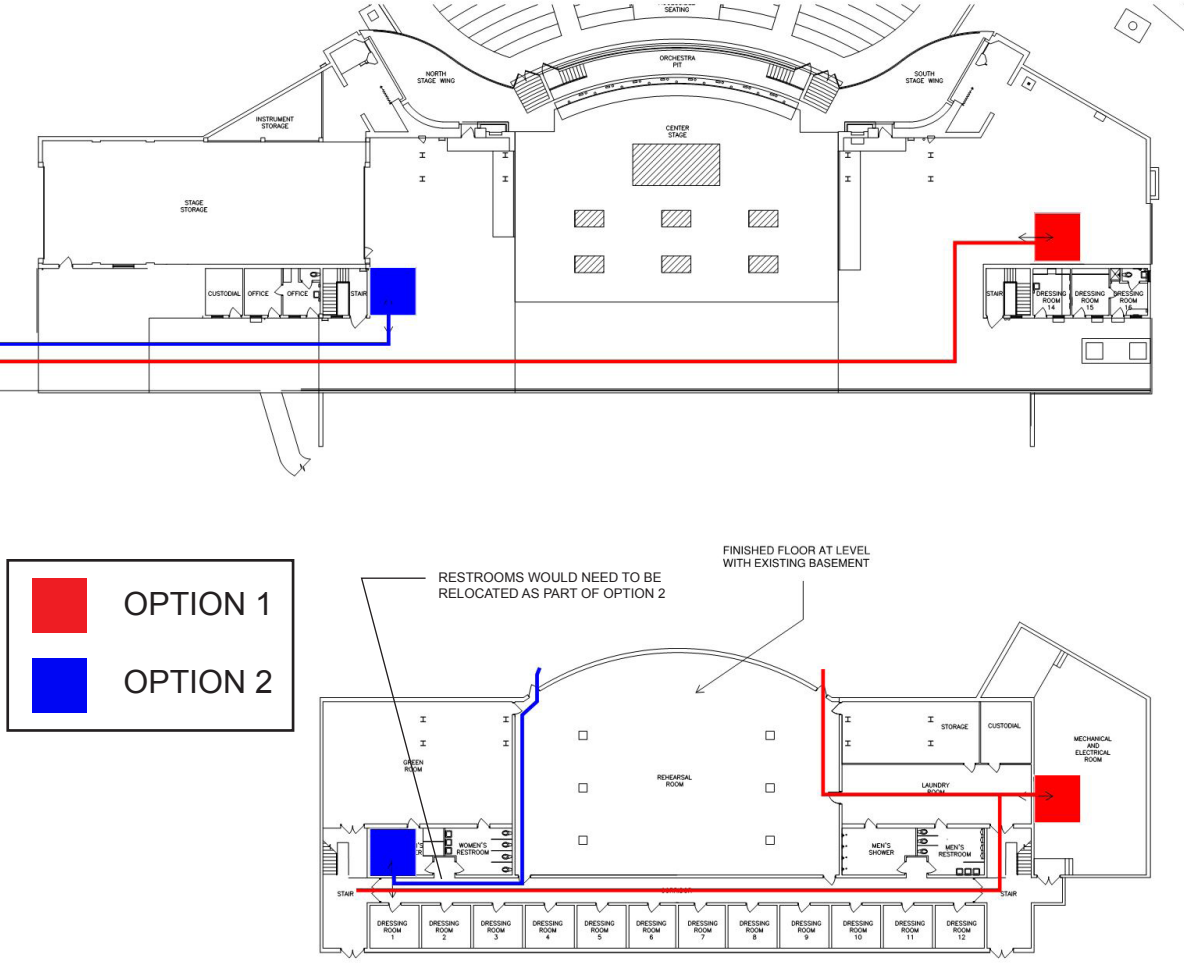


Figure 6-3. Proposed elevator locations.

routes throughout the basement and from the elevator to the orchestra pit. The two basement exit doors provide ABAAS compliant egress. The landings around exterior doors at the basement level should be repaved and set level with the basement floor.

