PRESERVING LANDSCAPE EXPERIENCE IN HISTORIC OUTDOOR THEATERS

CANCIAN & JEWELL

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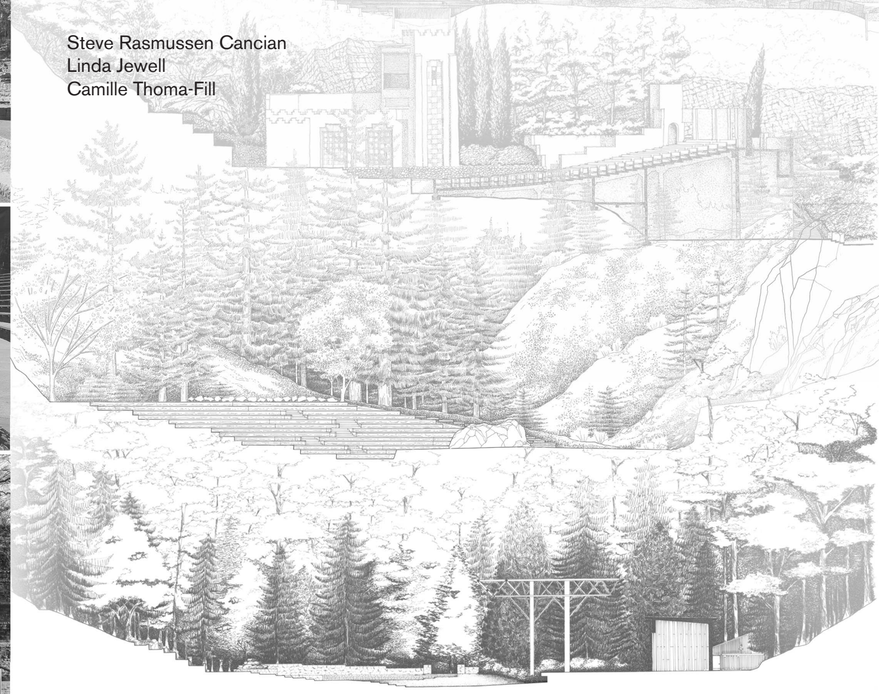

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Preserving Historic Outdoor Theaters' Connection to Their Landscapes

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* This British spelling 'amphitheatre' is used in this guide when it is the theater's official name

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The creation and preservation of outdoor theaters always involves many people, playing many roles over many years—this project followed that model. Thank you to everyone who contributed.

Figure 1 *The Arthur Hoyt Scott Outdoor Amphitheater at Swarthmore College exemplifies the merging of an existing landscape and seating.* *Grassl, 1996.*

"…through the spoken work, the rendition of music, through song and dance the outdoor theater can contribute to mental, physical, and spiritual growth. If it is healthful to exercise, work, play, and sleep in the open, it should be even more beneficial to have our finer sensibilities unfolded in the same favorable atmosphere."

Emerson Knight, Landscape Architect, in *Architect and Engineer*, 1924

INTRODUCTION

This guidebook investigates the best practices for renovating historic outdoor theaters while preserving the visitors' experience of the landscape. The need for this guide stems from a core dilemma of historic theater renovation: visitors and performers cherish these venues because they intertwine the experience of the landscape and the performance, but at the same time they desire modern comforts, conveniences and technology that can undermine the very landscape experience that draws them.

This dilemma threatens the reason these historic outdoor theaters were originally created. In the early 1900s, wealthy patrons, theater professionals, naturalists, and designers collaborated to create outdoor theaters to promote the "mental, physical and spiritual growth" that springs from experiencing artistic performances in the landscape. These theaters were a context and pretext for getting larger numbers of people to gather outside and experience the landscape together. Importantly, these new venues created "landscape experiences," not just vistas or viewpoints. They lured visitors into the rare experience of sitting quietly surrounded by the natural environment for an extended period of time. The live drama and music actually intensified this experience by heightening visitors' perception and awareness, in what we now understand to be a physiological response. Combine these factors with the presence of hundreds or thousands of kindred spirits and you had a truly memorable landscape experience.

During the Great Depression, New Deal programs brought these compelling landscape experiences to parks and communities across the nation by building hundreds, if not thousands, of theaters in the nation's public landscapes. These outdoor theaters offered free or low-cost

concerts, plays, lectures, and public celebrations that not only entertained and enriched the daily cultural lives of Americans but also brought them into close, extended contact with nature and the landscape.

In the decades after World War II, the motivation for building outdoor theaters gradually changed. Theaters were often developed outdoors, rather than indoors, because it was cost-effective. Over time, theater sites were selected more for their easy automobile access and the adjacent flat land for parking, than for their potential to connect visitors with the landscape. The owners and managers of these theaters sought to provide performers and audience members with much of the technology and creature comforts of an indoor space, while still being "outside." Many new and historic venues balanced their books by adding large commercial concerts into the more traditional community-oriented programs of drama, classical music and local celebrations. These commercial events, particularly after the 1960s arrival of rock concerts, brought more customers expecting a full amenity experience. Visitors now came to outdoor shows anticipating the same performance experience as in an indoor concert hall, just outdoors. Gradually, the amenities found in newer theaters had the unintended effect of raising audiences' expectations for state-of-the-art lighting, superior sound quality, diverse food vendors and comfortable seats in all outdoor theaters.

And so, renovators of historic outdoor theaters face a dilemma—how to meet these heightened expectations without undermining the experience that is the raison d'etre of these remarkable places. Our study of renovation projects reveals that this dilemma can be resolved by placing the theater's memorable landscape experience at the center of the design process as a primary parameter for every decision. When the landscape is understood as an essential reason for the venue to exist and as an essential player in the performance, then the design discussion transforms from struggling with tradeoffs in the name of modernization to taking full advantage of contemporary tools to support the outdoor experience. The most successful outdoor theater renovation projects demonstrate the potential to meet contemporary expectations and fulfill current requirements without compromising the landscape experience. While each of these projects is idiosyncratic and site specific, taken together they suggest a replicable process for modernizing historic outdoor theaters while preserving visitors' experience of the landscape.

We will set the foundation for considering the best practices for renovating amphitheaters by briefly reviewing the history of outdoor venues in the United States, including their inspirations, their intentions and how they sought to create landscape experiences. We will then explore best practices from three perspectives:

- **Profiles of Renovations that Succeed in Preserving their Landscape Experience** – These profiles present the origin and renovation story of each theater, so that the changes made can be analyzed in context and applicable lessons can be extracted. While each renovation project is different, many common challenges arise. These profiles provide contextualized examples of how previous renovation teams met these challenges.

- **Best Practices for Renovating Key Components of Theaters while Preserving the Landscape Experience** – While the profiles teach that all design solutions are contextual, it is still possible to distill a design process that holds the most promise for meeting contemporary desires without undermining the landscape experience. This section explores best practices by key element or component of a theater renovation—seating, stage structures, lighting, etc. It can be read as a primer or used as a reference when working on one aspect of a venue.

- **A Proposed Process for Renovating Outdoor Theaters while Preserving their Memorable Landscape Experience** – Together the history, profiles and analysis in this study suggest a process, rather than physical design guidelines, for resolving the dilemma posed above. This section outlines 9 key practices to integrate into any outdoor theater renovation project that seeks to preserve the landscape experience.

HISTORY

HISTORICAL OVERVIEW OF AMERICAN OUTDOOR THEATERS

EARLY OUTDOOR THEATERS (1890 – 1930)

DEPRESSION ERA OUTDOOR THEATERS (1930-1942)

OUTDOOR THEATERS SINCE THE DEPRESSION (1943-PRESENT)

Figure 2 *America's earliest performances were held in undeveloped landscapes with natural acoustics. Here, musicians test acoustics on the site of the future Red Rocks Amphitheater in preparation for a concert . c.1910-1930.*

Figure 3 *The designs of most early American outdoor theaters were influenced by European precedents. The 1913 Longwood Gardens Open Air Theatre was based on the 16th century garden theater. 1996.*

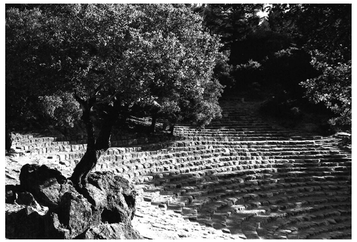

Figure 4 *1930s New Deal programs hired the unemployed to construct hundreds of rustic outdoor theaters in the nation's parks, including California's Cushing Memorial Amphitheatre. 1996.*

Figure 5 *After World War II, outdoor theaters prioritized the technical and commercial amenities of indoor theaters over the landscape. Yet, some Modernist theaters were inspired by their landscapes, such as the Santa Cruz Quarry Amphitheater. 2021.*

From the early 1900s until the Great Depression, outdoor theaters were built in public and private landscapes to facilitate the American enthusiasm for performances held in nature. Working together, wealthy patrons, volunteers and designers placed the landscape front and center as they designed and built hundreds of outdoor theaters to offer free and low-cost performances across the country. These theater advocates typically looked to Greek, Roman and Renaissance theaters for the basic form of their theaters, but they located the venues so that the visitors' experience was defined by the landscape.[1]

During the 1930s and into the early 1940s, a new patron, the federal government, built outdoor theaters in the nation's public parks and civic spaces. With the added objective of getting everyone back to work, New Deal government programs constructed hundreds, if not thousands, of outdoor theaters. The combination of the conservation ideals of the lead agencies, the sophisticated skills of the designers they employed, and the practical craftsmanship of thousands of workmen created distinctly local, site-specific theaters, including many defined by their landscape experiences in the tradition of earlier venues.[2]

After World War II, there was less generous support from wealthy patrons and significantly less government support for building outdoor theaters. Most new theaters became increasingly dependent on commercial funds from ticket sales and concessions. The siting and design of larger, high profile outdoor theaters now focused more on how to minimize costs and maximize income improving convenience, comfort, and production values.[3] At the same time, the growth and increasing cultural diversity of the post-War era supported the development of a wide

range of types and sizes of theaters that fit different productions and audiences, while still monitoring the bottom line. In response to this new context, some innovative design teams still developed models for how to simultaneously create a compelling landscape experience and meet financial imperatives and audience expectations.

For theater renovation teams, understanding the cultural context and prevailing design intentions behind each period of American outdoor theaters (the Early, Depression, and Post War eras) can offer insight into how an outdoor theater can either integrate or separate the performance, the audience, and the landscape. Each era impacts the audience's expectation of what a historic outdoor theater should look like and feel like while most recent commercial theaters raise audience's expectations for comfort, services, and production values. A successful renovation of a historic outdoor theater should sustain the tradition of providing audiences with an outdoor experience in nature, even as they provide contemporary comforts, amenities and production values.

EARLY OUTDOOR THEATERS (1890 – 1930)

In the late 19th century, amateur performances on the grounds of private estates led to the construction of the country's first outdoor theaters. Initially, wealthy families and their friends watched plays from temporary seats placed on the lawns and tree-covered slopes of private clubs and estates.[4] One of the first American outdoor theaters was the rustic Bohemian Grove Theater (c.1890) built on the wooded slope of a private club for California businessmen.[5] At the turn of the century, an increase in college enrollments spurred students to establish on-campus entertainment by staging drama, music, and celebrations in campus landscapes.[6] Outdoor performances quickly became popular with the wider community after several city symphonies offered summer concerts in natural landscapes.[7] Likewise, a movement of drama enthusiasts organized free outdoor plays as an antidote to the perceived elitism and costly ticket prices of interior theaters.

Concurrent with the growth in popularity of these open-air performances, many educated citizens began to promote access to the landscape and nature as a way to ameliorate the hardships of city life, reflecting the vision of earlier 19th century reformers, including Frederick Law Olmsted. Civic leaders supported efforts to make undeveloped landscapes more accessible to the public through the expansion of metropolitan parks, the preservation of wilderness areas, and the 1916 inauguration of the National Park Service. As the number of local and national parks increased, affluent patrons and civic groups sponsored music, drama, and celebrations within these landscapes to encourage urban families to spend more time in nature. Multiple articles in popular magazines soon made outdoor performances into a national fad. Citizen volunteers advocated for outdoor theaters as more open and accessible to people from various backgrounds than indoor venues. They supported building outdoor theaters that were intentionally designed as places where diverse Americans could gather to enjoy drama, music and celebrations. Wealthy patrons frequently helped fund these public theaters and many, including industrialist Pierre DuPont, built outdoor theaters on their estates to host public performances.

Influential architects and landscape architects such as Bernard Maybeck, Myron Hunt, Jens Jensen, Frank Waugh, and Emerson Knight were active advocates of the popular outdoor performance movement. They each designed outdoor theaters. Waugh and Knight also published articles and books on theater design and historical precedents. Most designers looked to European precedents and proposed *architectural theaters* with classically derived geometric forms.[8] Built of white concrete or finished light-colored stone, these theaters were carefully positioned to highlight elements of the undisturbed natural landscape through contrast. For example Berkeley's 1903 Hearst Greek Amphitheatre was originally designed as a classically derived "jewel" that could only be reached by first walking through a dense woodland. A number of smaller venues—particularly those used for plays such as the Longwood Garden Theatre—looked to theaters in Renaissance gardens for their design inspiration, maneuvering trees, shrubs and lawn to create performance spaces.

Other theaters—such as the Bohemian Grove Theater—were referred to as nature theaters.[9] Nature theaters merged with their context by mimicking both the colors and irregular shapes of the surrounding landscape. Jens Jensen, who designed a number of outdoor theaters for Chicago's park system, as well as for private clients, was an active advocate for the nature theater. On some occasions, designers would apply one approach to the stage and another to the auditorium or vice-versa. Such was the case at the Bohemian Grove Theater, likely designed by Bernard Maybeck who was an active member of the Club. Here, a series of performance platforms were placed at different elevations on a steep tree covered hillside where actors would emerge from the vegetation to deliver their lines and then disappear into the forest. The audience sat in chairs placed below on the nearly flat, open forest floor. In 1920 Bernard Maybeck used a similar approach at Los Angeles' Pilgrimage Theatre (now John Anson Ford) where multi-level platforms were built into the existing slope to offer different biblical settings for a religious play. The sloped auditorium, designed much like an interior theater, provides excellent sight lines to both the main stage and the hillside. A series of renovations have updated the seats, but the layout has remained, allowing the audience excellent views of both the hillside performance spaces and the more conventional lower stage.

Figure 6 Northern California's Bohemian Grove Theater, likely the oldest intact American outdoor theater, has a vertical stage that merges into the hillside. c. 1900.

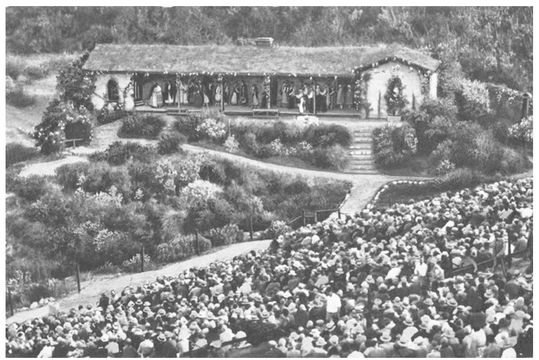

Figure 7 The 1923 Ramona Bowl Amphitheatre, the setting of the nation's earliest historical drama, utilizes a three-acre landscape as a stage with simple stadium seating. c 1925.

Religious Passion Plays, such as the one at the Pilgrimage Theatre and their relatives, the historical drama, had their roots in the late 19th century pageantry movement. During this time traveling performers and local volunteers performed spectacular dramas in the undeveloped landscapes of city parks, small towns and rural fields.[10] The epic historical drama *Ramona* has attracted thousands of visitors each year to its vast outdoor theater in Hemet, California.[11] The three-acre stage of The Ramona Bowl Amphitheatre was designed to present a series of scenes from the history and folklore of local native peoples and early western settlers. The rugged natural landscape is a key player in the drama that included scenes with hundreds of actors and horses galloping down a hillside and across the valley stage. In 1926, The Ramona Bowl's construction of the stadium seating, along with these landscape scenes, created the United States' first permanent outdoor theater for an historical drama. Along with the Passion Plays presented at Los Angeles' 1922 Pilgrimage Theatre (John Anson Ford) it set a precedent for outdoor dramas to continue the tradition of integrating the surrounding landscape into the performance even as they created permanent seating structures for the audience.

Both the stage and auditorium of nearly all early American theaters were open to the sky. A few designed for symphonic and musical performances, including the Hollywood Bowl and the Redlands Bowl, had shells covering the stage to protect instruments, improve sound projection and facilitate the ability for musicians to hear one another. The 1903 Hearst Greek Amphitheater is open to the sky, but it has an exuberant stage backdrop with heavy articulated classical detailing. Nevertheless, most stages were simple platforms or elevated lawns with minimal architectural elements. These earthen stages sometimes included shrubs and trees that became a part of the performance.

Figure 8 *The 1924 Hollywood Bowl had a series of shells to supplement the site's natural acoustics. Any shell becomes a minor event in the vast landscape where the Pilgrimage Play Theatre can be seen in the distance. 1926.*

Figure 9 *Since 1916, the Redlands Bowl, located in the town center, has offered free concerts with a distant view of the San Gabriel mountains. 1916.*

The seating was nearly always simple and often not very comfortable. Most theaters had continuous backless benches of wood or stepped seat walls of stone or concrete. Even the seats of the Hearst Amphitheatre were, and remain, steep concrete steps without any detailing or backs. The elegant Arlington Memorial Amphitheater with its carefully detailed stage structures had simple continuous backless benches—albeit, in white marble. Other venues, such as the Longwood Garden Theater, placed movable chairs on a gently sloped lawn. Steeper lawns provided better sight lines to the stage but presented the challenge of stabilizing chairs on the slope. At Vassar College, they solved this challenge by building custom chairs with the rear legs shorter than the front.[12]

Although influenced by European precedents, these early theaters reflected a distinctly American modesty and deference to the landscape. They were physical manifestations of the patrons', communities', and designers' belief that spending time in the landscape experiencing nature could provide physical, mental, and spiritual renewal.

Figure 10 *The 1920 Memorial Amphitheater in Arlington Cemetery hosts national ceremonies in a classically influenced white marble edifice that contrasts sharply with the green lawns around it. 1998.*

DEPRESSION ERA OUTDOOR THEATERS (1930-1942)

More outdoor theaters were built in America's public landscapes during the Great Depression than during any other period.[13] Although private donors continued to fund a few outdoor theaters including the 1937 Frost Theatre at Stanford University, the federal government quickly replaced wealthy donors as the principal patrons. After becoming President in 1933, Franklin D. Roosevelt established government agencies that sponsored thousands of construction projects between 1933 and 1942. His new programs, known as the New Deal, were established to create jobs for the 25% of Americans out of work.[14] New and existing federal agencies funded and managed projects within a complex system of programs, sub-programs, and multi-agency collaborations.

The administrative setting of a landscape project within the New Deal's complex framework influenced the final designs as each program had distinct regulations, review procedures, and funding restrictions. Some programs provided funds to state and municipal governments to hire engineering and design firms as consultants on large projects such as dams, roads, schools and municipal buildings. Others hired designers as government employees to plan and design public facilities. Whatever the organizational setting, the goal was to immediately fund, propose, and design public projects that would create as many new jobs as possible. Most New Deal construction funds went to civic buildings and large infrastructure projects, but President Roosevelt's interest in land conservation also gave a high priority to proposals that improved public parks and natural landscapes.

The government-hired and funded designers, influenced by the popularity of the outdoor theaters of the teens and twenties, frequently included theaters in their proposals for parks, zoos, schools, and civic spaces, whether there were programmatic requests for a theater or not. In her book, *The Public Landscape of the New Deal*, Phoebe Cutler noted that "the amphitheater, a much-favored item with almost every agency, but the Soil Conservation Service, appeared everywhere from the heart of a redwood forest to city streets."[15] Although a wide variety of New Deal programs did build the occasional outdoor theater, The Emergency Conservation Work program known as the Civilian Conservation Corps or CCC (1933-42), and the Works Progress Administration (WPA, 1935-42) designed and built most of the theaters developed in this period.[16] Both the CCC and the WPA programs typically created simple utilitarian structures based on theaters built before 1930. Even the occasional groundbreaking design, such as the Red Rocks Amphitheater, had an auditorium with simple backless wood benches.

The mobilization of a pre-existing National Park Service (NPS) administrative structure to hire designers put park leaders and park values at the forefront of many of these projects. Architects and landscape architects hired and managed by NPS transformed American parks with their designs for rustic structures that were intended to merge into their surrounding landscapes. The CCC put unskilled young men to work conserving and restoring the natural environment. Under this mantle of "conservation", the CCC built roads and small structures for state and local parks, as well as the National Parks. The NPS designers became responsible for administering and designing these improvements, including hundreds of campfire circles and outdoor theaters. The design staff of the existing NPS Landscape Division (renamed the Branch of Planning and Design in 1933) established a review system for newly hired senior and junior designers who designed and oversaw the construction of the CCC projects in the field. The NPS staff produced guidebooks with photographs and drawings of appropriately "rustic" park structures, including outdoor theaters. Each of these theater examples, although built with rough timbers, unfinished stone, and primitive construction techniques, had highly regularized geometric plans. Many of the most memorable theaters were created as NPS designers then altered these geometric layouts in response to the particulars of a site while they worked side by side with the CCC recruits.[17]

Of particular note is the extraordinary Cushing Memorial Amphitheatre (Mountain Theater) on Mt. Tamalpais in Marin County, California. Designed by NPS consultant Emerson Knight, the theater was inspired by the classically symmetrical Greek theater in Taormina, Sicily. However Knight adjusted his design during construction to follow the existing topography, producing an asymmetrical sweep of stone seats that appear to emerge from the natural hillside. The Cushing Mountain Theater exemplifies how the CCC's conservation and employment agendas and the NPS's rustic ideals combined to foster designs that merged into their landscapes. The necessity of keeping everyone working precluded waiting for redesigns when unforeseeable conditions arose or for materials to arrive from afar. Instead, designs were altered in real-time on-site as conditions required and materials were sourced locally—often right on or adjacent to the site. The results include theaters that are remarkably integrated into their landscapes in form and material.[18]

In contrast, the design vocabulary of outdoor theaters built by the Works Progress Administration varied with each sponsor and location. The WPA hired designers as both consultants and as government employees to design public buildings such as schools, libraries, post offices, civic buildings and parks. Many of these projects included outdoor theaters. Each funding request followed a lengthy review process that evaluated the number of jobs it created as well as the necessity for the project. When creating theaters for natural settings or heavily planted urban parks, WPA designers often looked to the rustic NPS structures for guidance, as the Forest Service landscape architects did for the amphitheater at Timberline Lodge in Oregon (Figure 67). Still, there were other WPA theaters built within the context of civic buildings with

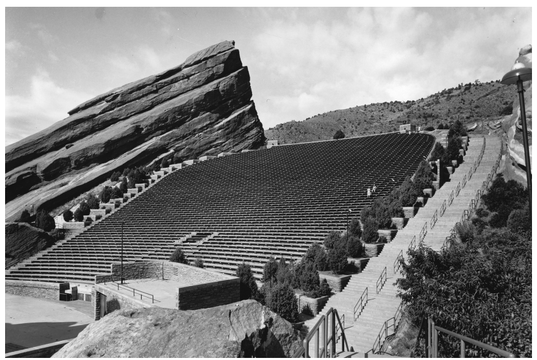

Figure 11 *Designed by modernist architect Burnham Hoyt, Denver's 9,525-seat Red Rocks Amphitheatre was one of the few modern theaters built by the CCC. It continues to be one of the countries' most popular concert venues. 1960's. History Colorado.*

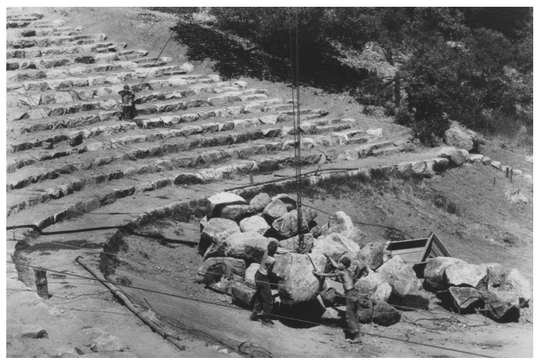

Figure 12 *The Cushing Memorial Amphitheater was built by the CCC from 1935 until 1941 with most design decisions made in the field by NPS designers. Consequently, the alignment of the rows, built of on-site stones, was constantly adjusted to the topography. c.1939.*

designs influenced by the 1930s “modern” styles, such as the viewing stands at the striking Maritime Museum (Aquatic Park Bathhouse) on San Francisco’s waterfront.[19]

Some WPA theaters were a result of the Federal Theater Project that funded jobs for actors, writers, and theater craftspeople to present free and low-cost plays.[20] Clever theater groups received both WPA and CCC support to improve and/or build outdoor theaters with designs reflecting their location and programs. The 1913 Forest Theater at University of North Carolina-Chapel Hill was updated with rustic stone seats that merged into a forested hillside, much like NPS theaters.[21] On the other hand, the amphitheater at the Raleigh Little Theater, also in North Carolina, had geometric concrete seats with grass terraces that reflected the simplicity of the modern design for the adjacent theater building.[22] Another Federal Theater project, the Waterside Theater on the Outer Banks along the coast in Manteo, North Carolina, was not only intended to employ actors and other theater professionals, but also to jumpstart the local economy by drawing tourists to a remote area highly impacted by the Depression. This 1937 theater became a new model for a historical drama set within a theater structure. Like the Ramona Bowl, the Waterside Theater was designed for a single production, *The Lost Colony,* by Pulitzer Prize Playwright Paul Green. It continues to attract some 70,000 people each year to a play that portrays the story of the native population and English settlers who first occupied the North Carolina Outer Banks in 1587 but had vanished by 1590.[23] The theater’s design references the fort where the English colony lived. Its auditorium entrance is carefully positioned to offer patrons a view of water just before they descend into an auditorium surrounded by the timber stockade of a simulated fort. The timber walls also provide a backdrop for the stage located near the edge of the inland waterway. Having been prompted by their early view of the water, audience members willingly accept masts and sails moving behind the stage wall as a ship returning to England for supplies.