Stage Level

North Building, Exterior

The Amphitheater has a concrete block building behind the north stage wing. Exterior recommendations include the following:

- Replace roofs.
- Clean gutters.
- Clean concrete block walls and remove biological growth.
- Clean rolling metal doors and remove biological growth.
- Repair cracks in concrete block walls. See structural recommendations.
- Repair windows, doors, and door hardware. Replace broken glass lights.
- Clean doors.
- Repair or replace all broken hardware.

North Building, Interior

Interior recommendations include the following:

- Remove ceiling areas with visible water staining. Repair.
- Replace carpet.
- Clean interior walls.
- If the instrument storage is to be used for professional instruments, finish room and provide a climate control system.

- Repair or replace all broken hardware.

The north building is not ABAAS compliant. Ramps should be added to the door thresholds to provide an ABAAS compliant path. Restrooms should be renovated to provide larger, ABAAS compliant facilities.

South Building, Exterior

The Amphitheater also has a concrete block building behind the south stage wing. Exterior recommendations include the following:

- Replace the roof.
- Clean concrete block walls and remove biological growth.
- Repair cracks in concrete block walls. See structural recommendations.
- Repair windows, doors, and door hardware. Replace broken glass lights.
- Clean doors.
- Remove rust from door frames. Repaint.
- Clean gutters.
- Replace roof flashing.
- Repair or replace all broken hardware.

Interior recommendations include removing paint and painting the interior walls.

The south building is not ABAAS compliant. Ramps should be

added to the door thresholds to provide an ABAAS compliant path. The restroom and shower should be renovated to provide larger, ABAAS compliant facilities.

Basement Level

The Amphiteater has a basement level, single-story concrete block structure that occupies the area beneath the stage. It includes a green room, dressing rooms, restrooms and showers, storage and laundry rooms, two sets of stairs, utility spaces, and an unfinshed, open-air space below the center stage. A long corridor running north-south connects the rooms.

Repair or replace all broken hardware throughout the basement.

Green Room

To address the water infiltration issue in the east wall, water-proofing should be added to the west face of the wall. This would require removing and rebuilding a portion of the wall. If the green room is to remain largely as it is with no other renovations, the paint and efflorescence should be removed and the wall cleaned. The wall should not be repainted as it will only prevent water in the wall system from drying. This, however, will not prevent the efflorescence from redeveloping. If the green room is to be ren-ovated into an active rehearsal space, consideration should be given to providing waterproofing.

Dressing Rooms

Recommendations include the following:

- Install control joints in the concrete block wall at Dress-ing Room 3 and Dressing Room 10 where cracked. The control joints should be placed to operate in conjunction with the existing control joints in the poured concrete. See structural recommendations.

- Repair or replace cracked concrete block walls at

Dressing Room 3 and Dressing Room 10. See structural recommendations.

- Remove foam sealant at concrete block mortar cracks. Repair with mortar.
- Repaint.
- Repair broken door vents.

The dressing rooms were originally constructed with windows along the west wall that have since been filled with metal panels. Consideration should be given to restoring the windows should NPS undertake a major renovation of the backstage area. If the metal in-fill panels are to remain, failed panels should be replaced and sealed. The dressing room counters do not meet ABAAS requirements. Should the addition of an elevator be considered, the dressing rooms should be modified to provide ABAAS compliant counters.

Corridor

A long corridor runs the length of the basement and connects the twelve dressing rooms to the green room, laundry room, restrooms, and stairs.

Stairs

Two flights of stairs, one at each end of the corridor, lead from the stage level down to the basement. Recommendations include the following:

- Scrape and repaint metal railings.
- Repaint concrete block walls.
- Replace carpet.

There is serious water intrusion into the structure through the emergency exit doors on the west side of the lower level. The National Park Service should address storm water issues at these location to prevent further water damage. The carpet in the stair areas should not be replaced until this work is completed.

Restroom and Showers

The men's and women's restrooms and showers are located off the main corridor. Recommendations include the following:

- Remove peeling paint on walls. Repaint.
- Repair broken door vents.