The New Deal’s agency guidelines, complex review processes, limited budgets and rapid schedules provided few opportunities or incentives to pursue new design directions. When sponsors and designers sought to create landscape experiences, they typically looked to the approaches developed and proven by earlier American theaters. However, many of the nation’s most talented and experienced, but unemployed, designers were hired for New Deal projects. They approached the “constraints” of the New Deal’s modest budgets and bureaucratic requirements with creativity and skill to develop hundreds of wonderful theaters that deferred to the landscape. After WWII, with the disappearance of the New Deal programs and a decline in donors, priorities in outdoor theater design gradually changed. The opportunity, desire and need to generate revenue to pay for performances and maintenance and, in some cases earn a profit, encouraged business-focused designs that sometimes left the landscape out of the picture. The most successful designers found ways to meet these financial demands and still preserve or create a memorable landscape experience.

Figure 13 *The 1936 Maritime Museum at San Francisco’s Aquatic Park was designed in the modern style of a larger building project. Here it provides stadium seats to watch boating and swimming events. 2021.*

Figure 14 *The Waterside Theater, built by the WPA in 1937, has offered The Lost Colony historical drama every summer since. c.1938.*

Figure 15 *The Forest Theater at UNC-Chapel Hill, originally built in 1913, was one of many early theaters updated with new seats and stage improvements by the WPA. Here the stone seats merge with the topography and vegetation. 1996.*

OUTDOOR THEATERS SINCE THE DEPRESSION (1943-PRESENT)

The pre- and post-war years were dramatically different. During the war, government programs supporting outdoor theaters disappeared. After the war, rapid development, commercialization, and an expanding middle class increased the choices in most aspects of American life. A broad spectrum of outdoor theater types—both old and new—were built or renovated to address the diverse interests of a booming country. Funding for these new theaters gradually evolved into a myriad of different financial arrangements amongst local governments, academic institutions, non-profit art organizations and for-profit producers. Still, nearly all theaters needed to generate at least part of their revenue from ticket sales and concessions. This obligation motivated sponsors to provide comfortable seats, nationally known performers, multiple food concessions and nighttime events with spectacular light shows. The focus on amenities to attract customers only increased as television became more and more of a competitor. Many venues also limited public access to the theater to control entry during ticketed events and protect electronic equipment. By the 1980s, providing popular amenities and a secure site dominated the design of both new and renovated outdoor theaters, often with an unintended consequence—the loss of a memorable landscape experience.

Exploring how post-war theaters attempted to meet customer and owner expectations and still deliver a landscape experience provides valuable precedents for renovating historic theaters to meet the same dueling demands. While post-war theaters are quite diverse, four clear types emerge that each teach different lessons:

- Large concert venues
- Historical drama theaters
- Shakespeare and intimate drama theaters
- Everyday casual use theaters

CONCERT VENUES

Since the 1924 construction of the Hollywood Bowl, numerous outdoor theaters had been built to showcase local symphonies. Initially, city orchestras offered summer concerts “under the stars” in nearby natural areas where patrons sat on the ground or on makeshift benches. After successful events, local governments added band shells and permanent seating. Funds from both local governments and donors often supported both construction and free or low-cost tickets. The CCC construction of the Red Rocks Amphitheatre carried on this tradition, as did the original 1938 Stern Grove Theater in San Francisco.

By the 1960s, the popularity of outdoor rock concerts, including multiple Grateful Dead performances at the Hearst Amphitheater and the Cushing Mountain Theater, increased interest in outdoor theaters for large rock concerts.[24] The 1964 tour by the Beatles gave an additional boost to existing outdoor theaters where they performed, including Red Rocks Amphitheatre. The profitability of these rock concerts prompted the building of new theaters for popular concerts as commercial ventures. Most new theaters had indoor support spaces behind a covered stage that opened to a partially covered auditorium with additional lawn seating.[25] This configuration saved owners significant capital investment over the construction of similar sized indoor auditoriums. Performers and audience members could still enjoy much of the technology and creature comforts of an indoor space, while being “under the stars.” While technically outside, many of these theaters had little connection to the landscape.

One of the first of this generation of theaters was the 1967 Merriweather Post Pavilion designed by Frank Gehry with Gehry, Walsh and O’Malley and built as a public-private amenity for both commercial and free events in Columbia, Maryland.[26] Over time, renovations to Merriweather Post and to other similar theaters have often resulted in experiences little different from those offered by interior theaters. For example, the 1971 Filene Center at Wolf Trap National Park in Vienna, Virginia, was built with a roof covering its stage and half of its 7,000 seats. The backstage support and the large roof facilitated sophisticated lighting and acoustical conditions but compromised the outdoor experience.

In 1975, the city of Concord, California, and concert promoter Bill Graham collaborated to create the Concord Pavilion for both community and commercial performances. Designed by Frank Gehry with landscape architects SWA, it had a roofed stage, over 4,000 covered seats and an additional 8,000 open-air lawn seats. Although the canopy limits most views into the landscape during performances, Concord’s original design gave thoughtful consideration to the landscape experience by preserving wonderful views of the surrounding hills from the carefully positioned entry path as well as from some portions of the lawn seating.[27] Unfortunately, the surrounding landscape is now mostly suburban housing that has compromised the original long vistas of rolling hills and created new demands to buffer the sound from performances.

Figure 16 *Columbia Maryland’s Merriweather Post Pavilion, built in 1967, is an example of post WWII concert theaters that provide some of the and technical and audience amenities of interior theaters under a canopy, with extensive lawn seating behind. 2017.*

Figure 17 *The 2012 Weill Concert Hall at Sonoma State University has a wall that opens onto the vast Weill Lawn with views of the nearby Sonoma County foothills. 2018.*

Since the 1970s, theaters with a covered stage, a partially covered auditorium with individual seats and a large open lawn became a model for some thirty or more commercial amphitheaters built as revenue producing venues. Many began as theaters for community events that also hosted occasional revenue producing concerts. By the 1980s, Commercial concert promoters and corporations such as AT&T, Sleeptrain and Verizon, were sponsoring outdoor theaters as business ventures, often in partnership with cities, towns or art organizations. Soon, community-based theaters faced pressure to renovate their venues with similar amenities to compete with the new theaters and access revenue from vendors and higher ticket prices. In some cases, these improvements diminished the original experience of a performance in the landscape. Fortunately, others had community advocates that deflected many of the most intrusive proposals, including one for adding thousands of seats to Red Rocks Amphitheatre.

Contemporary design teams have developed innovative ways to fulfill desires for customer comfort, production values and revenue while still creating a landscape experience. Not coincidently, these teams were working for clients equally committed to financial sustainability, customer (and donor) service and a memorable outdoor concert experience for the broader public. In California, at Sonoma State University's Weill Lawn and Commons, a retractable wall opens up the 1,400-seat Green Music Center to some 5,000 additional lawn seats with wonderful vistas of the iconic oak covered hills of wine country.[28] Frank Gehry's Pritzker Music Pavilion in Chicago's Millennial Park uses a similar dual space approach to provide a state-of-the-art symphonic experience and an iconic musical landscape experience, side by side. Directly in front of the stage, 4,000 comfortable seats are located under a permanent roof with the acoustical amenities of an interior concert hall. Behind these seats, a grand lawn accommodates to 7,000 visitors sitting, picnicking and star gazing while marveling at by fantastic views of the city skyline and listening to concerts through hidden overhead acoustical speakers.[29]

THEATERS FOR HISTORICAL DRAMA, RELIGIOUS PLAYS AND BROADWAY MUSICALS

Building upon the successes of *Ramona* and *The Lost Colony*, communities across the country built outdoor theaters during the 1950s through the 1980s for historical dramas, often in out-of-the-way locations. Paul Green wrote many of the early historical dramas with the play, the theater and the landscape crafted together to support a common story. Another of Green's historical dramas, the spectacular, *Texas,* opened in 1966 in Canyon, Texas with some 60 cast members and numerous livestock on a stage backed by a 600-foot-high cliff where cowboy actors and their horses perch to oversee the action.[30] The 2,800-seat Mountainside Theater in Cherokee, NC was designed to present Green's *Unto These Hills*, on the legend and history of the local Cherokees who were also cast members. This play continues to attract thousands of tourists each summer with live campfires, exuberant dances, animals, and hundreds of fireflies on an earthen stage that merges into the surrounding forest.[31]

Historical Drama theaters also developed in urban areas, often with more contemporary architectural approaches. In 1950, the National Park Service built The Carter Baron Sesquicentennial Theater in Washington DC's Rock Creek Park to host Paul Green's drama, *Faith of Our Fathers*, as a tribute to George Washington for the 150th anniversary of Washington, DC. The design displays a subtle Modern re-envisioning of the capital city's neo-classical architecture. After two years, Green's drama was replaced with free and modest priced musical and theatrical performances, prompting its namesake Carter Barron to describe the theater as a place where "all persons of every race, color and creed could attend."[32] Presently, the stage and 4,200 seats remain open to the sky and trees still surround the seats and are visible behind the stage even when portable fabric tents are installed over the performances. Due to unsafe structural concerns for its stage, Carter Barron has been closed since 2017 and is awaiting renovation.[33]

Interestingly, while these theaters fully embrace the landscape as part of the stage, their seating is most often architectural, like an indoor auditorium transplanted into the landscape. At these theaters, visitors leave the landscape when they enter the auditorium and then view it as a stage set. This contrasts dramatically with theaters, such as California's Cushing Memorial Amphitheatre, that seek to keep the audience in the landscape by integrating the seating into the site.

Figure 18 *The Cherokee Mountainside Theater in Cherokee, N.C. has offered the historic drama, "Unto These Hills", since 1950. The 2100 seats are enclosed on all sides by dense trees. The play's campfires and lightning bugs on the dirt stage merge into these trees. 1960.*

Figure 19 *The Carter Baron Amphitheater was initially built to offer a historical drama but has adapted to offer a variety of events in Washington DC's Rock Creek Park. 1952.*

THEATERS FOR SHAKESPEARE'S PLAYS AND INTIMATE DRAMA

Throughout the twentieth century, traveling troupes and local theater groups performed Shakespeare's plays in natural amphitheaters and on other unimproved outdoor sites. Many Shakespeare companies continue to do so rather than operate from a permanent home theater. The San Francisco Shakespeare Festival still offers free plays with movable sets for plays that they transport from one public open space to another in the Bay Area.[34] Plays are also presented in many modest theaters on campus and community landscapes such as the Marin Theater at Dominican College in San Rafael, California and the Shakespeare Garden Amphitheater at The Alabama Shakespeare Theater in Montgomery. Nevertheless, in recent decades, many Shakespeare theaters have been built with the lighting, sound equipment and concessions typical of interior theaters.

One of the first American theaters built specifically for Shakespeare's plays was the Allen Elizabethan Theatre at the Oregon Shakespeare Festival. Designed to invoke the Globe and other Elizabethan theaters, its first Elizabethan stage was built in 1935 with WPA funds. After being destroyed by fire in 1940, the theater was updated again in 1947 with a larger front stage and a new backstage. It was again rebuilt once again in 1958/59 to meet fire codes and upgraded again in 1992.[35] Although sidewalls separate it from the surrounding landscape the roof is open to the sky and weather as were the original 17th century Shakespearean Theaters.

Numerous other outdoor theaters designed to offer Shakespeare's plays do not attempt to replicate the Elizabethan Theater. The Delacorte Theater was built in Central Park in 1962. Surrounded by trees, the steep angle of the 1,800-seat auditorium offers a fantastic view of the stage, Turtle Lake, and the park beyond. Most outdoor theaters offering Shakespeare and intimate drama have less than 1,000 seats to facilitate the audience's need to read the facial expressions of the actors. The rule-of-thumb for facial readability is to sit within 65-80 feet of the stage and only the steepest auditoriums could accommodate more than 1,000 seats within this distance.[36] The Delacorte pushes beyond the usual audience numbers with the help of steep stadium seating and a broadly fanned seating layout.

Figure 20 *Although separated from the surrounding landscape, The Allen Elizabethan Theater in Ashland, Oregon recreates the open to the sky aspect of London's original Globe Theater. 2014.*

Figure 21 *The 1800-seat Delacorte Theater in New York City's Central Park presents plays with views of the park behind the stage. 2012.*

The Delacorte carries on many of the traditions of the early theaters with free admission and no cancellations for rain unless unsafe conditions arise. It is planning its first renovation since 1962 with the goal to maintain its' existing footprint and relationship to the landscape. The Public Theater, which manages the Delacorte, has pledged to preserve "the sanctity of the theater in the park experience."[37] Hopefully they will succeed and become a contemporary model for future outdoor theater renovations that preserve the landscape experience.

THEATERS FOR PERFORMANCE AND CASUAL EVERYDAY USE

For many contemporary designers and users, the term "amphitheater" often brings forth a vision of a terraced public space that is intended as much for daily casual use as for performance. Perhaps the most important aspect of these theaters is that they "mark a spot" in the landscape where one can stop, rest and appreciate the view—whether of the fascinating array of passing humanity, a beautiful landscape or a formal or informal performance.

The distinguishing characteristics of these theaters include:

- Open access
- Open-ended step or terrace seating
- Engaging views—of the landscape or passing people
- Limited size—at least of the formal portion of the space. Often, they are adjacent to large open plazas or greens that can hold crowds for the occasional larger event

This type of everyday use of American outdoor theaters likely appeared first on campuses and in civic spaces where the theaters were often open for students and the public to gather in small groups or sit alone to enjoy being outside. Precedents can be found across the globe—from the stepped structures of Mayan city centers to the steps adjacent to Renaissance plazas—but the conscious precedents for these first American spaces are not clear. In the early 20th century, designers included this form of amphitheater in some college campuses and the occasional community center. One notable example is the 1924 Camden Maine theater by Fletcher Steele, designed to view a small local harbor as well as host community events.[38] While most New Deal theaters were not intentionally designed for everyday use, many operated as such. The WPA produced some exceptional examples, including the Arneson River Theater in San Antonio, Texas, the striking Maritime Museum on San Francisco's waterfront. The Arneson presents plays and traditional Mexican dances to tourists on San Antonio's riverfront and the Maritime Museum's provides stadium seating for viewing boat and swimming races.

The tree-covered seating terraces of Swarthmore College's 1942 Scott Outdoor Auditorium (Figure 1) provided a delightful model for many exemplary hybrid campus theaters during the post-war college construction boom. The 1967 Quarry Theatre at University of California Santa

Cruz and the 1964 McIver Theater at Meredith College in Raleigh, North Carolina, not only are memorable landscapes for casual daily use, graduations and performance, they display innovative Modern formal vocabularies that highlight the landscape through contrast and careful curation of views.

By the 1970s, developers, planners and designers expanded the creation of everyday amphitheaters making them a common amenity in civic plazas and office parks. Many of these hybrid spaces continue the tradition of designing theaters around their relationship to the landscape. The most successful examples move this tradition forward by designing spaces that feel equally comfortable and purpose-built to casual visitors and performance audience members. Located in a Cary, North Carolina, public park, the Koka Booth Amphitheatre's performance lawn and covered stage remain accessible during daylight hours. The stage has lockable storage cabinets and support rooms adjacent to and below the stage where easily retrievable sound and lighting equipment is stored for performances for up to 5,000 people. In Hartford, Connecticut, Mortensen Riverfront Plaza and Amphitheater exemplifies this step forward. The design spans the I-91 freeway with a series of steps and grassy terraces to reconnect Hartford's city center down to the riverfront. Each element is designed to function every day as plaza park and equally comfortably accommodate 2,500 people for dozens of performances and boating events each year. Whether you arrive to eat your brown bag lunch with colleagues or hear a Jamaican band, your experience is defined by your elevated perch above the river. To accommodate both the everyday and performance events, the "seating" is open-ended. Steps, walls, and grass terraces are used rather than standards seats or benches and the stage is placed to one side. Together these moves give everyday users the experience of being in a wonderful river front park, rather than an empty amphitheater.

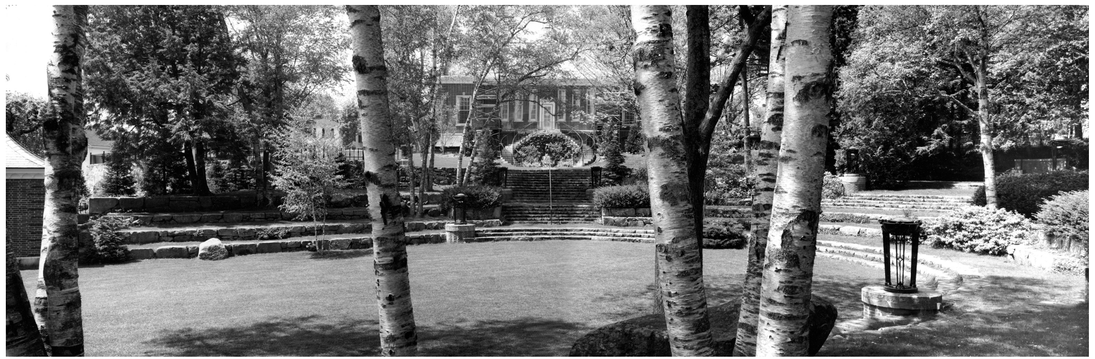

Figure 22 *The 1924 Camden Amphitheatre hosts graduations, music and Shakespeare plays. An extension of the town's library, it is open to the public and used everyday by residents and tourists to sit and view the city's harbor. 1998.*

The Grand Canyon's Mather Amphitheater applies the lessons of earlier natural and rustic theaters to create an everyday hybrid space that looks and feels like it has always been there. In fact, it was built in 2010, but the massive stone seemingly gathered from the surrounding landscape, the organically disbursed boulders and the diverse steps heights and placement together make the theater feel like it grew out of the existing canyon rim or was carefully carved into it. The planners, designers and stone artists developed this 75-seat theater to accommodate nature talks, small music performances and painting classes. Nevertheless, its primary function is to provide seats with a view where visitors can stop, rest, and watch the changing colors of the canyon without creating a bottleneck for other visitors walking the rim trail.[39]

These more contemporary hybrid amphitheaters emphasize the characteristics designers need to preserve when renovating a theater used for every day gathering as well as performances. Changes to the layout and form of seating in these theaters can unintentionally undermine everyday use. For example, the designers of the Santa Cruz Quarry Amphitheater renovation rejected a proposal to regularize the rows in the theater because they recognized that the divergent original rows created everyday social gathering spaces—little eddies in flow of the bench seats. Similarly, a traditional covered, centered stage structure can make a comfortable hybrid space feel like an empty theater and a less welcoming space for everyday activities. The added stage cover at the Mortensen Riverfront Amphitheater was located at one edge of the bottom rows, rather than the center, and the removable fabric structure was designed to be succinct and sculptural to add to the view, rather than blocking it. For similar reasons, the management at the Santa Cruz quarry theater rents a stage structure that is assembled for graduations and summer concerts. It is then removed to welcome everyday student use as an outdoor studying plaza during the academic year.

Figure 23 *The 1999 Koka Booth Amphitheater has an elevated stage and raised structure at the rear of the auditorium, eliminating the need for creating a steeply sloped auditorium that would have required removing the pine trees. 2000.*

Figure 24 *The amphitheater at Hartford's Mortensen Riverfront Plaza slopes from a platform that spans over railroad tracks and highways down to a riverfront path. Built to offer views to the river and boating events, today it also hosts summer music performances. 2012.*

Figure 25 *The Mather Amphitheater at the Grand Canyon highlighted an ideal spot for taking in vistas across the canyon, nature lectures, painting classes and small music events. 2021.*

HOW HISTORY CAN INFORM CONTEMPORARY RENOVATIONS OF OUTDOOR THEATERS

The 135-year history of American outdoor theaters confirms a relatively short list of successful approaches to connecting visitors, audiences and performances to the landscape. When beginning a renovation project, recognizing which of these approaches underly the impact of the theater can help a team preserve the landscape experience while providing the desired and required improvements. Like a protection fence around a heritage tree, overtly recognizing the modus operandi of a theater's landscape experience can both protect the irreplaceable resource and free the team to make creative renovations as long as they respect the established parameters.

Each of these approaches to creating landscape experience emerged in America's earliest outdoor theaters, were refined and popularized through the hundreds of theaters built by Great Depression programs and then applied in a diversity of ways after WWII:

- *Emphasizing views to the landscape*, as was done at the Hollywood Bowl, Hearst Greek Amphitheatre, Red Rocks Amphitheatre and the Quarry Amphitheater.
- *Incorporating the landscape as stage and set*, as done at the Bohemian Grove, Pilgrimage (John Anson Ford) Theater, the Ramona Bowl, Manteo's Waterside Theater, and Cherokee's Mountainside Theater.
- *Merging the seating with the landscape* at the Cushing Memorial Amphitheatre and the Grand Canyon's Mather Amphitheater.
- *Creating lawns for sitting or as platforms for movable seats*, as done at the Longwood Gardens Open Air Theatre, the Camden Maine Library Amphitheater, Mortensen Riverfront Plaza and All Hallows Amphitheater.
- *Bringing the landscape into the seating rows*, as done at Swarthmore and All Hallows Amphitheater, and Cushing Memorial Amphitheatre.

Surely alternate systems of categorizing these approaches could be developed, but the lesson for contemporary renovation teams would remain the same: the landscape experiences that make each of these theaters remarkable places rely on one or more ways that the surrounding landscape of the theater are brought into each event, leaving lasting impressions on each visitor. As the theater profiles in the next chapter illustrate, recognizing and preserving what generates that memorable landscape experience is the keystone of successful outdoor theater renovation projects.

PROFILES

SIX EXEMPLARY RENOVATION PROJECTS

JOHN ANSON FORD AMPHITHEATRE
RED ROCKS AMPHITHEATRE
TIMBERLINE AMPHITHEATER
QUARRY AMPHITHEATER
RHODA GOLDMAN CONCERT MEADOW
ALL HALLOWS AMPHITHEATER

PROJECT CREDITS FOUND ON PAGE 124-126

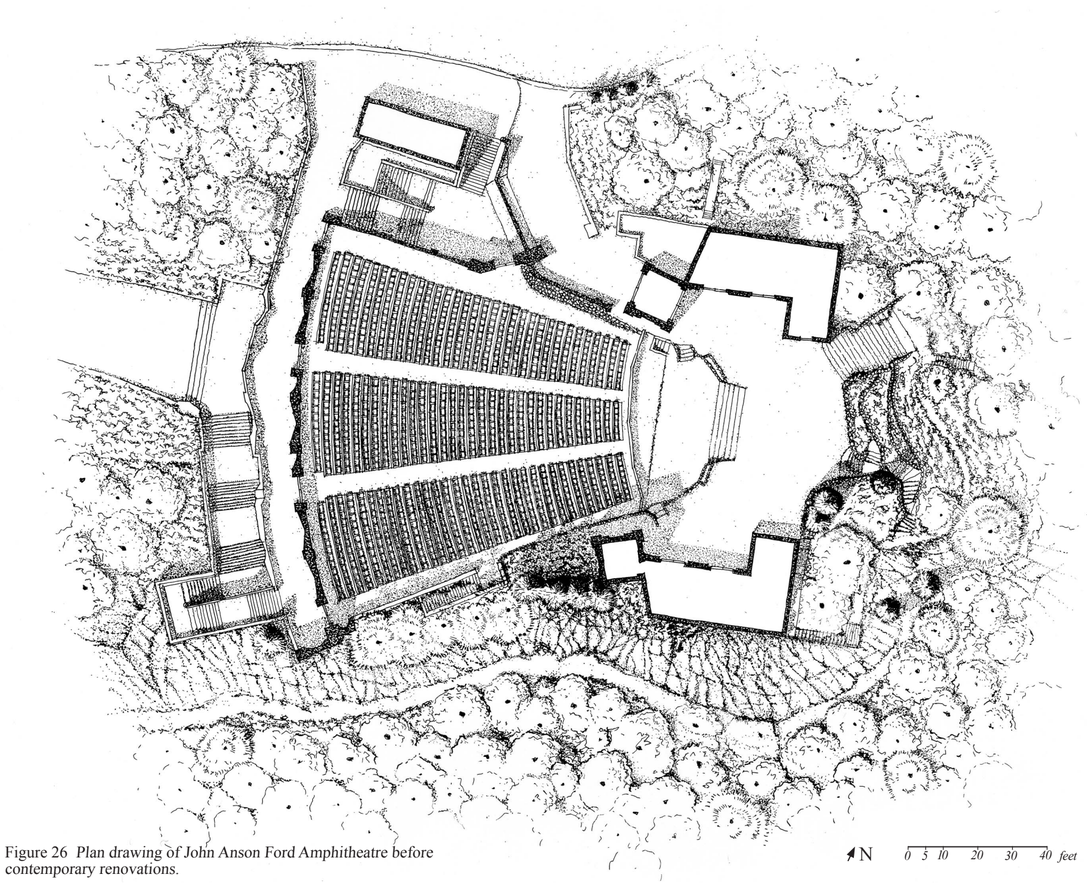

Figure 26 *Plan drawing of John Anson Ford Amphitheatre before contemporary renovations.*

Figure 27 *View from seats to renovated stage shows how the landscape remains an integral part of the experience even after the addition of modern stage equipment. 2017.*

JOHN ANSON FORD AMPHITHEATRE

LOS ANGELES, CALIFORNIA

Capacity: 1,277 (before renovation); 1,200 (after renovation)
Construction: 1920, 1931, 2008-2017
Primary Uses: Music, Drama and Performance Art

Cradled into the Hollywood Hills, the John Anson Ford Amphitheatre (JAFA) has included the surrounding landscape as an active player in its performances since its beginning in 1920. The original stage merged so completely into the adjacent canyon that it was difficult to know where the hillside ended and the stage floor began. In a turn from tradition, the JAFA auditorium was designed to face a steep hillside, rather than be built into it (Figure 30). The landscape was the proscenium, the set and the backdrop, enveloping the performance and captivating the audience.[40] The 2008 to 2017 renovation project sought to preserve this experience while adding modern amenities and technology, meeting contemporary codes and diminishing the impact of the adjacent freeway. The project's successes provide a model for similar renovation projects. One acknowledged trade-off illuminates the dilemma inherent in integrating contemporary stage sound and lighting into a landscape experience.