Should the addition of an elevator be considered, the restrooms and showers rooms should be modified to provide ABAAS compliant facilities. Restroom renovations should include shower and restroom stalls that meet the minimum depth, width, and grab bar design requirements of the ABAAS. Curbs should be removed to provide for ABAAS compliant routes.

Laundry

Recommended repairs include removing peeling paint on walls and repainting.

Storage

Remove efflorescent build up along seams in the concrete ceiling. Remove the curtain track steel structure. See structural recommendations.

Custodial

Recommendations include removing peeling paint on the ceiling and repainting. Remove loose and deteriorated concrete in

ceiling and patch.

Mechanical and Electrical Room

Remove loose and deteriorated concrete and provide patches.

Unfinished Room

The unfinished room below the stage should be finished for use as a rehearsal space, or other programming determined by NPS. Recommendations include the following:

- Drainage should be studied and addressed before the room is finished.
- Provide a floor slab at level with the surrounding rooms and orchestra pit.
- Provide finished walls at the north, east and south. Replace temporary infill wall with permanent finished wall between.
- Provide interior finishes.

If a full renovation is delayed, at a minimum the room should be enclosed so as to reduce the amount of water and moisture. Drainage should be evaluated to reduce water flow through the room. The cause of erosion in the unfinished room should be investigated and the underlying problem corrected before filling in areas of erosion, per structural recommendations. See structural, “Unfinished Room,” for structural implications of drainage.

Structural Systems

At over 65 years old, the Carter Barron Amphitheater is in need of structural repairs that have likely been postponed for extended periods. Structural recommendations are categorized as being critical, high-priority, and routine. Critical repairs are considered those that should be done before the Amphitheater is reopened, and are based primarily on personnel safety. High-priority repairs are important repairs that should generally be done within the next eighteen months. Many repairs are considered to be high-priority because failure to perform them within a reasonable time frame will result in more serious and costly structural degradation. Routine structural repairs should also be performed within a reasonable period, generally within about three years. While failure to accomplish routine repairs may also lead to more costly repairs in the future, the rate at which degradation occurs is slower than that of high-priority repairs.

Box Office

Critical Repairs: None

High-Priority Repairs:

Repair posts supporting outdoor overhang: Decayed posts in the box office should be repaired or replaced.

Routine Repairs: None

Promenade

Critical Repairs: None

High-Priority Repairs:

Replace retaining wall: The timber retaining walls behind the promenade should be replaced.

Repainting: The promenade should be repainted. This will likely require lead paint abatement for the current paint.

Routine Repairs:

Fieldstone retaining wall: Minor mortar cracks in the fieldstone retaining wall should be repaired, and locations where mortar is missing or loose should be repointed. Consideration should be given to sealing the mortar joints in order to extend the wall's service life.

Repair floor cracks: Cracks in the concrete floor should be repaired before they become a tripping hazard. Repaired cracks that have been sealed and injected with epoxy are typically unattractive, and it would be necessary to apply a topcoat to repaired floors to conceal the repairs. Replacement of the floor slabs is generally a more costly alternative compared to repair, but since nearly all of the promenade slabs have extensive cracking, it is recommended to replace all promenade slabs. This approach will address the root cause(s) of the cracking, whether the problem is mostly due to poor subbase preparation, inferior concrete mix, or inadequate steel reinforcement. Replacement concrete should have water/cement ratio of 0.40 or less and 5-8% entrained air to provide enhanced durability and resistance to freeze/thaw.

Concessions and Restrooms

Critical Repairs: None

High-Priority Repairs: None

Routine Repairs:

Repair restroom cracks and CMU damage: There are numerous cracks in the CMU restroom walls. There are also areas where minor moisture related damage is present. Cracks and should be repaired. Surfaces should be cleaned by power washing or other effective means, then a water resistant paint applied to the CMU walls. Power washing should not be used on any primary or secondary feature.