HISTORICAL OVERVIEW

The JAFA was built in 1920 as the site of the *Pilgrimage Play*—a reenactment of the Christian messiah story. The play's author, Christine Wetherill Stevenson, an heiress to the Pittsburgh Paint fortune, believed the rugged beauty of the Cahuenga Pass would provide a dramatic outdoor setting for her production. She first secured the land on which the Hollywood Bowl now sits, but was met with opposition to using the site for overtly religious purposes. Undeterred, and possibly wanting her displeasure to be remembered, she moved her project across the valley to a location in clear view of her original site. There she commissioned a wooden, outdoor amphitheater designed by architect Bernard Maybeck.[41]

To enable her production to take maximum advantage of the surrounding landscape, Wetherill Stevenson and Maybeck placed the seating facing the steep hillside, rather facing out from the natural bowl, as in most outdoor theaters. Actors entered "stage uphill," descending the rugged slope to the theater floor, sometimes on donkeys with additional animals following behind. Maybeck wove the hillside and the stage together with a series of detached rustic retaining walls that blurred the line between theater and landscape and kept the hillside an active part of the set throughout the play. In many ways, the landscape experience that defines the theater to this day is a result of designing to accentuate the *Pilgrimage Play*.

The original theater was destroyed by a brush fire in October of 1929. Wetherill Stevenson then commissioned the architect William Lee Woollett to replace the lost structure with a monumental neo-Judaic concrete theater recalling the gates of the Jerusalem. Like the original, the new theater faced the hillside to enable the Pilgrim players to use the landscape as their stage and set. The troupe performed the *Pilgrimage Play* annually from the new theater's opening in 1931 until 1964, with the exception of pauses during WWII, the construction of the adjacent Hollywood Freeway and a 1938 production of Faust.

Figure 28 *Christine Wetherill Stevenson poses with the original neo-Judaic theater she envisioned dropped into a Hollywood Hills ravine. 1921.*

Figure 29 *Actors perform Wetherill Stevenson's Pilgrimage Play using the landscape as stage and set. 1920.*

In 1941, Wetherill Stevenson gave the theater to the County of Los Angeles, unwittingly setting the stage for the sequel to her play's departure from the Hollywood Bowl site. In 1964, separation of church and state advocates successfully sued to end the performances of the *Pilgrimage Play* as inappropriate religious use of a public venue.[42] In 1976, the Pilgrimage Theatre was renamed the John Anson Ford Theatre in honor of the late LA County Supervisor's significant support of the arts.

Throughout the 1960s, 70s and 80s, the theater hosted an exceptionally wide range of music, drama and dance performances. The relative intimacy of an outdoor theater facing a steep hillside likely made the venue attractive for presenting everything from *King Lear* directed by John Houseman to jazz greats such as Chet Baker, Stan Kenton and Louis Bellson to seminal alternative rock bands, including Red Hot Chili Peppers, Jane's Addiction and the Ramones. Whatever the event, audience testimonies consistently return to theater's exceptional intimacy for a 1,200-seat outdoor venue and how the performance was accentuated by taking place "in the landscape."[43]

The JAFA's current Summer Series programming is generated through an unusual open process aimed at creating a roster of events that reflects the diversity and diverse interests of the residents of Los Angeles. Events are selected through a competitive application process. Organizers receive production and marketing support and the bulk of the box office proceeds. This approach has supported hundreds of local arts organizations and producers over the years.

In 2008, John Anson Ford Theatres and the County of Los Angeles commissioned Levin & Associates and Mia Lehrer + Associates landscape architects to develop a comprehensive multi-phased plan to rehabilitate the historic facility including, improving the stage, seating, lighting, and sound system, creating additional space for offices, food service and outdoor eating, and meeting contemporary codes and sound attenuation needs. The $80 million dollar project was completed in 2017. Plans for subsequent phases include a new three-level parking structure, a 299-seat indoor theatre, a box office, a museum and hiking trails.

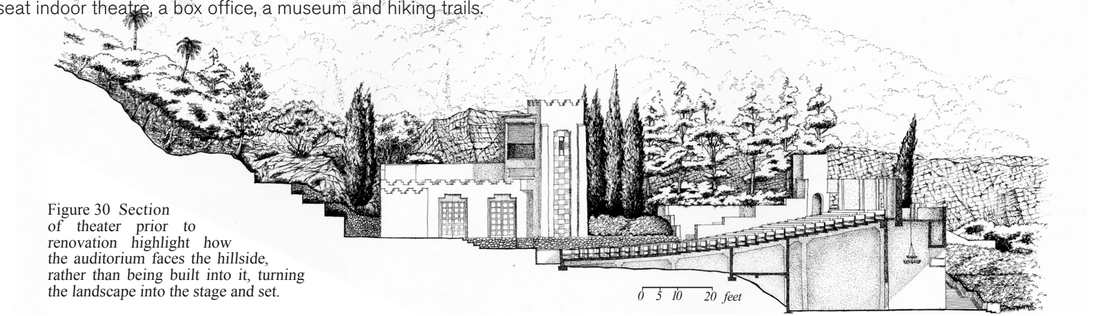

Figure 30 *Section of theater prior to renovation highlight how the auditorium faces the hillside, rather than being built into it, turning the landscape into the stage and set.*

TIMELINE: SIGNIFICANT HISTORICAL EVENTS AND RENOVATIONS

1920	Bernard Maybeck designs wooden structure as setting for *Pilgrimage Play*, written and produced by Christine Wetherill Stevenson.
1929	Brush fire destroys the original wooden theater.
1931	William Lee Woollett designs new poured concrete structure in neo-Judaic style.
1938	Theater is renovated for the Faust production. Side stages added.
1941	Los Angeles County takes on ownership and management of theater, begins offering diverse programming reflecting tastes of times.
1946	Concrete proscenium towers are built.
1964	ACLU lawsuit ends performance of *Pilgrimage Play*.
1971	Pilgrimage Theater adds 87-seat indoor black box theater and other amenities under auditorium.
1976	The Pilgrimage Theater is renamed John Anson Ford Theater.
2000	Entrance plaza, stairs and box office is renovated and elevator added making the theater ADA accessible.
2008	Comprehensive theater renovation project launches. Levin & Associates and Studio MLA lead design team.
2013	Renovation construction begins. Project includes: new seats, an extended sound wall, a cross stage lighting and sound structure, building extension with offices, food service, a dining terrace, an elevator and restoration of the neo-Judaic structure to its original unpainted concrete.
2017	Theater renovations are complete. Planned additional renovations include a three story parking structure, a 299 seat theater, a museum and trails.

LANDSCAPE EXPERIENCE OF ORIGINAL THEATER

As visitors opened the heavy wooden doors at the back of the JAFA auditorium, the landscape was revealed as the first player in the performance (Figure 33). Rather than embedding the seats in a hillside with a view across a valley to a distant landscape, the JAFA is a dam of concrete seats across a ravine directly facing a parallel hillside just over 150 feet away. Visitors have the extraordinary experience of viewing the details of canyon landscape head on from the perspective of a swooping hawk surveilling the chaparral for prey. This immediately present landscape serves as the proscenium, the backdrop and sometimes the stage itself.

The original stage and surrounding supportive elements were carefully designed to not distract attention from the landscape (and the human players in the drama). The stage was framed by rustic stone steps and retaining walls intertwined with the hillside, eliminating the line between structure and landscape. In 1946, the stage right and left towers were added framing the view, but the hillside remained as the proscenium arch and the defining element. Restrooms, offices, and concessions were all hidden under the auditorium, further minimizing distractions. The auditorium itself is an unapologetic architectural element inserted into the landscape. Retaining walls provide a sharp delineation between the seating and the seemingly untouched landscape surrounding it. This contrast highlights the rugged, wild character of the chaparral.

Figure 31 *The original stage and set was almost indistinguishable from the landscape. c.1930.*

Figure 32 *By 1947 the augmented structure drew a sharper line between the theater and its surroundings, but the landscape remained an integral part of the experience. 1947.*

LANDSCAPE EXPERIENCE AFTER RENOVATIONS

The designers of the of the JAFA renovations succeed in maintaining the original memorable landscape experience by using its preservation as a litmus test when designing each element of the project. This renovation demonstrates the importance of keeping in mind when and how the relationship to the landscape defines the visitor experience as each design decision is made. Even the one alteration that noticeably diminishes the experience—the overhead stage equipment truss—benefits from carefully considering views to the landscape from the seats.[44] The design of the new lighting and sound infrastructure illustrates how theater leaders and their designers can collaborate to find the least distracting ways meet contemporary expectations.

Figure 33 *The renovated theater keeps visitors' focus on the landscape from the moment they enter the auditorium through the original heavy wooden doors. 2017.*

Figure 34 *From the front rows, the landscape is as present as it ever was. The volunteer vegetation of contemporary Los Angeles adds diverse trees that offset new lighting towers. 2017.*

SEATING

Two factors make seating and seating renovations less of a factor in the landscape experience of the JAFA. First, from its original building as a permanent structure, the theater had backed seats. In keeping with the nature of the *Pilgrimage Play*, the original seating was composed of pew-like benches. Later the County of Los Angeles replaced these with standard individual folding seats. Unlike sweeping Red Rocks bench seats or the undulating stone rows of Mt. Tamalpais, the seats of JAFA were never a "part of the experience." Secondly, most visitors enter JAFA from the back of the house, where they are immediately struck by the raised view into the landscape and rather than looking up a rows of seats, as you do when you enter a theater from below.

This context and architectural character of the auditorium gave designers relative freedom to specify contemporary seats without compromising the landscape experience. Still, the team took care to specify seats in a warm French grey that complements the original concrete and makes the individual seats fade into rows and a mass, preserving the relationship between the monolithic structure and the diverse, detailed landscape.

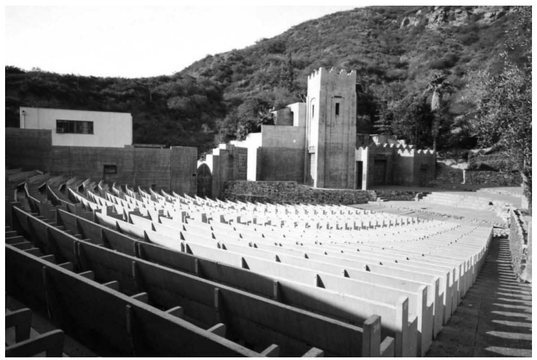

Figure 35 *The early pew-like benches highlighted the landscape by contrast. c.1931.*

Figure 36 *The new individual seating preserves the highlighting contrast between structure and landscape. 2017.*

STAGE STRUCTURES, LIGHTING AND SOUND

In the original theater, the lack of a constructed proscenium and the intertwining of the stage and the hillside allowed the landscape to jump forward into the auditorium. With each successive renovation, the lighting truss between the towers became more robust. Each expansion of the cross bar allowed more equipment and further impacted the landscape experience. Where the tipping point lies depends on where you are sitting and the time of the performance. The latest renovation added a slender, succinct equipment truss, hung above the two historic towers, rather than from them. The project teams' care in designing and placing the truss minimizes its impact. If you are sitting in the front rows of the theater the truss does not alter your experience. At night, the cross bar mostly disappears into the chiaroscuro of the stage and the lit and unlit landscape. Unfortunately, if you are sitting in the back half of the theater during the day and at twilight, when audiences are often waiting for shows to begin, the lighting truss significantly diminishes the immediacy of the landscape, causing it to recede to a more distant backdrop.

Outside of the cross-stage truss, the JAFA renovations are a model of how to minimize the impact of lighting, sound and video modernization. The side-stage lighting towers have been moved out of theater goers' cone of vision, hidden behind the historic towers. Similarly, the stage left and right lighting and sound side equipment is hung from the 1946 towers with simple, minimal hardware, preserving the view to an unadulterated landscape framed by simple monumental structures. These moves suggest an effective approach of overlaying the accumulative cones of vision of the entire audience, and then seeking to place lighting, sound and video equipment outside the view of all or most visitors. The JAFA renovations also teach a lesson in how to diminish the impact of technical modernization by counterbalancing it with even more new lighting—of the landscape itself. As the images below show, if the landscape itself is not lit, then the intensity of modern lighting leaves the viewer with a similar picture as they would have in an indoor theater. But when the landscape is lit, the hillside jumps back into its defining position.

Figure 37 *From the seats, minimal lighting and sound equipment is visible. 2017.*

Figure 38 *In contrast to the audience's view, the view from the stage shows the extensive new technology installed in the renovation. 2017.*

Figure 39 *An unlit hillside recedes into the darkness, drawing the viewers focus to the structures. 2014.*

Figure 40 *While a lighted landscape jumps forward to become a prominent part of the stage and set. 2017.*

RESTROOMS, CONCESSIONS & AUXILIARY STRUCTURES

The renovation designers kept amenities and support services from diminishing the landscape experience by following the original designer's approach of placing as many elements as possible behind or under the auditorium and out of view from the seats. The renovation designers went further to preserve the experience of entering the landscape through a neo-Judaic gate by placing the additions to the side of the original structure. Visitors who chose to go directly to their seats would barely notice the new structure, particularly in earlier darkness of the shoulder seasons.

The JAFA renovation design illustrates the importance of considering the timing and sequence of the memorable landscape experience when renovating an outdoor theater. At JAFA that experience begins when a visitor opens the heavy wooden door and encounters the facing hillside for the first time and continues as they take in a performance in the landscape with minimal distractions. This sequence gave the designers more freedom in renovations that would be experienced before entering the auditorium but demanded careful exclusion of any distractions that could be seen from the seats. The dam-like form of JAFA facilitated this clear separation, but the lesson is equally applicable to traditionally sited theaters. Just as movie theater managers seek to minimize any light or noise in the house once the film begins, outdoor theater renovators should seek to minimize any distraction that breaks the experience of sitting in the landscape watching a performance.

Figure 41 *The careful placement of this dining terrace to the side and slightly behind the original facade keeps it out of view to everyone except those seeking refreshment. 2017.*

CONTEMPORARY BUILDING & ACCESSIBILITY CODE UPDATES

Similarly, the design team placed all updates to meet ADA and other codes so that they are unnoticeable once visitors have entered the theater and the landscape experience has begun. The dam-like form of the theater facilitated meeting accessibility requirements without impacting the landscape experience. Visitors enter the structure at a grade that allows ADA compliant access to the bottom of the house without additional ramps. The original massive concrete structure also allows an elevator to be tucked adjacent to the back wall of the theater, mostly unnoticed. This lift provides universal access to the open-air walkway that leads to the back of house and the view of the defining landscape experience (California chapparal canyon), revealed when entering through the heavy wooden doors.

Figure 42 *The new elevator tower on the left carefully matches the original facade in material, form and color, but also stands separate, minimizing its impact. 2014.*

Figure 43 *The 2000 renovation of the route from the parking to the theater integrated social spaces and gardens into a combined stairway and ramp. 2017.*

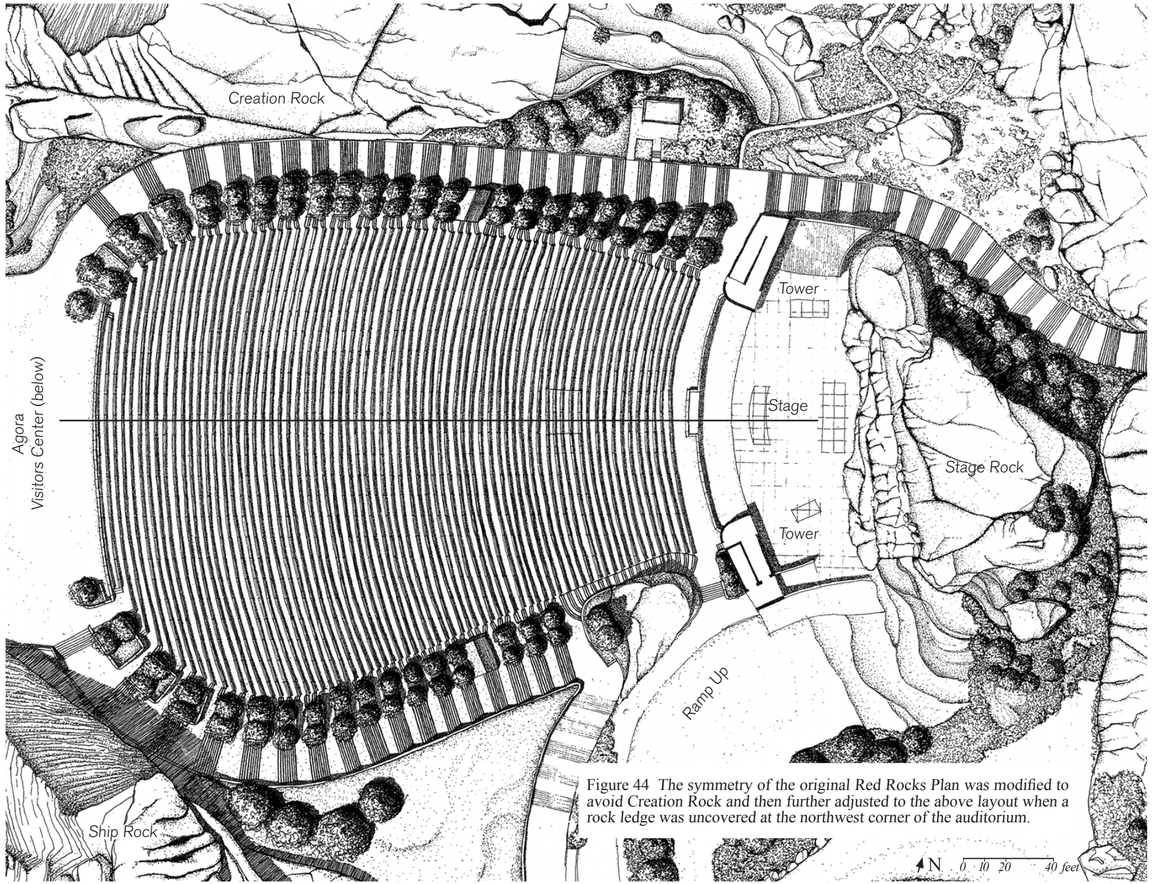

Figure 44 *The symmetry of the original Red Rocks Plan was modified to avoid Creation Rock and then further adjusted to the above layout when a rock ledge was uncovered at the northwest corner of the auditorium.*

Figure 45 *The Red Rocks Amphitheatre, west of Denver, was built by the CCC in the 1930s. This stage cover was built in 1988 and replaced in 2021.* *Grassl, 1998.*

RED ROCKS AMPHITHEATRE

MORRISON, COLORADO

Capacity: 9,525

Construction: 1936-1941, 1965, 1987, 2014-2019

Primary Uses: Concerts, Civic Events, Easter Services, Contemplation, Exercise and Yoga

Burnham Hoyt's bold modernist design of the Red Rocks Amphitheatre pushed the boundary of the National Park Service's (NPS) 1930's mandate for park structures to merge with their landscape.[45] While the colors and textures of the theater's sandstone and muted concrete harmonize with the natural setting, its simple, consistent geometric forms contrast sharply with the irregular geometries of the surrounding landscape. As Hoyt intended, this contrast heightens visitors' experience of the monumental stone outcrops and the powerful Colorado landscape that surrounds the theater. Originally built by the New Deal's Civilian Conservation Corps under the NPS's supervision, Red Rocks Amphitheater has been the country's most popular outdoor venue for decades. Its sweep of curved benches, odd tilt of the auditorium and asymmetrical plan are reminders that every design move was made with consideration of the landscape. Renovations have sometimes challenged the elegance of the original design, but the integrity of Hoyt's simple plane squeezed between the majestic rocks has endured, thanks to the advocacy of local citizens.

HISTORICAL OVERVIEW

In the 1870s, long before the construction of the amphitheater, a unique landscape 13-miles west of Denver attracted local citizens to marvel at its extraordinary rock formations. Located in a distinctive geological zone where the prairie meets the Rocky Mountains, the site's red sandstone monoliths jut from the plains to create a dramatic landscape known as Red Rocks.[46] In 1905, Denver businessman John Brisbane Walker purchased a portion of this spectacular setting to turn it into a premier tourist destination. To attract visitors, Walker took advantage of the outstanding acoustics of a natural amphitheater on his land by offering concerts where musicians performed in front of what is now known as Stage Rock.[47] The audience sat on boulders scattered across a steep slope between two monumental outcrops – Creation Rock to the north and Ship Rock on the south. From this vantage point they enjoyed panoramic views to Denver and the surrounding plains. In the 1920s, the City of Denver obtained Walkers' land as a part of the Mountain Parks system. In 1928 Denver Parks Manager George Cranmer proposed that the city build a grand outdoor theater for concerts at the Red Rocks' natural amphitheater.[48]

In 1935 Cranmer retained local architect Burnham Hoyt to delineate an amphitheater design as a potential project for the New Deal's Civilian Conservation Corp (CCC). Hoyt's scheme of simple curved forms built in rough faced sandstone was an unusual blend of his own modernist design sensibility with the rustic expression mandated by the National Park Service.[49] Upon approval of the proposal in 1936, the CCC immediately began construction under the supervision of the National Park Service. Hoyt and his assistant, Stanley Morse, served as consultants retained by the city. With only sketches of the future theater in hand, CCC enrollees began building the stage and basement dressing rooms. They also cleared large stone boulders from the site with dynamite and moved 25,000 cubic yards of soil to rough grade the auditorium for the seating.[50]

Starting with the first row and working uphill, the two architects and the NPS staff organized the CCC recruits to build the arced rows of benches around an axis extended from the centerline of the stage. Over more than four years of construction, the amphitheater gradually took shape. Morse visited the site each morning and then went to his office to produce drawings for the following day's work, eventually producing some 125 sheets of detailed drawings.[51] Topographic change, including a 28-foot cut at the auditorium's northwest corner were required to fit the sloped plane of seats between the gigantic rocks. Informed by their field visits, Hoyt and Morse adjusted the design in unexpected ways, including tilting the entire auditorium sideways to follow the site's natural drainage pattern and reshaping the northwest corner into an asymmetrical layout to avoid a rock ledge exposed during construction. As they worked, the two architects sometimes allowed the theater to reshape the landscape and at other times the landscape shaped the theater.[52]

Figure 46 *The original slope between Creation Rock and Ship Rock had exceptional natural acoustics and presented an ideal location for an auditorium. Yet it still required excavation of 28-feet at its northwest edge (upper right in photo.) c.1930*

Construction was completed in 1940 and the amphitheater opened in 1941 with a performance featuring Helen Jepson of the New York Metropolitan Opera. Red Rocks soon became a premier concert venue with greats like Louis Armstrong, Igor Stravinsky and Leonard Bernstein taking the stage. The "Rock and Roll" era was ushered in with Ricky Nelson in 1959 and firmly cemented with the Beatle's performance in 1964. Popular concerts increased during the 1970s and 1980s with performers such as the Grateful Dead, the Eagles, and Bruce Springsteen attracting enormous crowds.[53] In response to the need to protect musicians and their electronic equipment, a metal overhead structure was built in 1988 that also provided support for video screens, lighting and sound equipment. By the 1990s the popularity and profitability of these concerts created the demand from concert promoters for 1,400 new seats and commercial updates to the theater. Red Rocks designation as a Denver Landmark and the activism of Friends of Red Rocks stopped most of these requests.[54] Nevertheless, in 2003 several of these amenities, including restrooms and two cafés, became a part of the Burnham Hoyt Visitors Center built under the "agora" (upper plaza) of the amphitheater. No part of the Visitors Center can be seen from the auditorium although a small round building with elevator and stair access to the Visitors Center is visible from the agora.

Concerts at Red Rocks have continued their popularity and the venue offered some 177 performances in 2021 from Easter through October.[55] It also hosts graduations, film screenings, exercise classes and community gatherings. Open to the public every day except on the afternoon of a performance, Red Rocks routinely attracts thousands of tourists and locals alike to sit, walk, visit and enjoy the spectacular setting.

Figure 47 *A conveyor belt for construction materials was located on the auditorium's central axis that set the subtle curves of the seat rows. From above, the axis underlines the asymmetrical adjustment made to the auditorium. 1941.*

Figure 48 *People crowd the bleachers at a Roundup Riders of the Rockies show. 1952.*

TIMELINE: SIGNIFICANT HISTORICAL EVENTS AND RENOVATIONS

1870s	Denver citizens begin touring the unique and beautiful landscape of rock formations.
1908 –1927	Concerts are held periodically on the unimproved natural amphitheater owned by businessman Brisbane Walker. Musicians performed on a temporary wood stage in front of Stage Rock and audiences sat on the ground or on rock boulders between Creation Rock and Ship Rock.
1928/9	City of Denver acquires the natural amphitheater as a part of the 649-acre Red Rocks Park and builds a 5-mile loop road to provide outstanding views of rock formations from vehicles.
1936-1941	The Civilian Conservation Corps, under the direction of the National Park Service, constructs the amphitheater designed by noted Denver architect Burnham Hoyt. Opening performance on June 15, 1941.
1959	Stanley Morse, Burnham Hoyt's former assistant, continues the modernist character and red sandstone of the original design in with his design for new towers and sidewalls on the stage to improve lighting and acoustics.
1973	Red Rocks Amphitheatre is designated a Denver Landmark.
1988	A metal structure is built over the stage to provide rain and sun protection for musicians and instruments.
1990	National Register of Historic Places lists Red Rocks Amphitheatre.
1990s	Concert promoters and city officials propose new seats and amenities found in new commercial venues prompting the 1999 founding of Friends of Red Rocks to challenge such proposals.
2003	The Burnham Hoyt Visitor's Center opens with museum, cafes and ADA restrooms was built under the theater's agora (upper plaza.) Deteriorating redwood benches are replaced with ipe, a durable wood similar in color to redwood.
2006/7	ADA compliant restrooms constructed at the bottom of the north stairs.
2015	National Park Service designates Red Rocks Park a National Landmark.
2017	Historic American Landscape Survey (HALS) lists Red Rocks Park.
2018/19	Storm water channels repaired to original design. Structural improvements stabilized subsurface collapse below some auditorium seats and rebuilt the seats to their original design. Safety rails and pavement proposed to replace the juniper in planters, but implementation delayed due to controversy over their impact on the original design.
2020	The design of a new overhead stage structure to replace the 1988 structure is approved by the Denver Landmarks Preservation Committee.