Seating

Critical Repairs: None

High-Priority Repairs: None

Routine Repairs:

Repair floor cracks: Cracks in the concrete floor should be repaired before they become a tripping hazard. Repaired cracks that have been sealed and injected with epoxy are typically unattractive, therefore it would be necessary to apply a topcoat to repaired floors to conceal crack repairs. While it is generally more-costly to replace, rather than repair the cracked slabs, it is recommended to replace cracked floor slabs in the seating area on an as-needed basis, i.e. replacement of cracked slabs as cracks occur. Replacement should include improvement of the slab subgrade, use of concrete with a water/cement ratio not exceeding 0.40, and 5-8% entrained air, and suitable steel reinforcement to provide greater durability. It is recommended to investigate the application of a sealant to the concrete bowl installed in 2004. A sealant may enhance durability and reduce cracking by reducing surface permeability, but such coatings also carry with them risks of trapping moisture, exacerbating existing problems rather than alleviating them.

Light Towers

Critical Repairs: None

High-Priority Repairs:

Repainting: The light towers should be surface prepped and recoated.

Seal cracks in concrete bases Cracks in the bases of the light towers should be sealed.

Repair cavity near anchor bolt: The cavity adjacent to the anchor bolt in the south light tower should be cleaned and filled with high-strength grout.

Routine Repairs: None

Stage Deck

Critical Repairs: None. For repairs to the stage structure see "Unfinished Room."

High-Priority Repairs

Replace plywood decking: The plywood stage decking covering the concrete floor of the stage is nearing its end of life. It should be replaced before it becomes susceptible to cracking or other damage and thus a personnel hazard. The sleepers and elastic supports beneath the plywood deck should be evaluated and replaced as necessary.

Repair cracks in concrete deck: If NPS does not proceed with replacing the concrete deck, numerous cracks in the concrete stage deck should be sealed, and a waterproof coating placed on the concrete surface. While this might not normally be considered a high-priority repair, it must be completed in conjunction with the plywood deck replacement.

Routine Repairs: None

Stage Wings

Critical Repairs: None

High-Priority Repairs: None

Routine Repairs:

Repair wing wall cracks and CMU damage: There are numerous cracks and several spalls in CMU portions of the wing walls. There are also areas where moisture-related damage is present. Cracks and spalls should be repaired. Surfaces should be cleaned by power washing or other effective means, then a water-resistant paint applied to the CMU walls.

Orchestra Pit

Critical Repairs: None

High-Priority Repairs:

Repair crack at north end: The large crack in the concrete gutter at the edge of the orchestra pit should be repaired with flexible material.

Routine Repairs

Repair masonry beneath stairs: The masonry walls beneath the orchestra pit stairs have failed and require reconstruction.

Seal wall cracks: The numerous cracks in the orchestra pit walls should be sealed. It will likely be necessary to recoat the walls after sealing to conceal the repairs.

Curtain Track

Critical Repairs:

Removal of the curtain frames: The curtain frames have been out of commission for many years, and portions of the frame columns are corroded to the point where they pose a potential safety concern. A 2014 evaluation estimated that the degree of column corrosion results in a reduction of section modulus of

42% for the south structure. Both towers should be removed before the Amphitheater is reopened. This may require bringing a large crane on site, but it is also possible to remove the towers section-by-section using smaller equipment. The penetrations where the columns pass through the deck should be permanently repaired and sealed.

High-Priority Repairs: None

Routine Repairs: None

Stage Storage, Musicians' Storage, and Miscellaneous Storage Areas

Critical Repairs: None

High-Priority Repairs:

Repair crack in east wall: The crack in the east wall should be evaluated and repaired. The evaluation should consider whether the wall has sufficient expansion joints to enable a solid repair at the crack location. If it is unclear whether the wall has adequate expansion joints, then a flexible repair should be used for the crack.

Routine Repairs:

Moisture-related damage: The moisture-related damage should be evaluated and any mold or discoloration removed.

Dressing Rooms 14 and 15

Critical Repairs: None

High-Priority Repairs: None

Routine Repairs:

Mold and discoloration on the exterior of the building should be removed by power washing or other suitable methods. Note, power washing should not be used on any primary elements.

Green Room

Critical Repairs: None

High-Priority Repairs:

Repair east walls: The CMU walls in the east of the green room should be repaired. Blocks with more than 25% of the face material damaged should be replaced, and deteriorated mortar joints repointed. Damage to the walls is moisture-related, with moisture penetrating the wall from soil behind the wall. It may be possible that measures to improve drainage in the seating area and stage will correct the moisture problem. If so, repairs can be made to the wall from within the green room. If moisture problems continue after drainage improvements are made, it will be necessary to waterproof the wall from the interior and/or back side. This can be done by drilling through the wall in numerous places and injecting waterproofing compound, or performing a partial excavation behind the wall in order to waterproof the wall.

Routine Repairs: None

Dressing Rooms 1-12

Critical Repairs: None

High-Priority Repairs: None

Routine Repairs:

Repair minor cracks: There are a few cracks in the dressing room walls that are not associated with the expansion joints. These cracks should be repaired and surface repainted.

Corridor

Critical Repairs: None

High-Priority Repairs:

Repair CMU wall cracks associated with expansion joints: The walls in the hallway beneath the expansion joints should be rebuilt with expansion joints.

Routine Repairs: None

Women's Restroom and Showers

Critical Repairs: None

High-Priority Repairs: None

Routine Repairs: None

Men's Restroom and Showers

Critical Repairs: None

High-Priority Repairs: None

Routine Repairs:

Identify and correct cause of moisture-related damage: Some damage is visible to walls in the restroom area. Any

potential source of leakage should be identified and corrected, if present.

Laundry Room

Critical Repairs: None

High-Priority Repairs: None

Routine Repairs:

Repair leaking ceiling cracks: Cracks and holes where water leaches through concrete should be repaired. It may be possible to seal some cracks by sealing the top surface of the concrete deck. It may also be necessary to seal some cracks from below by epoxy-injection.

Storage Room

Critical Repairs: None

High-Priority Repairs: None

Routine Repairs:

Repair leaking ceiling cracks: Cracks and holes where water leaches through concrete should be repaired. It may be possible to seal some cracks by sealing the top surface of the concrete deck. It may also be necessary to seal some cracks from below by epoxy-injection.

Custodial Room

Critical Repairs: None

High-Priority Repairs:

Evaluate and repair damaged rebar: The broken reinforcement bar in the ceiling of the custodial room should be evaluated and repaired.

Routine Repairs:

Repair leaking ceiling cracks: Cracks and holes where water leaches through concrete should be repaired. It may be possible to seal some cracks by sealing the top surface of the concrete deck. It may also be necessary to seal some cracks from below by epoxy-injection.

Mechanical and Electrical Room

Critical Repairs: None

High-Priority Repairs: None

Routine Repairs:

Repair leaking ceiling cracks: Cracks and holes where water leaches through concrete should be repaired. It may be possible to seal some cracks by sealing the top surface of the concrete deck. It may also be necessary to seal some cracks from below by epoxy injection.

Unfinished Room

Critical Repairs:

Strengthening the Stage Beams: A recent evaluation by Johnson, Mirmiran, & Thompson (JMT) has determined that most of the beams and girders that support the stage are significantly overloaded in shear, and it is possible that some are overloaded to the point where they cannot safely sustain the dead load alone. While the beams and girders do not show signs of dis-

tress, the condition poses a risk to safety. Because of this, JMT has recommended that use of the facility be suspended until suitable repairs have been made.

As a permanent solution, JMT has recommended that either the stage structure be removed and replaced with a stronger stage structure, or the existing structure strengthened by using carbon-fiber wrap (Fiber-Reinforced Polymer, or FRP) or other means. NPS has accepted JMT's recommendations and is evaluating which option to implement. As part of the HSR assessment, this structural team does not recommend the FRP approach. It will not be possible to use FRP reinforcement alone to make the necessary repairs. ACI 440R is the structural code regulating the use of FRP reinforcement of concrete structures. One ACI 440R code requirement is that the structure be capable of sustaining 1.1 times the dead load plus 0.75 times the live load without the benefit of FRP. Since the existing structure is not capable of sustaining these loads, FRP-reinforcement alone is not a viable solution. Either removal and replacement of the stage or an alternate strengthening approach, beyond that outlined by JMT, will be required.