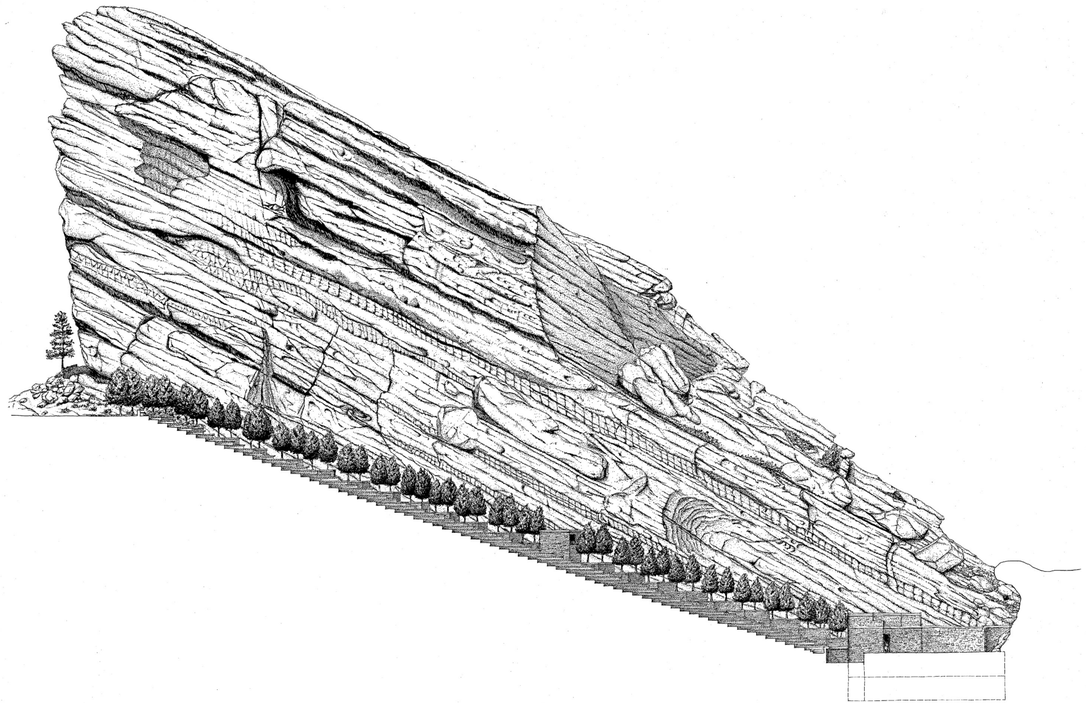

Figure 49 *Section through Red Rocks auditorium looking north to Creation Rock: The nearly 300-foot length of the auditorium drops from the Agora (upper plaza) to the stage 100-feet below. 1998.*

LANDSCAPE EXPERIENCE OF ORIGINAL THEATER

Burnham Hoyt's design heightens visitor's experience of the complex red rock walls and distant vistas by contrasting them against the simplicity and rigorous geometry of theater's arced benches. Whether visitors entered from the bottom or the top of the theater, the dynamic interplay of the natural rock formations and the human created seats made the landscape even more memorable and dramatic than if it stood unaltered.

Visitors entering from the top and the bottom of the theater had different initial experiences but arrived at the same conclusion. At the top of the theater, visitors entered at the northwest corner of the theater next to the towering red walls of Creation Rock. As they entered, they immediately confronted a dramatic panorama of the Colorado plains. The sandstone walls of Ship Rock dominated the view towards the south while also framing the grand vista to the east. From this elevated vantage point, individual rows of benches foreshorten into a simple gray plane that not only avoided distracting from the vista, but through contrast actually heightened the complexity and saturated tones of the rock formations. Visitors entering from one of the lower entrances initially viewed a steep stack of curved benches and their arced shadows sweeping the eye toward the inclined strata of the flanking rocks. The design's simplicity and consistency enabled the seats to direct visitor's gaze to the natural formations, rather than distract from the landscape experience. As visitors moved up or down one of the two peripheral stairs that ran alongside the vertical walls of the outcrops, they would look uphill and downhill experiencing the seat arcs dynamically emerging in swoops toward the rock walls. Upon finding their row, they turned to face the profile of a gigantic rock and then look down at the carving arc of the seat that guide their gaze back to the towering rock wall again. Hoyt's design heightened the experience of the natural landscape by repeatedly contrasting it with the pure, but simple, maybe even simplistic, lines of the theater.

Figure 50 *As one enters the auditorium from below, the pattern of the bench supports highlights the broad curves of the benches. May 30, 2018.*

Figure 51 *Views from the auditorium seats offered an uninterrupted vista of the surrounding landscape before the construction of the lighting towers and the overhead stage canopy. 1940s.*

LANDSCAPE EXPERIENCE AFTER RENOVATIONS

Today, the Red Rocks Amphitheatre's simple curved benches and intimate views of the grand rock outcrops are much the same as they were at the theater's 1941 opening. However, the broad vistas of the surrounding plains and views of Stage Rock have been somewhat altered. The first significant modifications were made to the amphitheater in 1959 when Stanley Morse designed new towers and stage walls to improve the acoustics and facilitate night lighting.[56] Although highly visible, the towers did not significantly compromise the views. Subsequently, only modest renovations and repairs were made until 1988 when a steel roof structure was built over the stage to protect musicians and their instruments. Although the structure performed its intended functions, it compromised views of Stage Rock and the broad vista of the plains from the upper plaza and from many seats.

Multiple proposals to update the theater with ill-chosen amenities found in newer commercial venues were proposed in the nineties. Fortunately, community advocates for the preservation of the theater's historic character and reviews by the Denver Landmarks Preservation Commission often stopped their implementation. After 2000, a series of renovations, including a complete replacement of the redwood benches, a below-grade Visitors Center, and ADA upgrades have had only modest impact on the landscape experience. In 2020 the Denver Landmarks Preservation Commission approved the design of a new overhead structure to replace the one constructed in1988. The new structure was completed in 2021.[57] Although more open to Stage Rock and more graceful than the 1988 structure, it still blocks much of the original vista and views of Stage Rock from many seats. The Friends of Red Rocks and the Denver Landmarks Preservation Commission continue to carefully review any proposals that could compromise the experience of moving through this spectacular landscape and its amphitheater. Despite the addition of the overhead stage structure, Burnham Hoyt's concept of a single design element – the auditorium – juxtaposed against the two gigantic rock outcrops remains an extraordinary merging of a human-made intervention with a spectacular landscape experience.

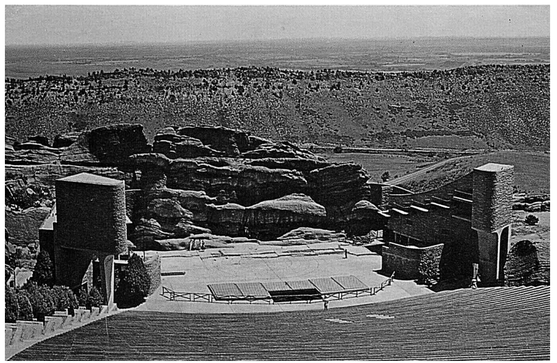

Figure 52 *The 1949 addition of the sandstone lighting and sound towers, designed by Stanley Morse, the Project Architect of the original theater, preserved views of Stage Rock and was a relatively modest intrusion into the vast vista. 1972.*

Figure 53 *The prominent 1988 roof structure blocks views of Stage Rock as well as much of the vista from many seats. 2008.*

SEATING

The design and layout of the seating was key to realizing Burnham's Hoyt's concept of a simple sloped plane set against the massive, complex rock outcrops. City administrators and designers have retained the essentials of his seating scheme throughout years of repairs, renovations, and a major restoration. To reinforce the auditorium as a single plane and draw attention to the textured surfaces of the gigantic rocks, Hoyt proposed a continuous pattern of benches across the entire auditorium. The result is a simple, unembellished plane of seats that constantly redirects the visitor's gaze back to the landscape. These backless benches were laid out in a series of broad geometric arcs that sweep towards the grand rocks and were centered around a central axis extending from the stage. The benches run from Creation Rock to Ship Rock without the distraction of any interrupting aisles. The sharp contrast of the rigorous geometry of the curved benches with the irregular textures of the massive flanking rocks emphasize the complex geological formations and their deep, incised strata that create dramatic interplay of light and shadow across their faces.

Hoyt managed to avoid intermediate aisles by providing a three-foot wide walkway in front of each bench to move people horizontally across the auditorium. Broad stairs on both edges of the auditorium accommodate movement up and down the theater. The simplicity and consistency of the seating design extended to the details. The one-foot-wide benches were built from two redwood planks laid across precast concrete brackets anchored into low sandstone walls. Throughout the theater, Hoyt spaced the benches four-feet front to front, leaving three-feet free for passage and the knees of seated patrons. Over decades of harsh winters many of the original redwood planks deteriorated and were replaced piecemeal. Still, by 2003 a significant portion of the redwood benches, concrete brackets and sandstone walls were in poor condition. As part of larger improvement project including the visitors center, all benches were completely restored. City administrators and their designer chose to restore the seats to their original design with one change: replacing the redwood with ipe, a durable Brazilian wood similar in color when unfinished. At the time, there was limited availability of sustainable redwood and ipe was seen as an appropriately sustainable substitute. Since, ipe's sustainability has come into question although its durability has not. In 2019, seats in the southeastern portion of the theater were again rebuilt to the original design after excavation to correct a subsoil collapse at the southeastern corner of the theater. The extra effort and resources that the City invested in maintaining the original seat design have paid dividends—through to today the dynamic relationship between the arcing rows and the monumental red rocks remaining the defining experience of the theater.

Maintaining this experience also involved rejecting proposals to "update" the seating to modern expectations. The proposal by concert promoters to add 1,400 seats to the amphitheater would have required new intermediate aisles, significantly altering the theaters dynamic interaction with its landscape. City officials and The Landmarks Commission rejected the proposal based on the strong negative public reaction lead by Friends of Red Rocks. Likewise, a plan to turn the juniper aisle planters into VIP box seats was deferred after similar public reaction.[58]

Figure 54 *The seating was designed by sketching, building an in-place prototype and then adjusting and drawing the detail. Here CCC enrollees use tools improvised on site to form the gutters that run across the theater along each row. 1938.*

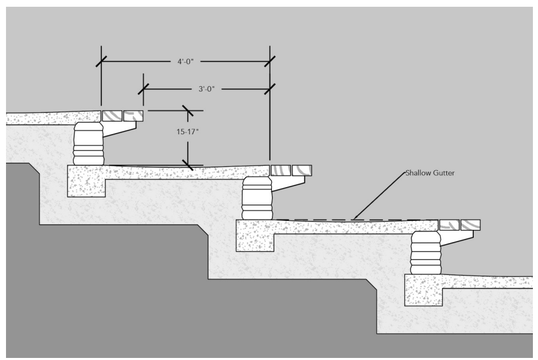

Figure 55 *The entire auditorium is tilted to the south, allowing shallow gutters to drain stormwater from north to south, the natural flow of the original site. This seat section shows the gutters and the wide aisles that allow passage across the theater.*

Figure 56 *The contrast between the rough red sandstone of the risers and the smooth off-white concrete of the aisles was an on-site decision made in response to an observation by a NPS Inspector. 1938.*

Figure 57 *The three-foot aisles in front of the continuous one-foot benches allows passage across the entire auditorium without the interruption of vertical aisles. They also become social spaces as patrons pass one another and share refreshments tucked under their seats. 2013.*

STAGE STRUCTURES, LIGHTING AND SOUND

Stage Rock was the backdrop to Red Rocks performances before anything was built on the site. How to preserve Stage Rock's role, while updating the stage infrastructure has been a key challenge in the renovations of the theater. In 1959, the city hired Stanley Morse to address the increased desire for lighting and sound equipment as well as problematic acoustics on the stage. Although sound dispersed successfully towards the audience, winds across the stage made it difficult for musicians to hear one another. Morse proposed new stage towers for the lighting and sound equipment and added walls to control disruptive winds on the stage.[59] Morse's design is a study in how to defer to an original design and maintain a landscape experience. Like the original theater, his proposal merged modernist and rustic sensibilities. The geometric curves and simple architectural forms of the additions were distinctly modern, yet they were built in the rough faced sandstone used in the amphitheater. The scheme positioned the stone towers and stage walls as frames on either side of the stage, thereby highlighting the crevices and shadows of Stage Rock. To minimize interference with the vista towards Denver, the height of the lighting towers was kept below the top of Stage Rock (Figure 52).

Accommodating the demands of contemporary traveling productions has proven more challenging. Protecting musicians and their instruments from sun and rainstorms were an ongoing challenge from the earliest performances at Red Rocks. However, the transition to popular bands in the 1960s and the subsequent increased use of electronic equipment amplified the demands and safety concerns of the performers. To protect the equipment from rain and electrical storms, a steel structure was built over the stage in 1988. Its red color was meant to make the overhead structure blend with the landscape, but its rectilinear design cut brutally across Stage Rock and was incompatible with the amphitheater's elegant curves. This cumbersome structure also disrupted clarity of the balance between the simplicity of the single, undifferentiated plane of the seats and the rocks' rich textures. The addition of the stage structure altered how visitors experienced the original elements of the design, leaving the theater more distinct from its landscape. This change may be most pronounced during events. Previously, a full house obscured almost all structure, leaving performers and audience framed by the rock faces. Now the performance was framed by a metal box dropped into the landscape. As productions have added additional light and sound effects and video screens over time, these impacts have increased. Current productions can be lost in the scaffolding of equipment, leaving the concert-attendee to view a stage structure in the landscape, rather than a performance in the landscape. Nevertheless, the structure does afford some protection for musicians and some contemporary productions will not book venues without the level of technical support it provides. Providing stage covers without diminishing the landscape experience is one of the central challenges of theater renovations..

After years of complaints about the inappropriate nature of the overhead stage structure, in 2020 the Denver Landmarks Preservation Commission approved the design of a replacement structure. The 1988 structure had been in place before Red Rocks designation as a National Landmark in 2015, so there was no expectation to restore the stage to its original open-to-the-sky design.[60] The 2021 replacement structure is a more graceful, simpler version of its predecessor. However, its roof is still quite prominent when visitors look down from the upper plaza and it still compromises the view and experience from many seats for concert goers and daily visitors. The challenge of integrating contemporary technology into Red Rocks without compromising the experience has yet to be met. Perhaps someday a stage cover will be designed that meets the needs of the concert season but can be removed during other times of the year to provide the spectacular views of the original amphitheater, if only temporarily.

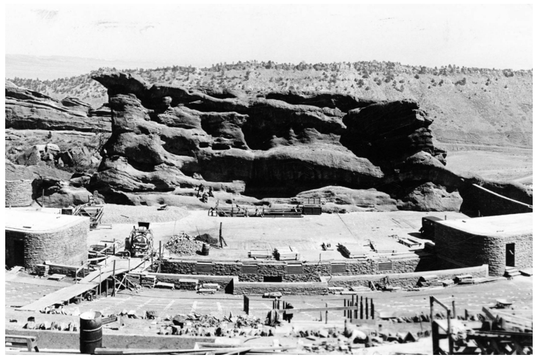

Figure 58 *Construction began with the stage floor that was sloped to align with the strata of Stage Rock. Originally there were no towers for lighting or sound equipment. c.1936-37.*

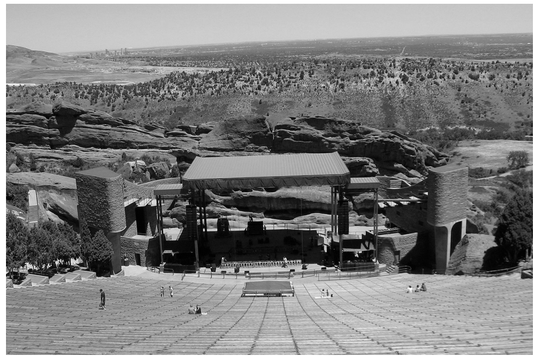

Figure 59 *Prominent 1988 roof structure blocks view of Stage Rock, 2009.*

Figure 60 *Many concerts, particularly rock concerts with extensive light shows, required multiple attachments of equipment to the 1988 overhead structure, creating visual clutter and further blocking the views of Stage Rock. 2013.*

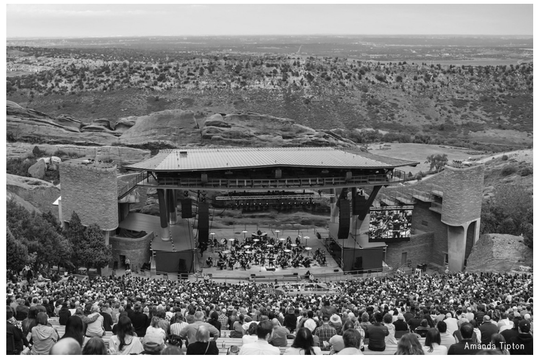

Figure 61 *The new structure installed in 2021 is more graceful and more successful in limiting obtrusive attachments, but it still blocks much of Stage Rock and the wide landscape vista. 2021*

RESTROOMS, CONCESSIONS & AUXILIARY STRUCTURES

The 2003 addition of the Burnham Hoyt Visitors Center pays homage to its namesake by cleverly designing architectural spaces that take a backstage to the natural landscape. Hoyt had always proposed that the upper plaza of the amphitheater become an "agora" where food and other commercial ventures would take place. Today, during performances, the agora does offer food and other products from temporary structures on the plaza. However, this upper plaza also provides access to a rich option of amenities in the Visitors Center. Designed by Denver architects, Sink Combs Dethlefs (now Perkins&Will) the Visitors Center is cleverly tucked under the agora and cannot be seen from the amphitheater seats. At the northwest corner of the agora, a small one story building provides access to an elevator and stair that takes visitors down a floor to the 32,000 sf Visitors Center that houses a museum, information center, exhibition hall, two cafes and ADA compliant restrooms. This lower level has doors, windows, and a café terrace that opens to the west and a view of the plains. When addressing the addition of the Visitors Center, The 2015 Landmarks nomination states that *"this addition to the amphitheater complex was approved by the Denver Landmarks Commission and meets the Secretary of the Interior's Standards for the Treatment of Historic Properties by placing the new under-plaza addition in a non-character–defining space, constructing it so there was no loss of historic character-defining features and limiting its size and scale in relationship to the historic amphitheatre by placing most of the square footage out of public sight."* [61]

There are a few additional small structures including ADA restrooms and concessions built in 2006/7 at the north stair and a small concession building and platform for concession carts at the base of Ship Rock. They are built in the same sandstone as the theater and are not a significant distraction from experiencing the amphitheater and giant rock formations. There are also entry and ticketing booth in the park, but they cannot be seen from the theater.

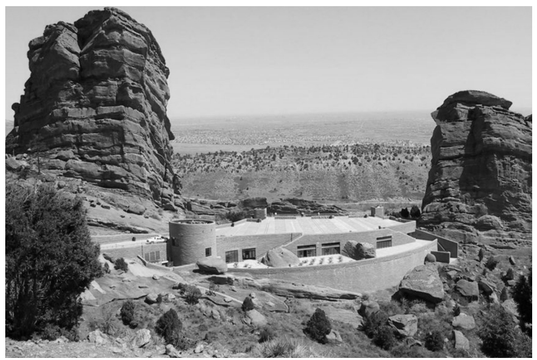

Figure 62 *The 2003 Burnham Hoyt Visitors Center housing a museum, cafes, restrooms, and other support facilities is cleverly located beneath the upper plaza. Consequently, these facilities cannot be seen from the seats. The elevator tower is visible on the agora. 2003.*

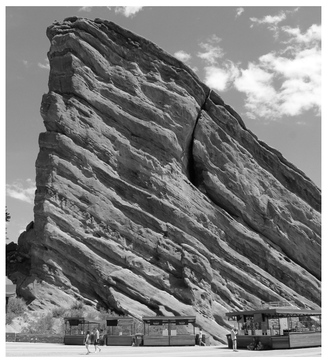

Figure 63 *Temporary concessions on the upper plaza do not interfere with the view of concert goers and daily visitors to the amphitheater. 2018.*

CONTEMPORARY BUILDING & ACCESSIBILITY CODES

Adherence to contemporary building codes and the American Disabilities Act are challenging for any large theater on a steep slope. It is particularly difficult when preserving the original character of a historic theater and managers of Red Rocks have struggled with meeting ADA and other code requirements for decades. Nevertheless, a series of incremental physical improvements, coupled with logistical techniques such as the pre-sale of tickets for seats designated as accessible and the coordination of accessible shuttles, parking and drop-off points, have made ADA compliant seats available at both the top and bottom rows of the theater. The physical improvements completed in the last decade have included ADA compliant handrails on the peripheral stairs, marked ADA paths, marked wheelchair spaces on first and last rows, ADA-compliant restrooms in the visitors center and the construction of a small restroom building at the bottom of the north stairs. The restroom building's rounded corners and red sandstone veneer attempts to match the amphitheater, although it and the concession stand on its roof disrupt the original relationship of the north stair and Creation Rock. However, the structure is only a minor distraction from the experience of traversing the north stair.

The unsanctioned use of the juniper planters by concert attendees to view concerts has challenged safety codes meant to protect people from falling from vertical drops of 30-inches or more. To protect people misusing the planters, inappropriate schemes to install obtrusive safety rails around the planters and pave over the junipers have been proposed. There seemingly should be other ways to address this safety challenge that do not compromise Hoyt's design intentions that the junipers reference the nearby native plants of the locale while also providing a subtle separation of the seats from the vast scale of the massive sandstone outcrops. Hopefully, input from Friends of Red Rocks, designers and other amphitheater advocates will result in a solution that both preserves the junipers in their planters and addresses code and safety concerns.

Figure 64 *Renovations widened the Row 1 aisle to provide wheelchair accessible seating. 2017.*

Figure 65 *Wheelchair accessible seating in Row 70 at the top of the auditorium has a lowered guardrail to avoid obstructing the view to the stage. 2017.*

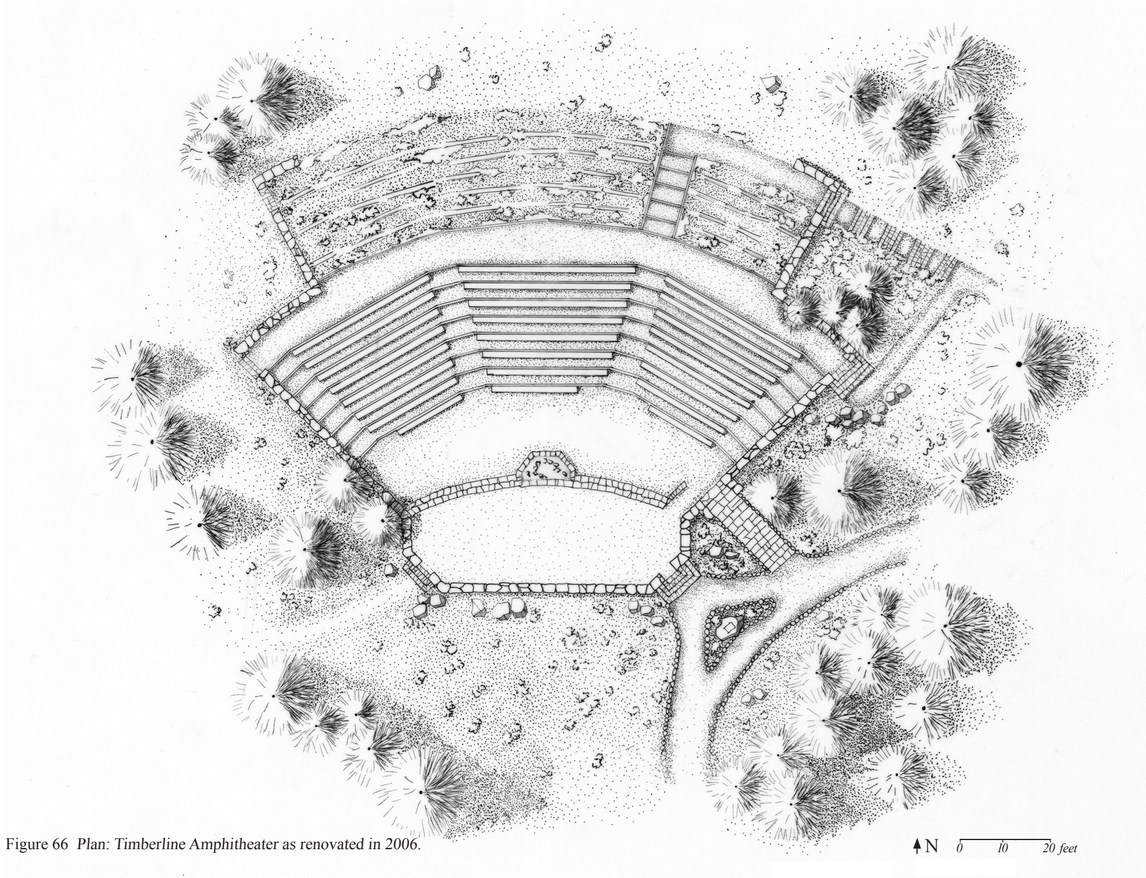

Figure 66 *Plan: Timberline Amphitheater as renovated in 2006.*

Figure 67 *Timberline Amphitheater at Timberline Lodge. 2021.*

TIMBERLINE AMPHITHEATER

MOUNT HOOD, OREGON

Capacity: 500+ (originally), 224+ standing (after renovation)

Construction: 1937-38, 2006

Primary Uses: Musical Performances, Nature Talks, Yoga Classes, Weddings, and Impromptu Gathering

Timberline Amphitheater was originally designed as an extension to the extraordinary Timberline Lodge. The Lodge is more than a hotel: it is a museum and successful restoration that showcases a stunning building and its furnishings as originally crafted by local WPA workers from 1936 through 1938. Committed to restoring the amphitheater to a similar level as the Lodge, the renovation team prioritized two key traits that connect the historic amphitheater to its landscape–its materiality and its' amazing views. The original log seats were severely decayed, but the renovation team completely rebuilt the lower eight of the fourteen rows of seats in cedar logs to preserve the original theater's robust image of stacked timber. Yet, they left the decaying upper rows untouched to tell the story of the harsh effects of nine months of annual snowfall on the large logs. The rugged stone walls were repaired and remain a link to the Lodge's monumental stone base. These low walls and the symmetrical layout delineate the theater as distinct from the landscape even as its materials are clearly a part of it. Most importantly, the team preserved the awe-inspiring vistas from the theater by keeping its strategic location on an axis between Mount Hood's peak to the north and Mount Jefferson over forty miles south. This gathering space of log benches and stone walls gives visitors the experience of being physically connected to the weathered trees and mountain peaks of the surrounding National Forest in a way not possible from inside the Lodge.