The replaced stage structure should also anticpate the loads required to support structure for a sasonal roof above the stage as well as modern production needs for lighthing and sound.

High-Priority Repairs:

Stair landings: The landings for both sets of stairs into the under stage area are being undermined. End walls should be constructed to prevent this from continuing.

Erosion gulley: Filling in the gulley in the central portion of the under stage area needs to be done to prevent the possibility of undermining column foundations. Once it has been confirmed that the source of water that created the gulley has been corrected, it is recommended a concrete floor be placed in the unfinished room.

Environmental control: As stated above, much of the degradation in the unfinished room results from moisture and other

environmental issues, including the intrusion of animals and trespassers. Repairs may not last if these environmental concerns continue. It is not clear whether the cause of the erosion gulley described above has been corrected. The unfinished room should be monitored during periods of heavy rain to verify that the cause of the gulley erosion has been corrected, and to identify other potential leakage locations for repair. In addition, the unfinished room should be secured to prevent access by animals and intruders. The concrete floor mentioned above will assist in preventing burrowing animals from entering the room. Installation of the concrete floor and securing the room against animal and human intruders should be accomplished whether the room is ultimately finished or not.

Routine Repairs:

Repair of cracks and holes in stage deck: There are cracks and holes in the stage deck that need to be repaired to prevent degradation of deck concrete. In conjunction with these repairs, a new waterproof coating should be installed on the deck. See page 299.

Mechanical Systems

Provide a direct outside air ventilation system (DOAS) to serve the lower level under the stage to provide code required outside air ventilation to the occupied spaces. An outside air system should be provided as a direct expansion split heat pump outside air system utilizing hot gas reheat for dehumidification control. Existing air conditioning systems that serve the corridor and the green room should be replaced on a one for one basis. The toilet and shower room exhaust system should be replaced. The existing electric wall heaters should be replaced. The exterior public toilet rooms should be provided with a code compliant exhaust system. The existing gas furnace system that provides the heating and cooling for the box office and administrative office building should be replaced. New packaged terminal air conditioning units with security cages should be provided to cool, heat and provide code required outside air ventilation for the control booth and the sound room. The upper level office spaces would receive outside air ventilation from the DOAS with split direct expansion air conditioning units providing zone conditioning. All exterior noise producing equipment, including new heat pumps and condensing units, should be located below the stage in the unconditioned area similar to existing or adjacent to the electrical generator to minimize impact on performances. If the unfinished space is enclosed, the existing condensing units currently located in the space would need to be relocated to the exterior.

Plumbing Systems

Where renovations to toilet and shower facilities are planned, new water closets, urinals, lavatories and showers should be provided to include new ABAAS accessible fixtures located in the public men's and women's rooms located off the promenade adjacent to the concessions area. The two 80 gallon electric water heaters located in the lower level should be replaced with new as well as the water heaters in the concessions area. Water coolers located outside of the public toilet rooms should be replaced. The electric water cooler provided in the box office should be replaced.

Electrical Systems

The majority of the electrical distribution system is at or past its useful life and should be considered for replacement during the next renovation. The main service switchboard is in good condition and could be reused.

The emergency generator and emergency distribution system should be replaced and the capacity of the system evaluated. Replacing the non-functional generator should occur prior to reopening Carter Barron Amphitheater.

The majority of the interior lighting has been retrofitted with LED lamps in the past few years. These light fixtures can be reused, but should be replaced with new LED fixtures connected to an addressable lighting control system during the next major renovation. An addressable lighting control system should include new LED fixtures. With an addressable lighting control system, each fixture and control device has an address or location. The software for the addressable lighting control system uses a Graphic User Interface (GUI) that simplifies programming, and the devices report status back to a head end unit where they can indicate when fixtures, drivers, switches or other devices need to be replaced.

The site lighting along the pathways is suitable for reuse and should evaluated for replacement if a major renovation occurs more than 10 years out.

An addressable fire alarm system needs to be installed prior to reopening the Carter Barron Center Amphitheater regardless if it is renovated or not. With an addressable fire alarm system, each fire alarm device has an address or location, enabling the exact detector that was triggered to be quickly identified.

Hazardous Material

Ninety (90) of the field screening shots yielded lead concentration above the District of Columbia threshold (≥1.0 mg/cm2) for lead-based paint. Building components and/or surfaces identified as being affected with lead-based paint include metal pipes, metal electrical panel, wooden door, metal door components, ceramic sink, metal handrail, metal pipe valve, metal support beam, window casing, fire hose connections, ladders, roof supports, telephone boxes, walls, and wooden window components. The lead screening does not include testing of every painted surface within the project area; rather its intention is to characterize groups of similar components and coatings. If similar components with the same substrate and paint to those identified are

encountered during renovation activities, they are to be treated as lead-based paint affected.

The Occupational Safety and Health Administration (OSHA) Lead in Construction Regulation, 29 CFR 1926.62, applies to all construction work where an employee may be occupationally exposed to lead. This standard does not indicate a specific percentage or mass per area (mg/cm2) of lead-in-paint that is permissible during construction/demolition activities. There is no acceptable concentration for lead under the OSHA lead standard that eliminates the requirement for contractors to comply with this regulation. Due to the presence of lead-containing paint at the site, OSHA worker protection requirements for lead must be followed during renovation and/or demolition activities. It is recommended that an appropriately licensed lead abatement contractor be retained to complete lead abatement actions which may be performed at the site. General demolition practices may be performed in accordance with the OSHA Lead in Construction standard.

A lead Toxicity Characteristic Leaching Procedure (TCLP) test should be conducted for the demolition debris generated on site. A representative waste stream sample should be collected to characterize the demolition debris, in accordance with the Resource Conservation and Recovery Act (RCRA), to determine disposal options. The hazardous waste criteria for lead waste is established under RCRA, Subtitle C, as 5.0 milligrams per liter (mg/L) measured with the TCLP as listed in CFR 40 Part 261. The lead-containing and lead-based paint debris generated during demolition should be handled in accordance with all applicable Federal and District of Columbia regulations.

See Appendix B for the full hazardous materials report.

Mortar Analysis

Recommendations for repair are based in part upon the findings derived from this site, industry standards, and accepted best practices in the architectural conservation field. Repair mortars should generally be compatible with the existing mortar and building materials in terms of compressive strength and porosity.

The analyzed samples provided sufficient information to serve as a basis for faithful replication of the pointing mortar found at Carter Barron Amphitheater. A repointing mortar should include the following characteristics:

- The overall appearances should achieve a light gray (similar to Munsell 10YR 7/1).
- Moderately sorted aggregate.
- A range of particle sizes, primarily consisting of sub-rounded to sub-angular medium sand particles, very fine sand (1/16 mm) to coarse sand (<1 mm).
- Replication of the existing joint profile should be performed to unify the existing joint(s) and re-pointed area.

Recommendations for an exterior repointing mortar are based in part upon information garnered from the samples discussed, but also upon industry standards and direct observations of the conditions currently found on the building. As noted previously, exact mix ratios should not be taken from acid digestion alone. Overall the supposed age, location, and qualities of the mortar characterized thus far suggest that it is a modern, relatively hard mix.

CSI recommends using a Type N or S mortar for any repointing of masonry at Carter Barron Amphitheater. Though it may not precisely replicate the original mortar, a Type N or S mortar can be created to match the existing mortar in appearance (i.e. joint profile, color, and aggregate) while also performing to modern industry standards.

Typical mix ratios for Type N or S mortars:

- Type “N” mortar, consisting of 1 part Portland cement, 1 part lime and 4-6 parts sand (by volume).

OR

- Type “S” mortar, consisting of 1 part Portland cement, 1/2 part lime and 4.5 parts sand (by volume).

CSI has retained the aggregates for the samples; upon request they can be provided to the client or building owner to aid in the creation of replica mortar mixes.

Joint profile

Overall the Carter Barron Amphitheater has a rough, recessed mortar joint profile closely resembling a raked profile. In addition to the color and consistency of the mortar, the joint profile is another important and defining design characteristic. Future repairs should replicate the existing profiles to ensure a unified appearance.

See Appendix C for the full mortar analysis report.

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