HISTORICAL OVERVIEW

The Timberline Amphitheater was designed as a complement to the extraordinary Timberline Lodge, a highlight of the New Deal's Works Progress Administration (WPA) program. Both the Lodge and theater reinterpret the "rustic architecture" style that Albert Good's book, *Park Structures and Facilities* described as built from native materials without "rigid straight lines and over sophistication."[62] Although the materials of both Lodge and theater reflect this rustic style, both structures exhibit an elegance and simplicity atypical of most rustic park structures. Their profiles are also more distinct from their surrounding landscape. The tall roof of the Lodge, referencing the peak of Mount Hood, is a highly visible icon, that earned its designation as a "Cascadian style."[63] The amphitheater also has a distinctive profile, and its stone walls clearly delineate it as separate from the native landscape. Built in less than 18 months, the 40,000 square-foot lodge and its amphitheater are a testament to the workmanship of the local craftsmen, artists and WPA laborers who created it.

The design of the theater demonstrates the considered and subtle approach taken in developing the entire Mount Hood National Forest. Located 60 miles east of Portland, the Timberline complex is in Mount Hood National Forest, named for Oregon's highest mountain (elevation 11,249.) The mountain has attracted skiers and hikers to its year-round snow since the 1890s. Simple inns and snow huts were soon built on the north side of Mount Hood and in Government Camp, a community on the lower south slope. These interventions motivated the United States Forest Service (USFS) to hire landscape architect Frank Waugh to recommend suitable facilities within the national forest. Waugh's report recommended a resort lodge, ski and toboggan facilities, tennis courts, horse barns, snow shelters and an "open amphitheater." He also gave his support to a 173-mile loop road around the mountain. The road was completed in 1925, inspiring multiple private proposals for ski lodges on Mount Hood. With proposals pending, the USFS had Frederick Law Olmsted, Jr., conservationist John Merriam and Waugh

Figure 68 *The WPA built Timberline Lodge on Mount Hood's south slope for skiers and hikers to enjoy the year-round snow. c. 1938.*

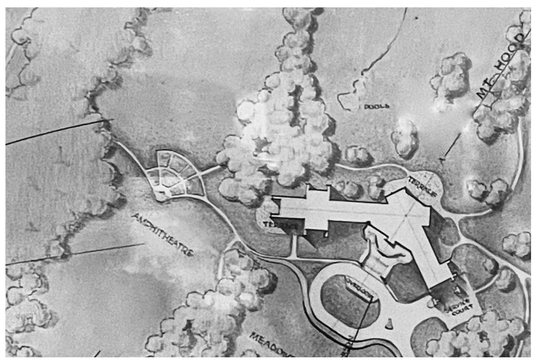

Figure 69 Emmett Blanchfield's watercolor rendering indicates an amphitheater located just west of the lodge. c. 1937

prepare the 1930 report, "Public values in the Mount Hood Area." It recommended any hotel should be integrated with the natural environment. Olmsted later wrote, *"As an element in the timber line landscape, it (the hotel) should be as little self-assertive and as little incongruous as the utmost skill and ingenuity in design can make it."*[64] Several proposals for privately owned hotels were submitted to the USFS in the early thirties, but the Depression curtailed their execution. Emerson Griffith, Oregon's WPA Director then applied for WPA funds for local workers to build a lodge and recreational facilities including an "open amphitheater." In December, National WPA Director Harry Hopkins approved the application and suggested the USFS retain a nationally known architect to work with the USFS staff. Gilbert Stanley Underwood, known for his rustic lodges at Yosemite, Zion and Bryce National Parks joined the team. Nevertheless, Forest Service Architect W.I. "Tim" Turner and his staff took the lead and began design and construction drawings in the winter of 1936 with advice from Underwood. The Lodge broke ground in June 1936, was dedicated by Franklin Roosevelt on September 28, 1937, and opened in February 1938.

The amphitheater was designed as a companion piece while the Lodge was under construction. The theater's strategic location was rooted in a master plan generated by the local Forest Service staff and Albert Taylor, a renowned landscape architect hired as a consultant. USFS Landscape Architect Emmett Blanchfield worked with Taylor to complete a beautiful watercolor master plan depicting hiking and ski trails, tennis courts, a barn, and other recreational amenities, including an amphitheater just west of the lodge. The theater was carefully positioned on an axis between Mount Hood's peak to the north and Mount Jefferson over forty miles south. It also spanned the timber line such that the stage is backed by forest trees while the landscape behind the seats is a rugged slope of volcanic soils with a few stunted trees and small plants. Blanchfield designed the amphitheater in Spring 1937 and produced the construction drawings with the USFS staff. Construction of

Figure 70 *The scale and details of the amphitheater's timber seats echo the use of large logs with finished surfaces used throughout the Lodge. 2021.*

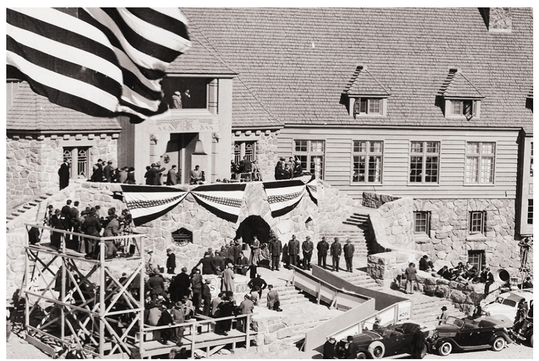

Figure 71 *FDR dedicating Timberline Lodge. Note the ramp erected to allow the president to enter the Lodge. September 28, 1937.*

the amphitheater began in summer 1937 and was partially complete when Franklin Roosevelt dedicated the lodge on September 28.

At first glance, the amphitheater seems much like many log amphitheaters located in parks across the country. Yet, by modeling a smaller version of the Lodge's refined geometry, materials, finishes, and careful details, Blanchfield differentiated this theater from most park structures. The theater's symmetrical plan was likely influenced by the amphitheaters in the National Park Service's 1935 Park Structures and Facilities by Albert Good.[65] Blanchfield, a skilled designer, carefully fit the terraced tiers of seats into the steep slope of Mount Hood in a similar manner to the multi-level terracing of the Lodge. Likewise, both the Lodge and the theater used oversized local timber stripped of its rough bark and hand-planed to precise dimensions. Well-crafted stone walls anchor both the Lodge and the theater into the ground. The theater's low stone walls delineate three sides of the symmetrical plan to subtly separate it from the surrounding native landscape, but the northern (upper) edge remains open towards Mount Hood. Perhaps most importantly, the theater serves as an extension of the numerous common spaces in the Lodge where visitors gather in its large lobby, porches, patios, and multiple nooks for socializing. Yet, the theater's location connects the visitor to spectacular vistas of the forests and mountains surrounding the Lodge in a way that is not possible from the Lodge's interior spaces.

In 1955 Richard Kohnstamm took over management of the Timberline Lodge and ski area. R.L.K. and Company renovated the Lodge, but not the amphitheater. The theater's cedar log benches continued to deteriorate due to freeze-thaw, snow loads up to 12 feet and snow removal. The Forest Service staff incrementally replaced some benches with standard sized lumber and worked with Youth Conservation Corps youth in 1975 to consolidate the usable log benches into the theater's front rows. The Friends of Timberline (FOT) was also established in 1975 to "preserve and conserve Timberline Lodge." Some FOT members advocated renovating the theater, as part of their commitment, but others objected since snow restricted the amphitheater's use to only three months a year. Nevertheless, in 1999 FOT hired Landscape Architect Richard Zita to prepare a study of options for the theater's future. A scheme to rebuild the lower rows of log benches was selected by FOT, the USFS and R.L.K. and Company. Construction started in the Spring 2006 and the renovated theater was dedicated on October 7, 2006.[66] Today the Timberline Amphitheater has a new life of performances, nature talks, weddings, and yoga classes. On Labor Day a musical festival attracts hundreds more than the 224 bench seats can accommodate, with patrons often spreading across the nearby landscape. Nevertheless, perhaps the amphitheater's most important role is to provide an ideal spot where visitors can sit and enjoy the breathtaking views and connect with the landscape.

Each year Timberline Lodge attracts thousands to a hotel that is not simply a place to stay, but a museum that showcases artwork and the beautiful craftsmanship of WPA workers. It is a spectacular building, yet its muted tones, form and careful siting are true to Olmsted's assertion that a hotel on Mount Hood should be as "little self-assertive and as little incongruous"[67] as possible. The amphitheater applies this same approach to an outdoor gathering space, giving visitors the experience of being physically connected to the stone and trees that compose the landscape while they take in the awe-inspiring views and find their place within a timeless environment.

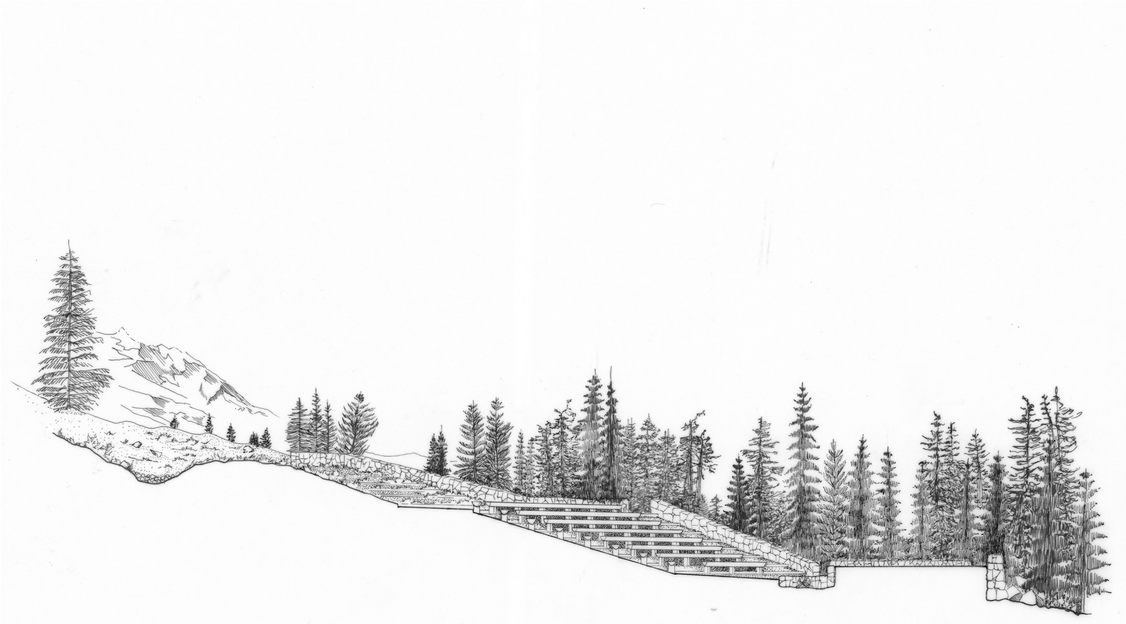

Figure 72 Section: Timberline Amphitheater as renovated in 2006.

TIMELINE: SIGNIFICANT HISTORICAL EVENTS AND RENOVATIONS

1890-1920s	Ski trails and small inns are built on Mount Hood's north slope and at the Government Camp community.
1925	A 173-mile loop road around Mount Hood, designed by Forest Service staff and Frank Waugh, is completed.
1925-34	Multiple private developers propose schemes for a ski lodge on Mount Hood, but none are completed.
1930	A report by Frederick Law Olmsted, Jr, John Merriam, and Frank Waugh calls for buildings integrated into the environment.
1935	In September Emerson Griffith, Oregon's WPA Director, submits a proposal for a lodge on Mount Hood. In December Harry Hopkins, National WPA Director, approves the proposal and the USFS recommends a well-known architect should design the lodge.
1936	Gilbert Stanley Underwood, an architect known for rustic lodge designs, joins the Forest Service design team. W.I. (Tim) Turner and his Forest Service staff begin design and construction drawings. The lodge groundbreaking is held on June 14.
c.1936/37	Forest Service Landscape Architect Emmett Blanchfield works with landscape architect consultant Albert Taylor on a recreational site plan and completes a watercolor master plan for facilities on the south slope, including an amphitheater.
1937	Emmett Blanchfield and USFS staff develop a design for a 500-seat amphitheater. Construction begins in the summer.
1937	On September 28, President Franklin Delano Roosevelt dedicates Timberline Lodge. The partially finished amphitheater hosts Oregon theater and music groups funded by the Federal Music and Federal Theatre Projects.
1938	The Lodge opens to the public in February. The theater is completed in the summer and is dedicated on September 9.
1938-41	The amphitheater seemingly hosts few events but serves as a spot for visitors to enjoy stunning vistas.
1942-45	The Lodge closes due to World War II.
1955	The Lodge closes briefly due to management challenges. Richard Kohnstamm establishes R.L.K. and Company to operate the Lodge and raises funds to renovate the Lodge, its crafts and artwork.
1942-1975	The amphitheater deteriorates but continues hosting nature talks and the occasional event. In 1975 Friends of Timberline is established and the Forest Service leads YCC youth in consolidation of useable benches in the theater's front eight rows.
1999-2006	The Friends of Timberline, the Forest Service and R.L.K. and Company collaborate with Landscape Architect Richard Zita and Cascadian Landscapers to renovate the amphitheater, including the complete rebuilding of the cedar benches.
2006	The restored theater is dedicated on October 7th. It hosts concerts, weddings, yoga, and daily enjoyment of amazing views.

LANDSCAPE EXPERIENCE OF ORIGINAL THEATER

Visitors remembered the original theater for its views and rustic materials, particularly its oversized log benches. Blanchfield and Taylor designed the theater to keep the focus on the landscape by orienting it to the spectacular view to the south, building it in recognizable local materials, and nestling it into the existing topography. The theater's location and design also connected it to the lodge because most visitors approached the theater from the south terrace of the Lodge. They walked along one of several makeshift paths through rocky slopes with a scattering of native shrubs and stunted spruce and fir trees. Their initial view of the amphitheater was a low wall built from the same stone boulders as the walls of the Lodge. An entrance to the theater is marked by three stacked steps protruding from the wall as well as glimpses of oversized log benches marching up the slope towards Mount Hood. At first glance, the log benches appeared much like the stacks of timber at nearby lumber mills. The rugged, but carefully crafted stone boulders and large diameter logs make the amphitheater a continuation of the iconic imagery and social spaces within the Lodge. Upon entering the gravel plaza in front of the stage, visitors saw a vista of the National Forest and a snow-covered Mount Jefferson with additional mountain ridges beyond in layers of green, blue, and purple. To the right they saw the stacked log benches with the steep snow-covered slopes of Mount Hood pushing downwards towards the theater. They moved along generous aisles to find a seat on the half-round logs—making a visceral connection by sitting *on* the landscape as well as in it. They looked again to breathtaking views of Mount Jefferson while they enjoyed performances and nature talks accentuated by nature's artistry. Hallie Flannagan, Director of the Federal Theatre Project wrote to Griffith, *"You are too conservative when you say the Timberline Amphitheater is the most beautiful theater in the world. There should be something in that comparison that brings in the entire cosmos…"*[68]

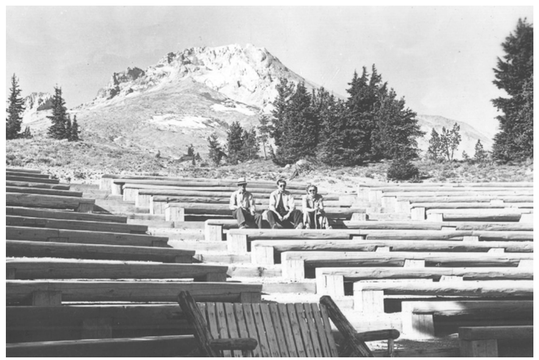

Figure 73 With Mount Hood in the distance, three friends look south toward Mt Jefferson. 1949.

Figure 74 A glimpse of the Lodge and the vista to Mt Jefferson can be seen from the amphitheater benches. c.1938.

LANDSCAPE EXPERIENCE AFTER RENOVATIONS

The renovation of the theater restores the original experience by replicating the alignment, form and materials of the 1930s amphitheater, while providing accessibility and avoiding distracting additions. If the experience has been diminished, the culprit is the Pucci chair lift marring the view to the east of Mount Jefferson. Today, most visitors still approach the theater from the south terrace of the Lodge. However, they now travel along an ADA compliant asphalt path surrounded by spruce and fir trees. Through openings in the trees, they see a low stone wall and lift chairs passing across the skyline a short distance away. They then see a glimpse of log benches and a stone ramp next to a cluster of trees. At the ramp, they get their first full view of the half-round cedar benches. The image of stacked timber logs remains, although the reduction in number of rows makes them less visually powerful than the original benches. As they proceed up the ramp and enter the theater, an extraordinary view of the snow-covered Mount Hood suddenly appears beyond the theater. Turning to face the stage, they take in a view toward Mount Jefferson. This view remains because the design team chose not to add an overhead stage structure and instead are relying on temporary structures assembled as needed for events. Unfortunately, the ski lift building does interrupt the vista to the left of Mount Jefferson. Nevertheless, it is hard to resist stepping up to the stage to enjoy the vast vista. By turning to face the benches from the stage, there is a full view of the peak of Mount Hood, covered in snow even in July. It is hard to resist taking a seat on a half log, and then touching the wood. Surrounded by trees you feel grounded in the landscape even as you take in the monumental views up to Mount Hood and south to Mount Jefferson. The well-crafted log seats and stone walls provide a reminder of the surrounding landscape and the beautiful lodge and the legacy of the WPA. The vista remains an enhancement to any event and often serves as the event itself.

Figure 75 "Yoga with a View" class with Dee Tullis takes advantage of the renovated amphitheater and its spectacular vistas. 2021.

Figure 76 Every fall, volunteers seal the log benches to prepare for winter snows. 2018.

SEATING

With snow loads up to 12-foot deep on the log benches for nearly nine months of the year, many of the benches were unusable by 1975. The Forest Service worked with Youth Conservation Corps that year to consolidate the most intact half-round logs into the front rows of the amphitheater and allowed the back rows to continue deteriorating. By the time that renovation plans began in 1999 all the benches had become unusable, and the amphitheater had become somewhat of an eye sore. Fortunately, the Friends of Timberline, the Forest Service and R.L.K. and Company were prepared to work together to plan a renovation with Landscape Architect Richard Zita and Cascadian Landscapers.

After six different design alternatives were presented by the designers in an effort to balance the program and budget to historic requirements, the group committed to restoring the theater as much as possible to its original design. Yet, replacing the 18-inch half-round cedar log seats was a challenge because large diameter cedar logs are less available and much more expensive than in the 1930s. Nevertheless, the team found a nearby timber firm with a lath equipped to process long, large diameter logs and they substituted 16-inch half-round timbers for the 18-inch diameter logs.[69] They reduced the trim on each side of the smaller logs to one-half inch rather than the full inch on the original logs. The seating surface therefore became 15-inches, just one inch less than the sitting surface of the original 18-inch logs.[70] This reduction in dimension did not significantly change the bench's function from the original design or the visual impression of stacked logs. To ensure greater structural integrity and durability of the benches, the maximum spacing of the supporting 12-inch square posts was reduced to six and a half feet on center rather than the nearly ten feet on center in the original theater. The Friends of Timberline also addressed the durability of the benches by recognizing the need for annual maintenance of cedar in the harsh timberline environment. Each September, the Friends hold a volunteer workday to refinish the logs and prepare them for the winter.

Figure 77 When approaching the amphitheater from the Lodge the first image of the log seats was reminiscent of stacks of timber in nearby mills. c.1938.

Figure 78 The deterioration of the log benches made them nearly unusable before the 2006 renovation. 2006.

STAGE STRUCTURES, LIGHTING AND SOUND

The 2006 renovation preserved the 1937 stone and concrete stage. Unfortunately, new electrical connections at the stage were not a part of the renovation so electrical service is provided by a "gigantic extension cord" from a service area at the 1958 swimming pool some 200 feet from the amphitheater stage.[71] All events rely on portable equipment (with an endless array of wires and plugs). Since the renovation, an annual music festival has been held on Labor Day. A temporary overhead tent structure is set up for each musical performance. The overhead structure remains only for an event and is then removed to preserve the incredible vista to Mount Jefferson that is enjoyed daily by Lodge guests as well as skiers and hikers on nearby trails. During the summer, "Yoga with a View" is held on the stage and lower plaza. Some participants lie along the log benches for *savasana* at the end of classes.

RESTROOMS, CONCESSIONS & AUXILIARY STRUCTURES

All events are free to both Lodge patrons and the public. There are no permanent structures for sales or concessions although temporary concession booths are sometimes installed for special events. All amenities (snacks, bar, restrooms) of the Timberline Lodge are available through an entrance less than 300 feet away along an accessible pathway.

Figure 79 *A temporary structure is installed over the stage to protect electronic equipment during performances. It is then removed to preserve the vista for daily use. 2017.*

Figure 80 *Temporary stands are set up for concessions at major events such as Mountain Music Festival. 2017.*

CONTEMPORARY BUILDING & ACCESSIBILITY CODES

If FDR returned today, he would have a barrier free pathway to reach the theater. This was not the case in 1937 when he dedicated the lodge. It is unlikely that he saw the performances given the rough, steep terrain between the lodge and the amphitheater and the steps at its entrances. Instead, he delivered the dedication from the main floor's outdoor terrace after entering the ground floor along a temporary enclosed ramp and then taking an elevator to the main floor.

The 2006 renovation of the amphitheater created a new barrier-free pathway from the South Terrace of the wheelchair accessible Lodge to a new stone ramp at the east entry to the front row of the amphitheater. This seventeen-foot entrance ramp is paved in cut stone with tight joints the to insure comfort for wheelchair users and ADA compliance. Most able-bodied visitors also enter through this same entrance. There are also three 4-foot-wide gaps in the first row of benches to accommodate visitors using wheelchairs. Although there is not a barrier free access to the back row, the distance between the front seat and the rear benches is only 25 feet. The view from the rear benches is not appreciably different from the view from the wheelchair spaces in the first row where the vista of Mount Jefferson and surrounding mountains can be seen clearly over the stage's stone walls. The raised stage has also become accessible with a short ramp tucked next to the stone walls at its eastern edge. Through modest changes--opening a wall, repositioning a path, subtly adding a ramp--the design team of Timberline Amphitheater made the theater fully accessible without sacrificing any aspects of the original experience.

Figure 81 *The wheelchair accessible path allows access to the front row of amphitheater during the Mountain Music Festival. 2017.*

Figure 82 *The 2006 renovation replaced three steps with a ramp at the amphitheater's lower entrance connecting it to a new wheelchair accessible path to the Lodge. 2021.*

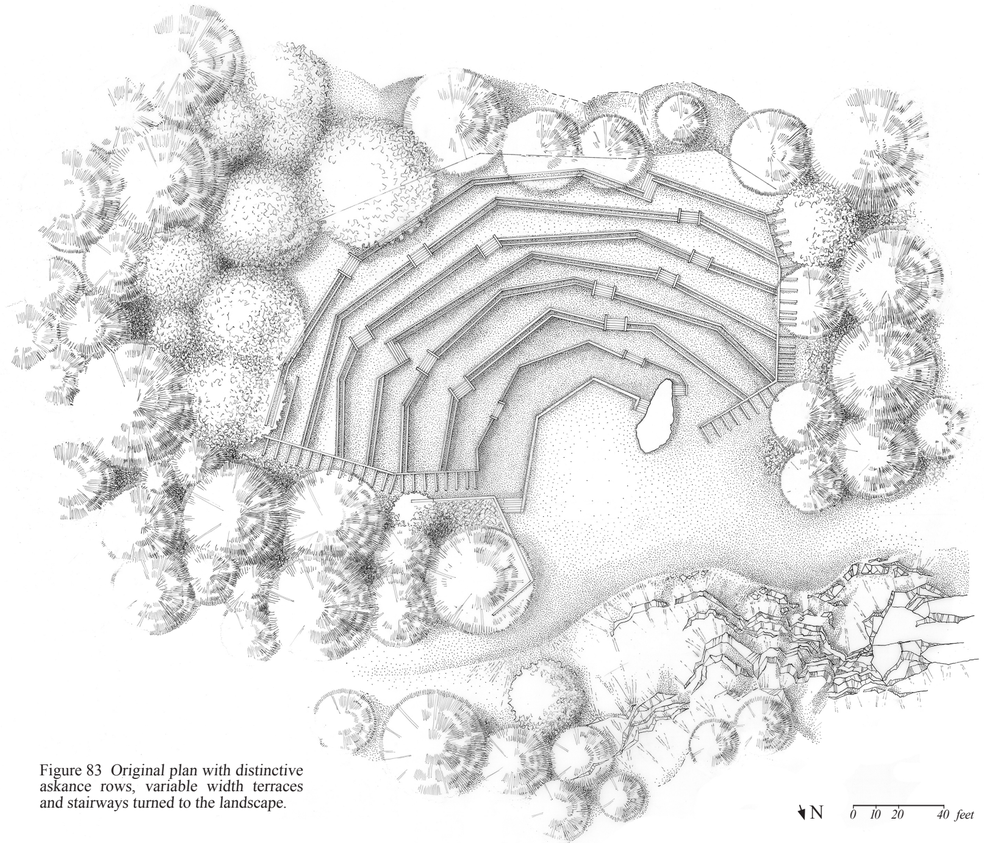

Figure 83 *Original plan with distinctive askance rows, variable width terraces and stairways turned to the landscape.*

Figure 84 *The renovation team sustained the landscape relationship by avoiding distracting additions and remaining true to the original form and materials.* *Grassl, 2021.*

UCSC QUARRY AMPHITHEATER

SANTA CRUZ, CALIFORNIA

Capacity: 1,600 (originally); 2,700 (after renovation)

Construction: 1967, 2017

Primary Uses: Commencement, New Student Welcome, Classes, Concerts, Impromptu Gatherings

This iconic theater uses a modernist design vocabulary to actively engage visitors in the irregular beauty of a quarry set within a redwood forest. Artists such as Mondrian, Kandinsky and Klee inspired noted landscape architect Robert Royston to pursue a novel language of landscape spaces for his 1950s park designs.[72] This early work and the jagged geometry of the derelict quarry inspired Royston to position railroad-tie walls askance to one another when he fashioned seven asymmetrical terraces for the auditorium's seating.[73] Royston seemingly placed the numerous stairways between the terraces at random angles and locations. But actually, he was using their locations and orientation to choreograph the visitor's movements and sightlines towards particular landscape features – the forest, the quarry wall, rock outcrops and specimen trees. This scenic walk through the theater and occupiable nooks created by the askance rows encouraged year-round use of the theater for small group gatherings and individual contemplation. In 2006, the deterioration of the seats and rear quarry wall forced the theater's closure. Its 2017 renovation required design changes for code compliance and new uses. However, the renovation teams assured the theater remained a design icon and favorite year-round campus destination by avoiding distracting additions, remaining true to the original form and materials and preserving the active interaction between the theater, the visitor and the landscape.

HISTORICAL OVERVIEW

In 1961, the University of California purchased 2,000 acres of forested foothills in the Santa Cruz Mountains for a new UC campus. Shortly thereafter they hired John Carl Warnecke Architects to lead a design team that included landscape architect Thomas Church. In 1963, the university adopted the design team's Long Range Development Plan, including a goal to preserve as much of the forest as possible. The scheme called for unobtrusive parking and roads, a central core of academic and institutional buildings and twenty to thirty small residential colleges scattered throughout the forest. Church continued to advise the administration on the design of the residential colleges, central facilities and other aspects of the campus as construction proceeded. With no large assembly hall on the new campus, he proposed an outdoor amphitheater in a derelict quarry near the center of campus, so large groups of students could gather for lectures and other university events. The first event held on the site was the 1966 inauguration of the campus's first President, Dean McHenry, in a temporary theater installed on the quarry floor. Church laid out this theater with 4,000 folding chairs set in conventional symmetrical rows and oriented west towards a raised wooden stage. Soon afterwards Church recommended noted landscape architect, Robert Royston, his former employee who had worked professionally as an actor, to design a permanent amphitheater for the quarry site. Royston began his design immediately and the theater was completed by October 1967.[74]

Royston, with Church's support, relocated the theater to the east of the temporary site and rotated it to focus the audience on a 100-foot-high quarry wall. He placed a large earthen stage in front of the wall and between a nine-foot tall boulder and a knoll with two towering redwoods. Although Royston developed several versions of this scheme, the wall, boulder and redwood trees always appeared prominently. Each of the schemes also had asymmetrical terraces defined by seat walls placed at diverging angles. During construction Royston visited the site regularly, even staking the final layout in the field with the contractor and placing numerous stairs at diverse and unusual angles between the terrace levels. According to Royston's partner Kaz Abey, Royston saw the tall boulder protruding from the front edge of the stage as the important "monument" and "starting point" for the modernist geometry of the theater.[75] He directed the contractor to make a vertical cut on one side of the boulder while keeping the weathered surface on the other. After an early event in the theater, the Campus Planning Commission requested removing the boulder to open blocked views. In response, Royston again reshaped the boulder to open up some views to the stage, but the boulder remained as the keystone to the magical character of the theater.

After construction was completed in 1967 at a cost of $82,000, University events and lectures began immediately. The 1968 commencement awarded honorary degrees to Albert Hitchcock and musician Ravi Shankar. Lectures by Cesar Chavez, Bella Abzug, Buckminster Fuller, Angela Davis, and other national leaders were held in the theater. Concerts by numerous popular performers occurred frequently throughout the 70s, 80s and 90s. The use of the theater declined in the early 2000s as the wood benches deteriorated. Access to the Quarry Amphitheater was curtailed in 2006 due to safety concerns about rockslides on the south (rear wall) of the theater and the deteriorating seat-walls and steps.

In 2013, a design team led by the Office of Cheryl Barton was retained to prepare an analysis of the existing theater's condition and present possible options for the future renovation or redesign of the facility. Co-author, Linda Jewell, served as a consultant to the effort. The team

Figure 85 *The Quarry before the theater was built, captured through the lens of Ansel Adams. c.1962-1967.*

Figure 86 *Thomas Church suggested using the cleared bowl left by the quarry as a temporary theater with seating oriented to the west. 1966.*

Figure 87 *Robert Royston reoriented the theater to face the 100' rock wall of quarry and make room for a shallow, wide open-ended theater. 1969.*

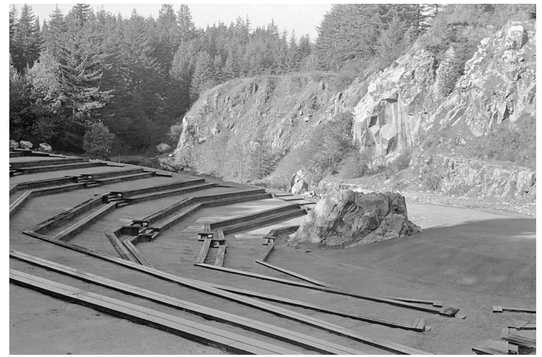

Figure 88 *The quarry walls were a strong presence in the theaters first decades. Compare this view to Figure 83. 1966.*

organized workshops, interviews and online surveys with students, alumni, staff and faculty to determine the most appropriate direction of the project. Working with a Core Advisory Group, the team determined that the existing use of the theater include one annual event with 3,000 people and that otherwise 2,000 seats could accommodate nearly all university needs. However, a challenge still remained. A 3,000-capacity theater would more predictably generate revenue and attract more revenue generating events. To elicit comments from a broad cross section of possible users, the team published documents that included programmatic analyses, guiding principles and four design options varying from a reconstruction of the existing askance benches with 1,600 seats to a classical layout of matching arced rows with 3,000 seats. Students, staff and faculty alike supported the preservation of the theater's landscape character and daily function as a public space, over creating a performance space with more seats that increased the potential for higher revenue. During the design-build phase of the project, the University expanded the bench seating following the original askance geometry, increasing the permanent seats to 2,700 while maintaining the character of the theater.

In October of 2017, the first phase of the renovated amphitheater opened for musical performances, lectures, rallies and other events. Its daily use for individuals or small groups to study or simply relax and enjoy the landscape continues to provide its most treasured memories.

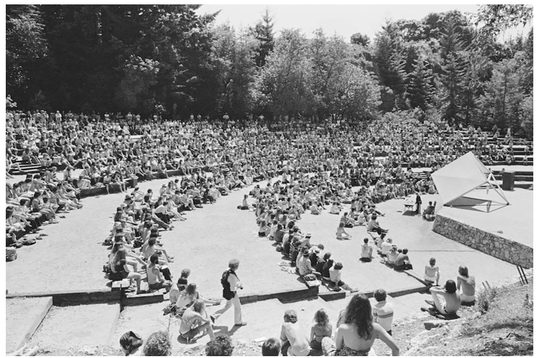

Figure 89 *Modernist form hosts a modernist function as Buckminster Fuller speaks to the campus community. May 4, 1980.*

Figure 90 *Angela Davis packed the house for another kind of revolutionary vision. May 1978.*

TIMELINE: SIGNIFICANT HISTORICAL EVENTS AND RENOVATIONS

1860-1946	Quarry is in operation.
1961	The University of California purchases 2,000 acres of mostly forested land, including the derelict quarry, in the foothills of the Santa Cruz Mountains for a new campus.
1963	UC Santa Cruz adopts a Long Range Development Plan by a design team led by John Carl Warnecke Architects. The noted landscape architect Tommy Church is a key member of the team that proposes a scheme with residential colleges scattered within the forests.
1963	Church proposes an outdoor theater within the derelict rock quarry located near the center of the campus.
1966	Campus's first President, Dean McHenry is inaugurated within the quarry that Church had identified as a theater site. For the event, Church designs a temporary theater in the flatter west portion of the quarry with a raised wooden stage and 4,000 folding chairs.
1967	Church designates landscape architect Robert Royston to design a permanent outdoor theater for the quarry site. Royston designs an asymmetrical theater facing north towards the quarry wall. Theater opens.
1968	UCSC administrators advocate removing the rock outcrop protruding from the stage because it compromises views of the stage from some seats. Royston successfully negotiates saving the rock.
1969	Commencement ceremony for first graduates of UC Santa Cruz is held in the theater.
1968-90s	University events, lectures by Buckminster Fuller, Cesar Chavez, Angela Davis, and other national leaders and concerts by popular bands are held in the Quarry Theater. Use of theater declines over the decades as wood benches deteriorate.
2006	Access to the Quarry Amphitheater is curtailed due to safety concerns from rockslides and worn benches.
2013	A design team led by the Office of Cheryl Barton (O|CB) meet with campus administrators, faculty and students to evaluate options for renovating the Quarry Theater, including an alternative that replaced Royston's design with a more classically symmetrical theater with additional seating.
2014	Students, staff, faculty and University administrators support the O|CB option that preserves the essential character of the original design while adding approximately 500 seats and meeting code and operational needs.
2017	Phase One of the O|CB proposal completed under a design-build contract with Flynt Builders and Dreyfuss+Blackford Architects. Campus events, popular concerts and daily use resume in the amphitheater.

LANDSCAPE EXPERIENCE OF ORIGINAL THEATER

Visitors approached the theater from campus buildings and parking lots on narrow paths through a redwood forest that enveloped most of the 2,000-acre campus. These paths led to an intimate clearing designated as the "Redwood Lobby" by Royston who carved it from the forest but left a circle of tall redwoods in the middle as welcoming monuments to guests. Visitors then ascended a stair to an earthen plaza where they looked across the complex array of wooden benches set against the 100-foot-high quarry wall and the redwood forest. From here, they chose one of several indirect routes to descend the tiers of wooden seats. Rather than follow a linear aisle looking down at their feet, visitors made multiple stops and turns on the way to their seats, each time looking up to see a new view of the surrounding redwoods, the imposing quarry wall and a nine-foot-tall craggy boulder protruding through the stage. The landscape on stage and off were always the opening act at the Quarry Theater.

Walking to your seat at the Quarry Theater resembled a walk in a thoughtfully designed garden with choreographed views and circuitous paths that expanded the perceived space. The askance benches created nooks that could be comfortably occupied by small groups and individuals who wanted to relax, picnic, study, hold a class or just enjoy the surrounding landscape. These qualities led the theater to be used as year-round public space in ways seldom seen in a theater composed of matching arcs and linear aisles.[76]

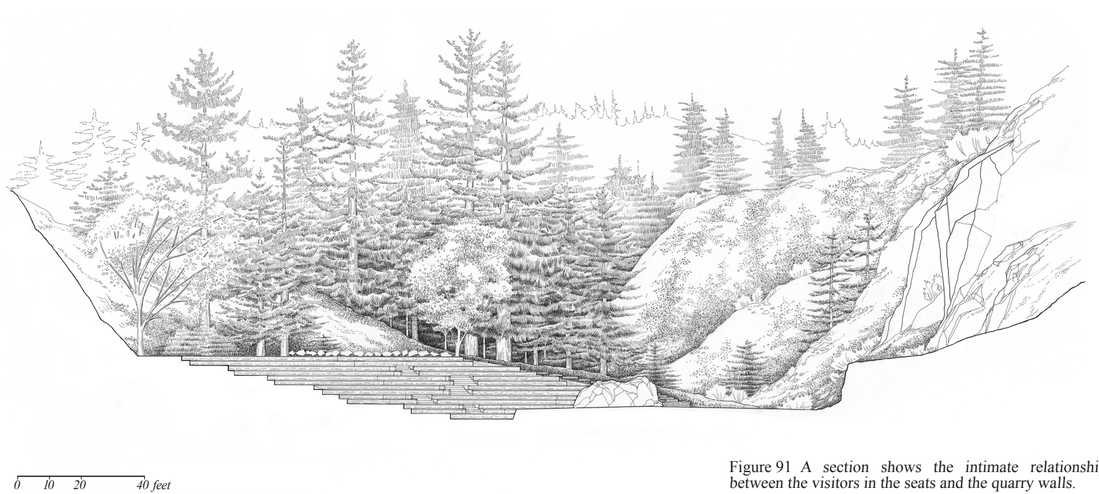

Figure 91 *A section shows the intimate relationship between the visitors in the seats and the quarry walls.*

LANDSCAPE EXPERIENCE AFTER RENOVATIONS

The renovation teams maintained the theater's original landscape experience and year-round function as a public space by preserving key aspects of the design and avoiding disruptive additions. They studiously replicated the original asymmetrical layout of the seating and protected the boulders and trees that frame the stage.[77] Through extensive give and take with regulators, they maintained as many aspects as possible of the indirect paths of travel from terrace to terrace and the active engagement with the landscape they create. By providing infrastructure for a seasonal stage cover, they avoided a permanent proscenium that would have blocked the view and left the space feeling more like an "empty theater" between shows. When viewed from the entry area or as you descend the terrace stairways, the theater appears and feels as it did originally. Long time patrons, sitting in one of the nooks created by the theater's unique geometry, would be happy to recognize the same experience that had drawn them for decades. Still, some original aspects of the theater have been diminished. The garden-like experience of constantly changing views has been somewhat compromised by the more direct paths through the theater required by regulators. When walking up the stairs or looking up to rows above you, the concrete support walls feel like more of an intervention in the landscape than the original railroad tie walls. The new wooden benches are floated above these walls, creating a strong line that formalizes the character of the theater. The bright brushed stainless-steel handrails and the surprisingly large Wi-Fi amplifiers sharply contrast with the surroundings. Together, these alterations may diminish some visitors' experience of being enveloped in the landscape and serve as caution flags for future renovation teams.

Figure 92 *Overall, the renovation succeeds in maintaining the theater's relationship with the landscape while meeting contemporary codes and expectations. However, dissonant details sometimes diminish the experience of being enveloped in the landscape. 2021.*

SEATING

By 2006, the original seats composed of railroad ties, an inexpensive material popular in the 1960s, were heavily deteriorated due to their contact with the soil and water collection behind the walls. The renovation replaced the ties with concrete walls. Wood plank seats were floated above concrete walls to minimize the contact of the wood with soil or water, while maintaining the experience of wooden benches. The layout, height and depth of the seat walls were replicated using laser scans of the original theater to ensure accuracy. Additional rows of benches with Royston's askance geometry were added, increasing the number of permanent bench seats to 2,700. The visitors experience of the seating from the top of the theater remains largely the same—they see a series of jagged wooden lines complementing the materiality of the forest and the form of the quarry wall. On non-performance days, visitors are still presented with the same array of different nooks to occupy and make their own.

Figure 93 *Just before renovation, the deteriorated benches show the impact of the wood to soil contact allowed by the original detail. 2016.*

Figure 94 *The renovated benches maintain the form and material of the original bench seats, but raise them off the ground plane. 2017.*

STAGE STRUCTURES, LIGHTING AND SOUND

The original Quarry Amphitheater had an unusually large stage with ambiguous edges and access. The renovation project paved the central core of the stage in concrete to make it more accommodating for bands and other performers. A new road was graded to bring equipment to the new concrete stage. An array of outlets were hidden behind the stage rock and on the front edge of the stage. Additionally, conduit was installed between the stage and the back of the auditorium to facilitate lighting and sound from temporary control booths. Footings were installed to support as-needed overhead structures. By avoiding installing a permanent proscenium, the renovation team preserved the views of the quarry wall and the character of the space as a terraced plaza when events are not taking place.

Once again, there was much debate about the large boulder on the stage blocking the view from some seats. A large volunteer redwood tree at the boulder had increased the number of blocked views of the stage. As in the past, a compromise was reached that preserved the experience: the volunteer redwood was removed, and the boulder stayed.

RESTROOMS, CONCESSIONS & AUXILIARY STRUCTURES

There are no significant new structures in Phase One, although temporary service buildings were built out of the sight but near the stage. Most new structures proposed for Phase Two will be located within a new service building, including a kitchen, concessions, restrooms, a greenroom, meeting space and storage. In current plans, this proposed building is placed so that it is not visible from the theater.

Figure 95 *The foundations built into the stage allow for a relatively light overhead structure that lessens the impact on the experience. 2017.*

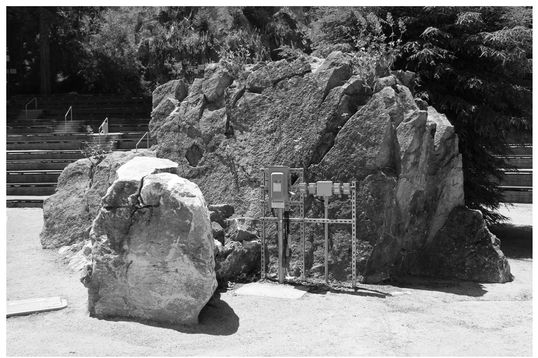

Figure 96 *The renovation team used the iconic "stage rock" to hide unsightly power hookups from audience. 2021.*

CONTEMPORARY BUILDING & ACCESSIBILITY CODES

Royston's "wandering" scenic stairs were significantly modified. Unfortunately, the original design conflicted with contemporary safety codes that require self-evident, clear paths of travel for emergency egress from the theater. The original design sought to connect visitors to the landscape by making them look up and find the next set of stairs. The logic of contemporary regulations is that visitors should not have to look for where to go, so that in an emergency or in a crowd at night, they can intuit where the next steps will be or, at least, easily find them. The renovation design team sought to preserve as much of the original experience as possible while complying with contemporary codes. To address safety and access, the team reduced the number of stairways and replaced the many different orientations of the stairs with flights consistently perpendicular to the seat walls and facing the stage. They also replaced the wooden stairs with contrasting light brown concrete stairs and added ADA compliant metal handrails. The renovated theater provides barrier free access to 22 wheelchair seating spaces at the top and near the front of the auditorium. Visitors who arrive by vehicle contact the theater to arrange parking or drop-off at the beginning of the accessible path of travel

Figure 97 *The original layout provided renovators with an opportunity to subtly include an "accessible" row with a wide concrete aisle and wheelchair nooks. 2021.*

Figure 98 *Looking east across the Quarry Amphitheater. 2021.*

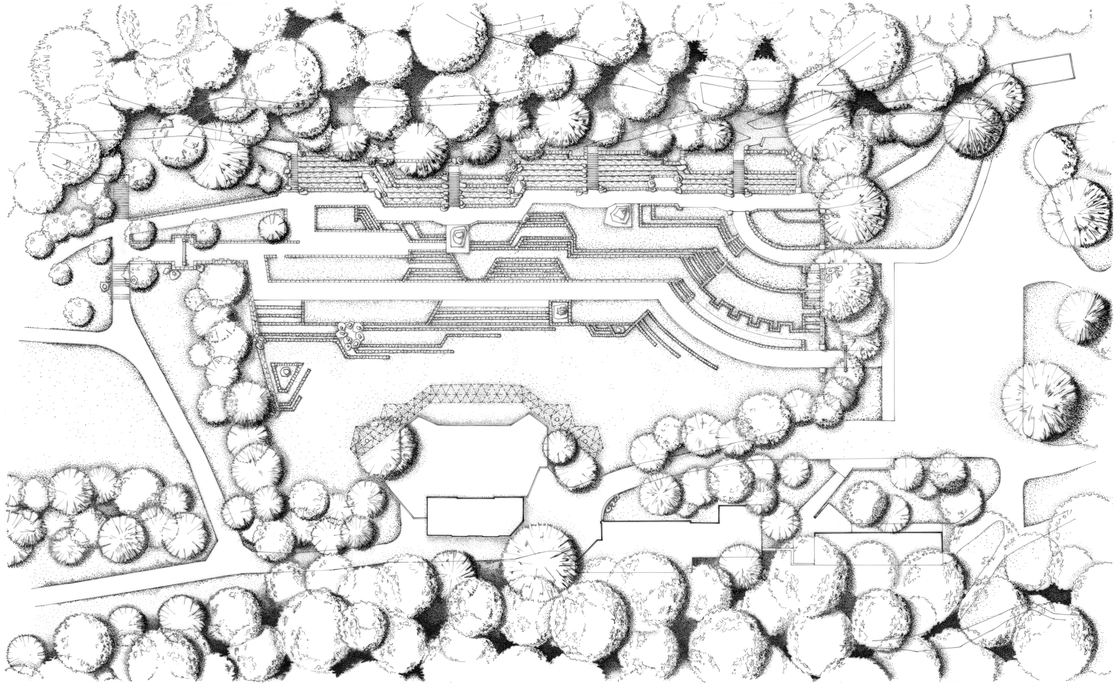

Figure 99 *Plan drawing illustrates the remarkably large amount of new structure the renovation added while still maintaining the original landscape experiences.*

Figure 100 *In contrast to the plan drawing, this view through the theater shows the new stage structure and seats merging with the landscape.* *Grassl, 2021.*

RHODA GOLDMAN CONCERT MEADOW

SAN FRANCISCO, CALIFORNIA

Capacity: 13,000+ with standing and overflow

Construction: 1932, 2005

Primary Uses: Music, Drama, Dance, Civic Events, Day-to-Day Relaxation and Dog Walking

The extraordinary experience of being sheltered 100 feet below a bustling city in a tree-shrouded ravine defined the Stern Grove Amphitheater from its birth. The theater was born when Philanthropist Rosalie M. Stern and Parks Director John McLaren recognized that the eucalyptus-covered ravine contained "nature's music box."[78] With minimal alteration, the site became a concert "theater" that hosted millions of visitors at the annual Stern Grove Festival for 70 years. In 2005, Stern's great-great grandchildren and McLaren's successors recognized that the theater was being "loved to death."[79] The theater's widely praised renovation renamed the space after Stern's granddaughter, Rhoda Goldman. The project also introduced complex stone structures well beyond anything Stern and McLaren would have imagined. However, all this change did not undermine the historical character of the place because the project carefully preserved the memorable landscape experiences that defined the theater from its birth – the descent below city streets, the unexpected discovery of a broad meadow and the magic of viewing a performance surrounded by the tree-covered slopes.

HISTORICAL OVERVIEW

In 1931, San Francisco Recreation and Park's seminal director, John McLaren, shared a special site with civic leader and philanthropist Rosalie M. Stern. The extraordinary experience of "escaping the city" by walking 100' down into a ravine to a meadow encircled by groves of eucalyptus, captured Stern's imagination from her first visit. This "natural" wonder had been created by the Greene family who originally homestead the area in 1840 and planted the dunes with eucalyptus to stabilize the land and cut the wind. Both Stern and McLaren recognized that this very functional landscape planning had created a magical natural theater a block from the City grid.[80]

Stern purchased the site and gifted it to the City of San Francisco, in memory of her husband Sigmund. She then engaged an illustrious team of designers, including Architects Gardiner Daily, Bernard Maybeck, and William Gladstone Merchant, to develop improvements to accommodate the inaugural performances. The improvements were modest in deference to the already existing natural theater. They included earth terraces for seating along the northern slope, temporary seating on the meadows and a wooden stage with a temporary cloth canopy set against the southern slope. Granite retaining walls planned for the northern theater slope and locations throughout the park were built later by WPA crews.

As an advocate of democratic culture, Stern directed that the site be preserved in perpetuity as a public park where everyone could enjoy admission free music, dance and theater. To realize this vision, Stern formed the non-profit Stern Grove Festival Association that produces annual free concerts series every summer to this day. Stern chaired the Festival Association until her death in 1956. Stern's family has remained committed to sustaining her vision for 90 years. Today, the Festival Association is led by her great-great grandson, Mathew Goldman. The San Francisco Symphony played the first formal concert in the theater in June of 1932. Today, the Stern Grove Festival hosts ten performances and over a hundred thousand visitors a year. From its inception, the program has reflected Stern's sense of cultural inclusion. The 1938 festival included the "Colored Chorus" long before the idea of multicultural programming had been born. The 2019 Festival artists ranged from The Toots & The Maytals to San Francisco Symphony to Digable Planets. During the first year of the COVID-19 pandemic, the Festival went online with a "greatest hits" series of past concerts, including everyone from Sharon Jones & the Dap Kings from 2011 to Thao & the Get Down Stay Down from 2018.[81]

By 2000, Goldman family members and the SF Recreation and Parks staff recognized that the theater was being "loved to death." The tens of thousands of annual concert visitors left the slopes worn, bare and susceptible to erosion. Each year fewer natural seating areas remained as trees perished and log seats rotted away. One unseasonal rain could make a summer concert reminiscent of Woodstock in muddy ways no one was seeking. As experienced supporters of the public realm in San Francisco, the Goldman's engaged a range of leaders and designers in contemplating the future of the theater. They selected Lawrence Halprin to design the renovation because he immediately understood what had struck their great-great grandmother—a meadow 100' below, but only a block away from the City streets, embraced by groves of trees that sheltered visitors from the wind and City and kept the beautiful music inside "nature's music box."[82]

In 2005 the renovated theater was re-christened the Rhoda Goldman Concert Meadow. It opened with 12,000 visitors[83] enjoying free performances by Lucinda William and John Doe while being embraced by the trees and amazed that the City was just hundreds of feet away—just as Rosalie M. Stern would have wanted it.

Figure 101 *For its first concert in 1932, the theater presented the San Francisco Symphony under a cloth canopy to a crowd of 4,000 on folding chairs. June 19, 1932.*

Figure 102 *Rosalie Meyer Stern (fourth from the left) attends the first performance. June 19, 1932.*

Figure 103 *From the perspective of the performers, the original theater felt like an opening in the forest naturally accommodating a mass audience. 1948.*

Figure 104 *The audience had the same experience of the theater as an opening in the forest filled with people and music. July 1939.*

TIMELINE: SIGNIFICANT HISTORICAL EVENTS AND RENOVATIONS

1890	Local entrepreneur, Alvin Green, transforms the treeless landscape into a “resort,” planting hundreds of eucalyptus along a ravine in a sand dune and marsh landscape.
1931	SF Recreation and Parks Director, John McLaren, shares an extraordinary site with Rosalie M. Stern, a civic leader and philanthropist. Together they recognize its potential as a natural theater. Stern purchases the site and gifts it to the City to be public space for free concerts and performances.
1931	Architects Gardiner Daily, Bernard Maybeck, and William Gladstone Merchant design intentionally modest improvements to accommodate the inaugural performances.
1932	First summer of concerts in the Stern Grove Amphitheater.
1938	The Stern Grove Festival Association (SGFA) forms to organize the annual summer performance series and keep it “distinctly a forward mark in newness.”
1950s	City Recreation and Parks Department maintains and stabilizes the steep southern slope used for seating and adds a modest backstage area.
1956	Rosalie Meyer Stern passes away. Her daughter, Elise Stern Haas, becomes festival chair, establishing a pattern of family leadership that continues to this day.
1963	The 25th Anniversary Season opens with a performance by the San Francisco Symphony. Ansel Adams, in the audience that day, takes a series of photographs of the Grove.
1967	First jazz concert in the Grove, with Turk Murphy, John Handy, Rudy Salvini, and Vince Guaraldi. The performance is taped and televised nationally on the Bell Telephone Hour in 1967.
1970-1990s	Stern events include Pete Seeger, Frankie Laine, Ballet Folklorico Mexicano, Diamano Coura West African Dance Company, Divas of the Golden West, Preservation Hall Jazz Band, and the Kronos Quartet
2000	Lawrence Halprin attends concert with Richard and Doug Goldman. Halprin creates first sketch of renovation plan.
2001	SGFA retains Halprin to develop Landscape Improvement Plan for 31-acre Stern Grove and 33-acre Pine Lake Park.
2004	Halprin’s firm and City staff team begin designing the amphitheater renovation using expedited design/build process.
2005	Festival kicks off 68th season in newly renovated theater, only 9 months after construction began. The opening concert features Lucinda Williams and John Doe.

LANDSCAPE EXPERIENCE OF ORIGINAL THEATER

The vision for creating the Stern Grove Amphitheater was birthed by Rosalie M. Stern’s memorable experience of descending into a ravine to find a meadow embraced by trees and seemingly miles, not a few hundred feet, from the bustle of the City. The millions of visitors have shared that same experience because Stern’s designers and their successors kept the improvements to a minimum, understanding that the “theater” and the defining experience already existed. The stage was a free-standing wooden structure with a retractable cloth cover. A single retaining wall expanded the meadow and held the facing slope as an informal seating area. Folding seating and tables were brought to meadow for events. Fallen and placed logs and horizontal branches furnished the hillside. Over 70 years, the experience remained remarkably similar to the very first concert organized on the site.

Over time, the characteristics that created a natural theater, also created a natural escape for city dwellers strolling, walking their dogs and getting their daily exercise down in the ravine. While the theater hosted 10,000 people 10 times a year, most of the people who enjoyed the theater each year were actually these daily visitors. They appreciated how the topography and tree cover removed them from the clang of the city just as much as the classical music connoisseurs did.

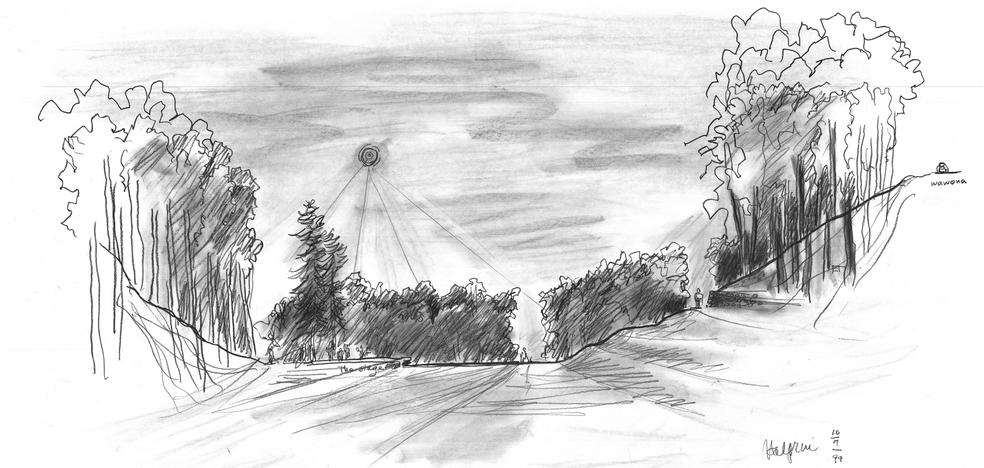

Figure 105 *The lead renovation designer, Lawrence Halprin, recognized the defining characteristics of the theater from his early visits, illustrated by this drawing from his 1999 sketchbook. 1999.*

LANDSCAPE EXPERIENCE AFTER RENOVATIONS

The renovation preserved the original landscape experience by consciously deferring to it when designing the entry, seating, stage, structures and accessibility measures. Just as Rosalie M. Stern did in 1931, visitors today descend 100' below the street on natural material paths through a eucalyptus and conifer grove. Just as Stern, they find themselves in a linear meadow bounded by facing slopes of the ravine and embraced by the towering trees—their presence amplified by their rising elevation. And just as it did when Stern attended the first concert in 1931, the linear form on the theater defers to the ravine—it is not circular or oval or turning toward the stage in any way. These preserved elements sustain the experience of a concert dropped into a forested ravine meadow—just the experience of the very first concert by the SF Symphony 90 years ago. The most visibly significant change—the construction of the stone rows—supports this memorable experience because the seating follows the landscape, rather than reforming it, and because the roughhewed massive granite resonates with visitors' expectation of a natural theater. The stone is not native to the site or typical of the original theater, but it fits visitors' vision of a historic natural theater in a way that could not be achieved with another material.[84]

The renovation also consciously sought to preserve, and even enhance, visits to the theater on the 355 non-performance days each year. The team rejected rotating the theater 90 degrees to form a horseshoe across the ravine because this change would block daily flow of views, water and people down the ravine and through the theater. The theater had always deferred to this flow and that was what allowed it to be an integral part of the park year-round, rather than just an event space. After the renovation not only have the dog walkers and jogger returned, but now families and construction workers eat lunches on the sunny stone seats, children climb the ziggurats, and lovers snuggle between boulders.

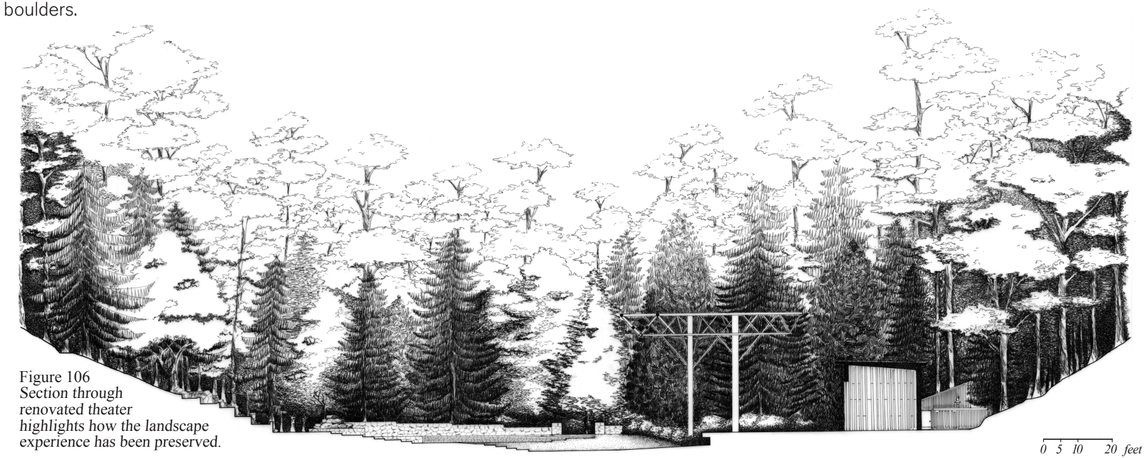

Figure 106
Section through renovated theater highlights how the landscape experience has been preserved.

SEATING

By respecting the original form and experience of the theater—really the ravine—Halprin afforded himself the latitude to introduce more intentional seating and new seating materials without diminishing the landscape experience. Even with this latitude, his choice of material—rough hewn and organically patternless granite in the earthen tones of the landscape—was important to continuing a sense of the "natural" in the ravine.

The original theater seating deferred completely to the site. Logs laid and fallen on the northern slope were the only "seating" present year-round. During performances temporary seats and tables where arranged on the meadow and visitors sat directly on both the meadow and the northern slope. Some audience members occupied the trees, nature's box seats.

To preserve this deference to the landscape and the experience of a year-round open meadow, Halprin confined new seating to the north slope. This move also kept handrails and other code requirements from blocking the flow of the view and people across the meadow and down the ravine. Early in the process, Halprin and the client considered rotating the theater 90 degrees to create a more traditional horseshoe of seating looking down the ravine. In the critical turning point of the project, they rejected this change to preserve San Francisco's last intact coastal ravine.[85]

With this decision made, the form of the final project flows from the landscape: the granite seat rows and seating terraces stretch linearly along the hillside like paths walked by cattle. What at first may seem like an extraordinary design for a "natural" theater is actually the essence of

Figure 107 From the first performances, folding chairs were placed on the slopes (and in 1939 hats were only proper.) July 1939.

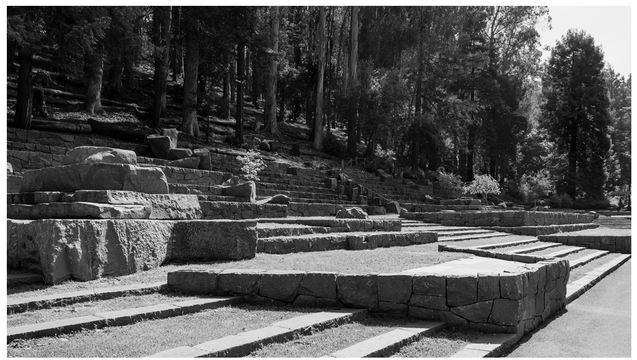

Figure 108 The renovation replaced these folding chairs with permanent stone seats, further integrating the theater and audience into the landscape. 2021.

this archetype—seating formed to the land, rather than the land formed to accommodate seating.

The form of the seating—backless walls or steps—and the material—roughhewn granite—succeed in preserving visitors' experience not because they match the original theater (they don't), but because they match the visitors' expectations of a historical natural amphitheater. Google "historic nature amphitheater" and our collective conception of stone rows and terraces is on display. This resonance with their expectations also allows visitors to experience the theater as part of the park year-round, rather than seeing it as an empty, possibly uninviting, performance space. Halprin reinforced this integration by designing the east/west paths through the park and the theater—most of the year the "theater" is stone seating placed around the paths thousands use to jog and walk their dogs.

Figure 109 *By integrating the seating and the paths into the broader park landscape, Halprin made the 10,000 seat theater a comfortable place for a family picnic. 2021.*

STAGE STRUCTURES, LIGHTING AND SOUND

As with the seating, the renovation of the stage and technology succeed by honoring the original designers' deference to the landscape. The new stage remains in the original location, built into the southern slope to disturb the natural landform and flow as little as possible. The design of the new stage references the temporary nature of the original Maybeck scheme including its removable fabric roof and wood construction. As with Maybeck's design, the overhead structure is intentionally minimal and site specific. In deference to the natural proscenium created by the groves, Halprin designed the stage structure columns in the form of branching trees. The trusses were designed as simple and transparent as possible and painted a dark green that recedes into the grove background.

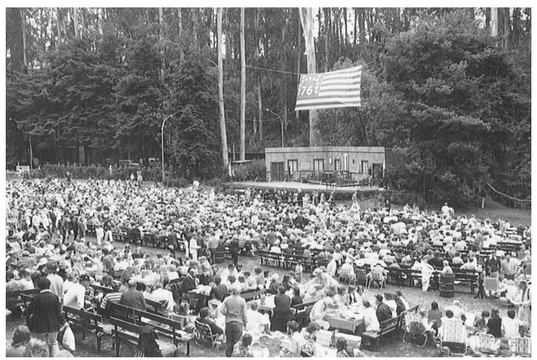

Figure 110 *The original stage structure provide a small one story "back of the house" often obscured by the set or decorations for an event. 1976.*

Figure 111 *The renovated stage retained the form and material of the original, with the addition of an intentionally transparent proscenium. 2021.*

RESTROOMS, CONCESSIONS & AUXILIARY STRUCTURES

Entering the original theater was noticeably defined by a lack of structure—no gate, no ticket booth, no perimeter walls or fences. Temporary tables were erected near the entrance to offer information and concert souvenirs. From the meadow and hillside, no structures were visible other than the stage, which concealed dressing rooms and storage below and behind.

The project team sought to preserve these experiences while adding restrooms and additional service spaces. They achieved this by staying true to the original style of simple structures sheathed with vertically oriented wood siding, minimizing the size and height of the structures. The structure were then screened with the stage and mature vegetation. Support services—information, first aid, bike valet etc.—are hosted on the nearby Esplanade, out of sight of everyone except those needing assistance. Similarly, porta potties for the 10,000 strong concert crowd are place close by, but out of view of the seating.

Figure 112 *The original restrooms were just to the west of the stage, but completely screened by vegetation. 1948.*

Figure 113 *The renovated restrooms remain hidden behind vegetation and retain the form and material of the original structures. 2021.*

CONTEMPORARY BUILDING & ACCESSIBILITY CODES

By respecting the existing topography and confining designed seating to the northern hillside, the design team was able to create a fully accessible theater without ramps or handrails becoming noticeable distractions. If the site had been re-graded to create a traditional slope from backrow down to the stage, then attendant handrails and ramps would have followed. Instead, the team preserved the comparatively flat meadow and created subtle accessible paths of travel to each area of the temporary seating set up for performances. Then they built the terraced granite seating into the existing hillside, integrating accessible paths of travel to each section and experience. The linear design of the rows running east to west along the topography allowed accessible paths of travel to be subtly placed between rows, avoiding the appearance of freestanding “ramps.” For all this thoughtfully integrated accessibility, some details forced makeshift solutions. For example, inlaid brass contrast strips on the granite stairs were rejected as insufficiently visible and so the stone, imported from across the world and so lovingly selected and set, was painted white along the front edge of each step. Happily, this necessary striping has patinaed with time and is likely only a distraction to outdoor theater aficionados.

Figure 114 *To the right, the universal park path flows through the theater’s front rows. To the left, screened ramps provide an accessible route to the upper rows. 2021.*

Figure 115 *Collaboration with local ADA officials led to visibilty strips that fulfill their purpose without being distracting. 2021.*

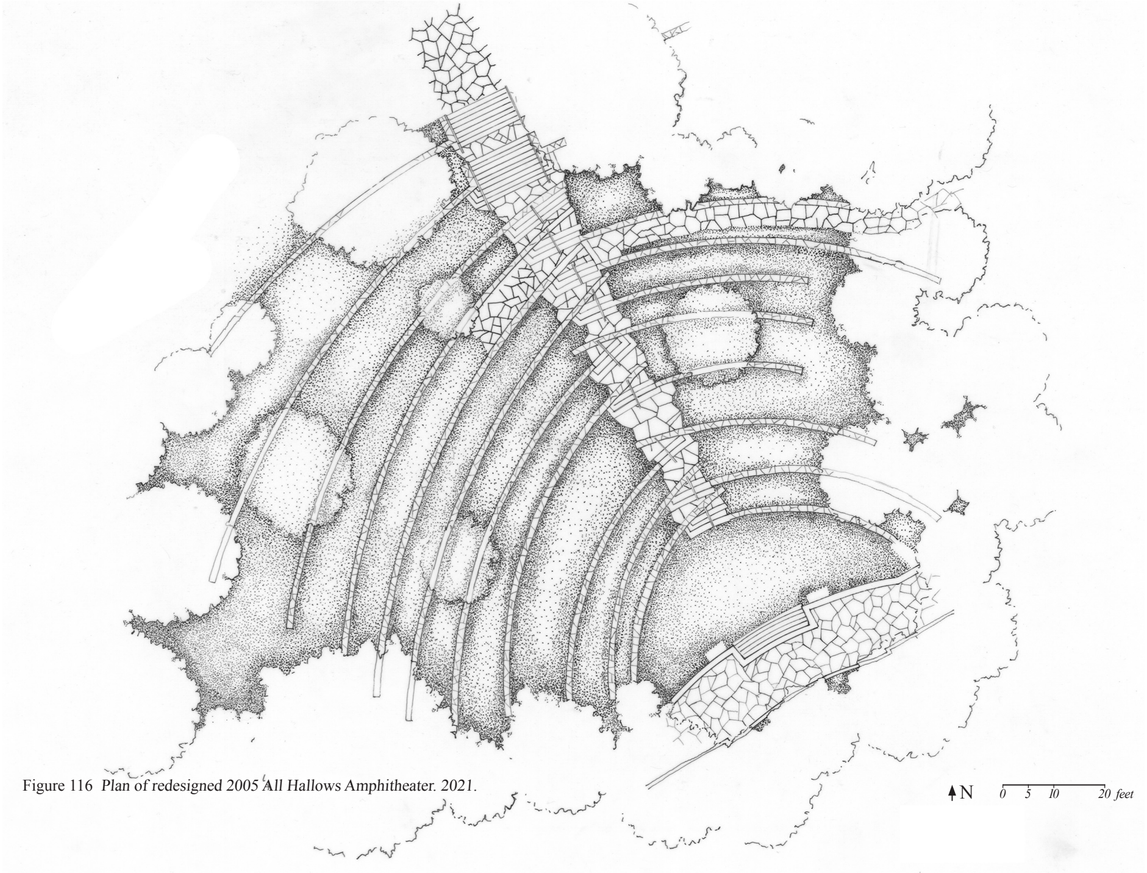

Figure 116 *Plan of redesigned 2005 All Hallows Amphitheater. 2021.*

Figure 117 *Redesigned All Hallows Amphitheater with Olmsted Woodland and National Cathedral beyond.* *Grassl, 2021.*

ALL HALLOWS AMPHITHEATER

WASHINGTON D.C.

Capacity: 30,000+ with standing and overflow (original); approx. 1200 wall seats (renovation)

Construction: 1901-1949 (incrementally), 1941, 2005-2007

Primary Uses: Church Services, National Worship Services, Graduation Ceremonies

The National Cathedral's outdoor theater was used for a hundred years before being fully realized as the All Hallows Amphitheater in 2007. The site of the future theater began hosting church services in 1901 and Frederick Law Olmsted Jr. located an amphitheater in this same location in his 1910 and 1924 Master Plans. Church leaders then evaluated various theater designs for decades while the staff installed makeshift wood benches around the outdoor pulpit. But the wood benches, left outside year-round, required frequent replacement and were removed in 1949, forcing audiences to sit on the steep lawn or in awkwardly placed chairs. Debate on the design continued, but a 1941 stone stage was the only permanent element constructed.

All Hallows Guild (AHG), a volunteer group founded in 1916 "to provide for the care and beautification of the grounds"[86] revived interest in the theater in 2004. AHG's Amphitheater renovation was the final part of their project to restore the site's native woodland and address its dysfunctional storm water system.[87] They held an invited competition of accomplished designers to propose a renovated amphitheater near the restored woods. The selected design by Michael Vergason included curved stone retaining walls and grass terraces that merged with the restored woods and complimented its drainage design. Completed in 2007, All Hallows Amphitheater at long last fulfilled Olmsted's vision of an uninterrupted greensward that also functions as a theater.

HISTORICAL OVERVIEW

In 1898 the Protestant Episcopalian Cathedral Foundation purchased land on one of Washington's highest points to build a National Cathedral for church and public religious services. Before construction of the Cathedral began, outdoor services began in 1901 at a "rustic open-air chancel and pulpit…beneath the trees."[88] Services continued intermittently on the "same spot of ground"[89] during the 83 years of the Cathedral's construction. Frederick Law Olmsted Jr. began consulting on the design of the Cathedral grounds in 1907, producing detailed topographic studies and Master Plans in 1910 and 1924. Olmsted questioned whether a Greek amphitheater was appropriate for Christian religious services,[90] yet both his master plans delineated a classically symmetrical auditorium facing east towards the existing pulpit. Olmsted did not indicate details of how the semi-circular seating would be realized, but instead described "a continuous sweeping grass slope (though not an absolutely uniform one)"[91] for the auditorium space. Rather than seek guidance on the seating design from Olmsted, the Cathedral staff constructed inexpensive wood plank benches in various alignments around the pulpit-stage. Likewise, an ad hoc arrangement of wood platforms was constructed adjacent to the pulpit for choirs, speakers, and dignitaries. The wood benches could seat nearly 13,000 people and were left out year-round with their wood supports driven into the soil. The seats therefore required constant repair and replacement as they deteriorated quickly in Washington's climate. Olmsted expressed his objection to these extensive interventions across the greensward as showing a lack of appreciation "for natural scenery" that he considered "very close to religion itself in its spiritual effect upon the human heart and soul."[92] Yet, some events attracted an estimated 35,000 people who both sat and stood across the Cathedral's landscape, creating a need to quickly construct the simple, inexpensive wood benches.

Figure 118 *Services were first held on the site in 1901 and continued through the construction of the Cathedral. Here, the first service is held "beneath the trees" on Ascension Day. 1901.*

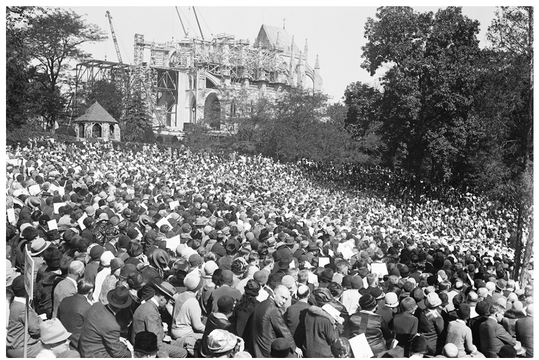

Figure 119 *Crowds up to 12,600 people sat on wood plank benches for open-air services while the Cathedral was being built. As many as 30,000 people sat or stood across the grounds for some special events. 1928.*

The design of the theater's seating generated significant debate within the Cathedral Building Committee and between Olmsted and Mrs. Florence Bratenahl, a member of All Hallows Guild (AHG) and wife of the Dean of the Cathedral. Living close by, Mrs. Bratenahl had first-hand knowledge of amphitheater developments, including some questioned by Olmsted. After a 1929 site visit, Olmsted wrote to her, "The space used for the outdoor services was a very distressing sight. The board seats are "as they have always been, ugly and shiftless looking…"[93] He followed with suggestions for a bench type that might be stored when not in use. However, by 1930 Olmsted was no longer working on the Cathedral grounds and All Hallows Guild published a new plan by Mrs. Bratenahl who was a self-taught garden designer. Her scheme kept the pulpit-stage in the same historic location as the Olmsted schemes. However, she consolidated the seating into a more rectangular form that faced south towards the pulpit. Both Bratenahls resigned their positions in 1936 and progress on the amphitheater stalled. Olmsted did again briefly offer advice on the amphitheater seating in 1939. He suggested benches of various lengths with fixed precast concrete supports and 2"x4" redwood slats that were "readily adjustable in length" and "could be stored when not in use."[94] He emphasized the importance of the woodland and its trees to provide a "sylvan quietude" and contribute a "very great esthetic value in the total impression that generations of people will receive from the Cathedral."[95]

A new amphitheater plan by F. Burrell Hoffman, Architect, was completed in 1941, but only its stone stage was built. In 1947, the landscape architects Clarke, Rapuano and Holleran completed yet another scheme - a fan-shaped layout with 3,600 seats facing the 1941 stage.[96] Yet

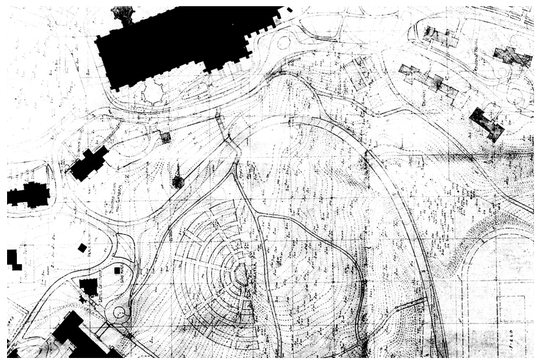

Figure 120 *To take advantage of the natural acoustics, both Olmsted's 1910 and 1924 Master plans for the Cathedral Close indicated a semicircular auditorium facing east towards the existing Chancel. 1924.*

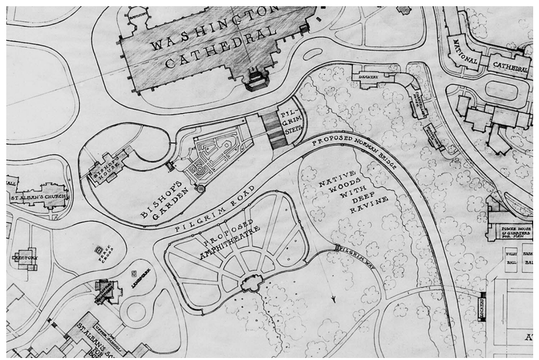

Figure 121 *Florence Bratenahl's 1930 Master Plan shows the Bishops Garden between the Cathedral and Amphitheater. It also kept the Chancel/stage in its historic location, but the seating faces south. 1930.*

again, permanent seats were never built. The deteriorating and unsafe wood benches were completely removed in 1949 although the stone stage remained. Over the next 50 years, there was less interest in holding services on the Cathedral grounds and no progress was made on completing the amphitheater. A few events, such as school plays and graduations for St. Albans School continued to employ the stone stage. Students and visitors sat either directly on the lawn or on movable chairs, but the steep slopes made both options awkward. Periodically, the Cathedral's Building Committee would discuss the possibility of re-constructing amphitheater seating, but there were no obvious donors.

In the mid-1990s, AHG initiated several projects championing the reemergence of the Cathedral's historic landscape with attention to the Olmsted Brothers Master Plans. Due to expanded impervious surfaces on the Cathedral Close, the native oak and beech woodlands and the amphitheater slopes had suffered from increased water runoff and erosion, creating dangerous conditions after heavy rains. Faced with visible deterioration in the woods and amphitheater area, AHG commissioned a study in early 1996 by the restoration consultant Biohabitats who predicted the wood's extinction if action were not taken soon. AHG announced in 1997 that it would undertake the wood's restoration as its 80th anniversary project and name the five-acre woods in honor of Olmsted Jr.[97]

AHG retained Andropogon Associates in 1998 to develop a stabilization and restoration plan for a more ecologically sustainable woodland - the new Olmsted Woods. In 2004 AHG undertook the final phase of the woodland restoration project – the revitalization of the outdoor amphitheater. They held an invited competition of leading landscape architects to propose amphitheater schemes that also addressed the storm water and ecological challenges of its location.[98] A design by Michael Vergason Landscape Architects (MVLA) was selected and MVLA began developing their amphitheater scheme.

Completed in 2007, MVLA's design reflects a response to contemporary ecological challenges as well as insights gleaned from a hundred years of the site's use as an outdoor theater. The design re-imagines a classical amphitheater with an asymmetrical layout that responds to the topography and preserves major trees that provide shade to many seats. Its grass terraces, stone walls, and drainage system complement the stormwater program in Olmsted Woods and alleviate problems from water runoff on the theater's steep slopes.[99] These terraces also fulfill Olmsted's desire for "a sweeping [grass] slope" while the retaining walls created a usable and maintainable design for sitting and gathering. The preservation of the existing outdoor stage incorporated the axial relationships existing among the stage, the Shadow House and the Cathedral's West Façade, enhancing the visual connections across the Close, including the connection between the original "pulpit beneath the trees" and the Cathedral.

TIMELINE: SIGNIFICANT HISTORICAL EVENTS AND RENOVATIONS

1898	The Protestant Episcopalian Cathedral Foundation acquires the site on Mount St. Alban in Northwest D.C.
1901	Outdoor services with a "beneath the trees" are held on site.
1907	Construction begins on the Cathedral. Frederick Law Olmsted Jr. begins studying projects on the Cathedral grounds.
1910	Frederick Law Olmsted Jr. proposes Master Plan with an amphitheater on the site of the early services.
1923	An estimated 35,000 people sit on the plank benches and stand for the September 30 church services open to all.
1924	FLO Jr. completes a new Master Plan with the amphitheater stage again in its historic location.
1930	Florence Bratenahl, wife of Cathedral Dean, Rev. George Bratenahl revises the Master Plan.
1939	FLO Jr. consults briefly and recommends seating with removable wood slats on concrete pedestals.
1941	F. Burrell Hoffman, Architect, designs an amphitheater with stone walls and grass terraces. Only the stone stage is built.
1947	Clarke, Rapuano, and Holleran, propose an unbuilt amphitheater scheme with the existing stone stage and 3,600 seats.
1949	Wood plank seats are removed due to many being in dangerous disrepair.
1950s-90s	Without seats, use of the amphitheater declines.
1998	All Hallows Guild retains Andropogon to assist with the woodlands stabilization and renovation.
2004-07	All Hallows Guild invites noted designers to submit schemes to revitalize the amphitheater area. Michael Vergason Landscape Architects is selected, and their design is constructed.

LANDSCAPE EXPERIENCE OF ORIGINAL THEATER

The design and extent of the seating of the original amphitheater varied between 1901 and 2007, but the connection between the Cathedral and the amphitheater endured. The mature trees and woodland were a key attraction for a walk from the Cathedral to the seats. Cathedral visitors initially saw a woodland of mature trees intruding upon a steeply sloped lawn covered in benches. At the bottom of this slope, deciduous trees provided a backdrop to a wood platform - and eventually the stone stage - for the pulpit and choir. During the winter these same trees offered veiled views of the Potomac River basin below (the Cathedral is on one of the highest points in Washington.)

Until 1949, long plank benches created graphic lines across the bowl-shaped amphitheater. Perpendicular aisles descended through the benches to emphasize the steep (20-30%) slope. Olmsted saw the benches as an uncomfortable intrusion into the lawn although mature trees did intermittently interrupt the lines of benches. Looking down from the Cathedral and Bishop's Garden, the rows of benches continued into the native woodland on the east. Gazing uphill from the stage, church officials, dignitaries and choir members looked back towards the Cathedral through the trees. Views from most seats included both the woodland and glimpses of the Cathedral under construction. Even after the benches were removed and few events were held on the slopes, this relationship between the stage, the Cathedral, the distant views, and the woodland inspired a redesigned amphitheater built upon these historic connections.

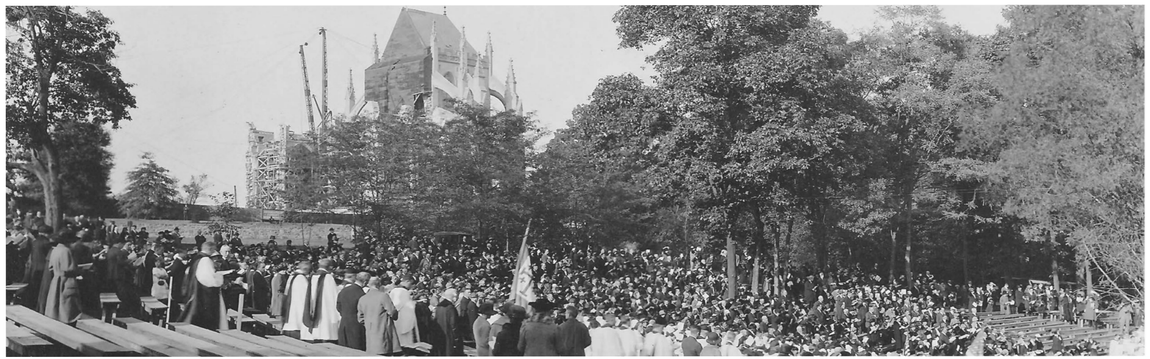

Figure 122 *A wood chancel located in its historic spot with an adjoining platform for choirs and "temporary" plank benches successfully served thousands for church services while the Cathedral was under construction. 1924.*

LANDSCAPE EXPERIENCE AFTER RENOVATIONS

The 2007 renovation of the Amphitheater was informed by the same site conditions that guided the realized and unrealized proposals by Olmsted, Bratenahl and others. For example, the newly restored "Olmsted Woods" still offers an important view towards the amphitheater and trees still mingle with the seats on the theater's eastern edge. Deciduous trees provide a backdrop to the stage during the summer and, during the winter offer glimpses of the buildings below. New tree plantings wander into the seating, providing shade for many seats and establishing a pastoral setting characteristic of the Olmsted firm. The center aisle, like the original bench aisles, is perpendicular to the slope, thereby emphasizing the steep topography of the bowl-shaped amphitheater.

Vergason's asymmetrical design reconfigures the symmetrical plan of a Greco-Roman amphitheater, preserving the Olmsted Woods and large trees on the eastern edge of the theater. Likewise, the layout refocuses attention on the woodland, encouraging walks through it when visitors move to and from the Cathedral. The renovation advances Olmsted's unfulfilled intention to create a "continuous grass slope" by creating terraced lawns behind a series of stone retaining walls.[100] This strategy addresses Olmsted's objection to the dominance of the benches when looking down on the theater from the Cathedral and Bishop's Garden. Today, when looking down or across the theater, grass and trees dominate the view. Gazing up from the stage, church officials, dignitaries and choir members look back towards the Cathedral through the trees to remind them of the connection between the Cathedral and its first services "beneath the trees." Yet, the stone walls do not overshadow the "green" experience of the amphitheater. Today, lawn, scattered trees and the Olmsted Woods dominate the All Hallows Amphitheater to create the uninterrupted greensward prescribed by Olmsted.

Figure 123 *The 2007 Amphitheater was built as a part of the restoration of the Olmsted Woods with its eastern edge merging with the Woods. Scattered trees meander through its grass terraces that fade into the lawn of the Close. When looking downhill the theater becomes a part of the Close's greensward. When looking uphill the theater's stone walls make it an extension of the Cathedral. 2021.*

SEATING

The nature of the seating was debated throughout the amphitheater's development. Frederick Law Olmsted Jr.'s early schemes indicated semicircular rows of seating around the pulpit, but he did not detail the seats. His intent to have "a continuous grass slope (though not an absolutely uniform one) from the crest of the hill down to the stage" was never fully realized. Rather than consult Olmsted on the seats, the Cathedral staff constructed plank benches on wooden stakes driven directly into the ground. They left these benches out year-round for multiple years, exposing them to wet soil and weather. The benches quickly deteriorated and needed constant repair and replacement.

H.J. Koehler from Olmsted's office first wrote Dean B. Bratenahl of Olmsted's concern that the benches below Bishop's Garden compromised the view of natural scenery. Then Olmsted's 1929 letter to Mrs. Bratenahl referred to the amphitheater as "distressing" and the board seats as "ugly and shift-less looking," but the rough wood benches remained. In 1939, Cathedral leaders considered installing precast concrete seats and consulted Olmsted on their choice. However, Olmsted judged their design as inappropriate. Instead, he recommended temporary benches composed of concrete pedestals with removable wood slats that could be stored inside when not in use. He saw them as "substantial without being out of keeping with informal sylvan surroundings."[101] As the bench debate continued, Architect F. Burrell Hoffman, retained in 1941, proposed an amphitheater with grass terraces supported by retaining walls for seats, but only the stage was built.[102] In 2007, Vergason's similar approach of stone walls and grass terraces realized Olmsted's vision of a greensward with trees while also creating a durable facility that could sustain consistent use. Comparing images of the theater with bench seats and today presents a strong case for assuring a venue's seating supports, rather than undermines, its landscape experience.

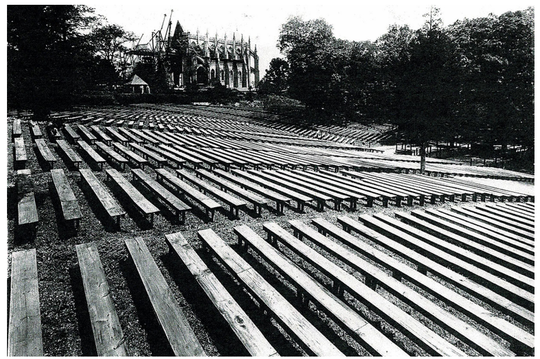

Figure 124 *Olmsted referred to the temporary benches as "ugly and shiftless." Flimsy boards, supported on wood stakes driven into the ground, deteriorated quickly in Washington's climate. Yet, they remained year-round for much of the time from 1924 until their permanent removal in 1949. c.1930.*

Figure 125 *The stone retaining wall seats of the 2007 amphitheater have successfully fulfilled Olmsted's vision of an amphitheater that appears as a continuous grass slope with scattered trees. 2021.*

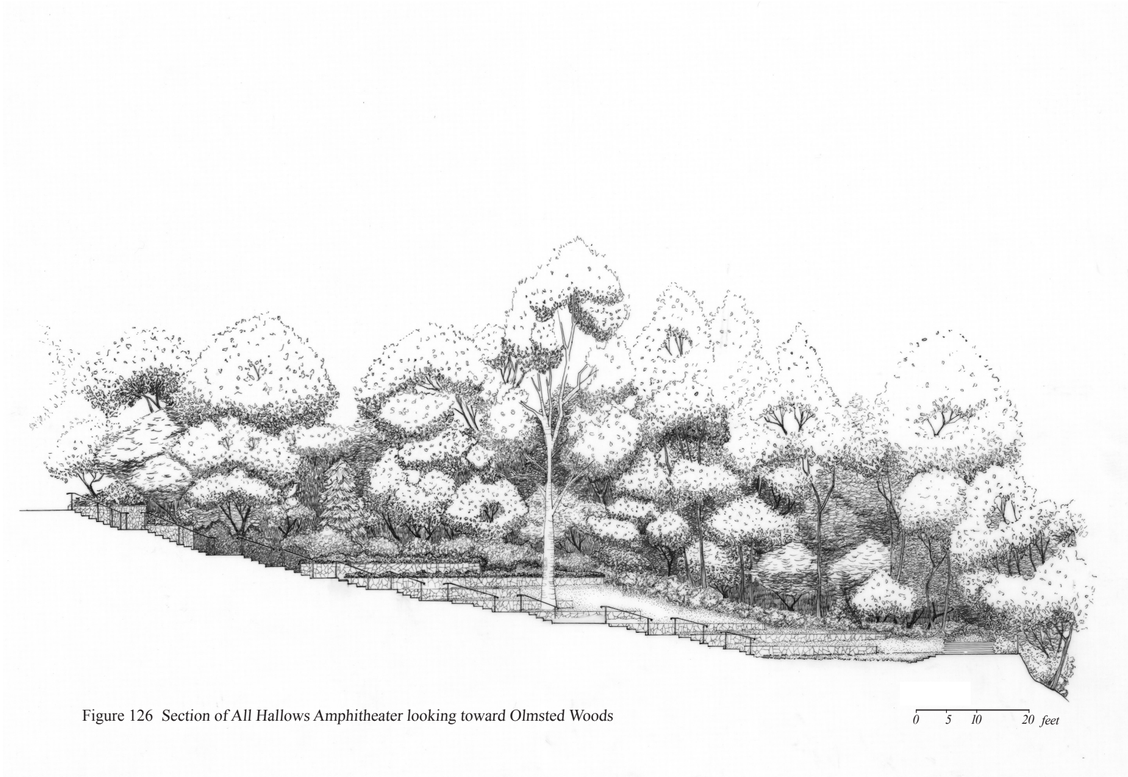

Figure 126 *Section of All Hallows Amphitheater looking toward Olmsted Woods*

RESTROOMS, CONCESSIONS & AUXILIARY STRUCTURES

There are no permanent structures for restrooms, concessions, or food immediately adjacent to the amphitheater, but they are nearby. There are restrooms and a gift shop in the Cathedral that can be reached by several routes from the Amphitheater, including an ADA compliant path through Olmsted Woods. There is also a café at the edge of the Bishop's Garden.[103] Portable structures and sales carts are temporarily installed throughout the Cathedral Close for the annual spring Flower Mart.

STAGE STRUCTURES, LIGHTING AND SOUND

The 2007 renovation preserved the 1941 stone stage and its nearly twelve-foot-high retaining wall that was built across the existing drainageway. Portable audio equipment was used as early as 1928 for special events.[104] An electrical box was recently added near the stage. Screened by vegetation, it facilitates the use of portable sound and lighting equipment during events in the amphitheater.[105] The stage remains uncovered, preserving the distant views of the Potomac River Basin below.

Figure 127 *The 1941 symmetrical stage was repaired in 2007 and became the starting point for an axis to a Cathedral tower in the redesign. The surrounding topographic bowl has been continuously praised for its natural acoustics. 2017.*

Figure 128 *There are no permanent concession stands, stage structures, or electronic equipment for the amphitheater. However, temporary structures are set up for special events such as the annual Flower Mart. 1948.*

CONTEMPORARY BUILDING & ACCESSIBILITY CODES

The renovation of the amphitheater created a new barrier-free path from reserved ADA parking and the Cathedral to a wide aisle at the top of the theater. Here, there is room for wheelchairs to stop, park and view events on the stage or simply enjoy the woodland trees and the view.[106] The central stairway serving the seat rows has unobtrusive dark bronze handrails that were ADA compliant when the amphitheater was constructed.

Figure 129 *An ADA accessible pathway passes through the Olmsted Woods to connect an ADA parking lot and the Cathedral to the upper promenade to provide wheelchair accessible seating near the top of the theater. Handrails (ADA compliant in 2007) provide safety for traversing the central stair. 2021.*

ELEMENTS

BEST PRACTICES FOR RENOVATING THE CRITICAL COMPONENTS OF HISTORIC THEATERS

SEATING

STAGE STRUCTURES, LIGHTING AND SOUND

TICKETING, COMFORT STATIONS & CONCESSIONS

CONTEMPORARY BUILDING & ACCESSIBILITY CODES

SEATING

Like all alterations, renovating seating poses the challenge of meeting contemporary expectations and codes without detracting from the landscape experience of a theater. Renovating seating also presents a different challenge than adding accessibility, technology, or support structures because the original seating design has often played an active role in how visitors experience the landscape. For example, the patterns of seating at the Quarry Theater and Red Rocks highlight and accentuate distinctive features of the landscape, making them more remarkable than they would be without the seats (Figures 50, 84). In different ways, the seating at both these theaters also enables diverse everyday use and appreciation of the landscape that would be lost if rows of typical backed seats were installed. The importance of seating renovations is heightened by the simple fact that seating occupies such a large portion of a theater structure and, by its nature, cannot be screened or placed out of view. At the same time, visitor demand for comfort when sitting through a two-hour show is ignored at a theater's peril.

Taken together, the profiled theater renovations and many other projects this study team has reviewed, suggest a two-pronged approach to planning seating renovation: first, understand what role the seating plays in the visitors' experience of the landscape and then pursue all the creative alternatives for comfort that do not undermine that experience.

Figure 130 *Yoga practitioners demonstrate the every day use potential of Red Rocks--made possible by the backless benches. 2019.*

Figure 131 *San Francisco residents enjoying the Rhoda Goldman Concert meadow to the fullest on one of 355 non-performance days each year. 2020.*

1. **Assessing Seating's Role:** The first step in planning seat renovations should be assessing what role the seating plays in the landscape experience—does it serve as a contrast that highlights a landscape feature, acts as a director of views, or a creator of social space? Or is it simply a place to sit? As the profiles illustrate, seating's role in the visitors' experience varies widely. At the Quarry Theater, the askance benches and stairs orchestrated a sequence of views, while at the John Anson Ford Theater the classic arced rows were simply a place to sit while viewing the landscape backdrop (Figures 92, 35, 36). As a project goes through this step, it is important to consider how seating's role and its visual impact on the visitors' experience may be quite different depending on where a visitor enters the theater.

2. **Understanding Seating's Modus Operandi:** It is then important to be clear on how the seating color, form, material, placement, simplicity or complexity impact the landscape experience. Understanding the modus operandi of the seating in the landscape experience begins to clarify what can and cannot be altered without undermining its role. At the Quarry Theater, for example the layout of the benches was recognized as the driver of the interplay of the theater and the landscape, so the original plan was exactly surveyed and replicated, even while the materials and detailing were modified. In contrast, at the Timberline Amphitheater, the materiality and detailing of the seating was fundamental to the landscape experience, so the renovation team carefully replicated these characteristics, even as they chose to only install 8 of the original 14 rows (Figures 76, 67).

3. **Designing to Preserve Seating's Role:** Understanding how the seating fulfills its role, the design team then knows its parameters as it seeks to meet contemporary expectations. At the John Anson Ford Theater, the original seats were part of an auditorium inserted into a canyon as an architectural contrast to the surrounding wild native vegetation. Consequently, the renovation design team had significant freedom to select comfortable, durable seats as long as their color, form and material didn't diminish this contrast or distract visitors from focusing on the landscape. The team left the seating layout unchanged and replaced the previous generation of backed seats with ergonomic warm grey seats that meld with the concrete structure. The new seats defer to the landscape more than the original seats, whose material and color matched traditional Christian pews (Figures 31, 32, 35, 36). In comparison, at Red Rocks, successive design teams have worked hard to minimize any change in seating recognizing that the auditorium's simple repetitive arcs of uninterrupted backless benches play a critical role in directing the eye to the complex patterns of the surrounding rock formations.

4. **Expanding Seating's Role in the Landscape Experience:** Some theater renovations create opportunities to expand or accentuate seating's role in the visitors' experience. At the original Stern Grove, the defining experience was to escape the city by dropping down into a wooded ravine to find a pristine meadow seemingly preserved from a time long ago. In this context, Halprin's massive granite seat rows and ziggurats feel like something uncovered from the past. While they are a significant change from an original plan that had no permanent seating, they actually accentuate the original experience while providing greater preservation of the remaining vegetation on the slope. Change the material, the rough hew of the stone, or the pre-Columbian scaling and the change might feel like a corporate plaza dropped into a beloved park. But when designed in fine tuned harmony with the original experience, the new seating feels like it has always been there (Figure 100).

5. **Avoiding Creating Unintentional Distractions:** Even after following the steps above, it is critical to remain conscious of avoiding unintentional distractions from the landscape experience in the detailing of seat renovations. For example, at the Carter Barron Amphitheater, the replacement seats disrupted the clean horizontal lines of the mid-century modern design by adding a traditional curved top rail to each seat.

Figure 132 *The Carter Barron's original seat backs create sharp horizontal lines complementing the Modern design of the stage structures. 1952.*

Figure 133 *The replacement seats' curved backs create a competing pattern and are recognizably from a different time. 2016.*

Creatively Improving Comfort and Access Without Diminishing Visitors' Experience As mentioned above, renovating seating is particularly challenging because seating design often plays an essential role in defining the visitors' experience of the landscape and changes to seating cannot be screened. Importantly, these limitations diminish when the seats are occupied. For example, when Red Rocks hosts an event, the repeating perfect arcs that highlight the dramatic red rock walls on either flank are hidden and replaced by a sea of people. This temporary change creates an opportunity to add comfort without diminishing the landscape experience. Offering patrons seat cushions or clip-on seat backs can dramatically improve comfort without any perceivable impact because these temporary additions are only in place while in use and screened by the occupant and the crowd. Similarly, in many cases, placing temporary chairs at the front, back or sides of the auditorium can expand comfort and accessibility options without impacting the experience during or between events.

There are also permanent comfort improvements that don't diminish visitors' experience of the landscape. The perceived and real comfort of bench seating can be improved by expanding the space allocated to each patron. At Red Rocks, each patron is allocated 18" on the bench seats—at the Hollywood Bowl you only get 17". These dimensions make for a very intimate experience when the theater is full. For comparison, the width of a coach seat on a typical American airline is 17-18".[107] Just like on a plane, these dimensions also restrict patrons from shifting their position after sitting for an extended time. A recent renovation of the Hearst Greek expanded the per patron allocation by 33% from 18" to 24"—upgrading everyone to first class and making the theater significantly more comfortable without any impact on the experience. Clearly, expanding the space allocated to each patron reduces capacity, so this factor needs to be balanced against improving comfort, preserving the experience and saving capital on physical seat renovations.

STAGE STRUCTURES, LIGHTING AND SOUND

Most contemporary performers, producers and audiences expect a level of production and predictability that historic outdoor theaters were not designed to deliver. It is equally true that contemporary stage covers and lighting and sound structures often diminish the connection to the landscape that defines outdoor theaters and attracts their patrons.

This dilemma can best be resolved when both concerns have advocates in the client group and in the design team. Theater directors, managers and consultants organically provide the voice for production upgrades. However, intentional action is often needed to assure the client group includes a voice for the landscape experience and selects a design team with a track record of balancing functional improvements with sustaining visitors' connection to the landscape. When each key element of the theater has a voice in the process, the client and design team can effectively assess what needed structure and equipment can be added without diminishing the landscape experience and what improvements pose potential conflicts. Resolving these conflicts often involves looking beyond typical solutions to find creative and flexible ways to deliver both the desired production improvements and the desired visitor experience.

Most pre-World War II theaters offered free or low-cost daytime performances that made the most of the surrounding landscape. Usually open and accessible for daily use, they regularly welcomed impromptu gatherings, picnicking, reading or simply resting while enjoying the landscape. If there were night performances, managers used rather simple and often temporary lighting. They placed vertical poles along the sides and rear of the stage and within the auditorium to support these often-temporary fixtures. A few theaters also had up-lights along the front of the stage floor. Today, evening performances of both music and drama have increased reliance on electronic lighting and the demand for special effects has amplified the number of lighting and sound fixtures utilized in both dramatic and musical performances. When historic theaters are renovated, the production staff and technical consultants understandably desire the most up-to-date equipment used in interior performances, but often do not consider the impact of the supporting structures on the landscape experience. Likewise, the reliance on ticket sales has intensified the desire of owners and managers to avoid cancellations by installing covers over stages to protect musicians, their instruments and electronic equipment. Some requests such as these may be essential to support a theater's programs while many are merely desirable from the prospective of production managers and performers.

Studying the design processes of the profiled theater renovations and many other similar projects reveals how an inclusive client group and design team can balance all these concerns and maximize the improvement of production values without diminishing the visitors' experience of the landscape:

- An effective place to begin this process is for the project team to collectively recognize what creates the historic theater's relationship to the landscape. Is the landscape part of the stage and set? Or does the landscape immediately behind the set provide the connection to the environment? Or is the landscape experience more the longer views out to the surroundings or the very immediate touch of grass and stone for seats?

- The project team can then conduct a field survey to determine what views and other sensory experiences need to be protected to sustain the landscape experience. Nothing replaces getting everyone out on site together to walk and experience the site through the eyes of a visitor and consider what is essential to the experience. To maintain awareness of the impact of changes as the design process progresses, it is very helpful to map visitors' views to the stage and landscape from the full range of seats and each key moment in the progression to and through the auditorium. In some instances, it will be important to map the height, as well as the width, of these critical viewsheds.

- With this survey integrated into the base model, the design team can work to keep as many of improvements as possible out of visitors' views to the stage and landscape.

- When constraints or technical requirements appear to make it impossible to keep improvements out of visitors' views, the best hope for resolution is close collaboration between the design team and the production team.

- Vertical equipment towers often hold the most potential to deliver production values while minimizing impact on the landscape experience.

- Horizontal over-stage structures—lighting trusses and stage covers—require the greatest creativity and flexibility to avoid diminishing one aspect of the theater experience to enhance another.

Towers for Lighting and Sound Equipment When lighting and sound equipment cannot be positioned outside visitors' critical views, vertical equipment towers are often the least intrusive option. Two distinct approaches to vertical equipment towers have repeatedly delivered production values without diminishing visitors' experience of the landscape: 1) contextually designed towers matching the original structure and landscape in form and color and 2) simple, minimal width towers, without horizontal elements, painted to merge with the structure and landscape.

Earlier renovations of historic theaters in the 1940s and 1950s, exemplified the contextual approach. For example, at the John Anson Ford Theater, the stone towers bracketing the stage were added in the 1940s to accommodate lighting and sound equipment and provide a hidden off-stage area to accommodate exits and entrances of performers. As shown in Figure 27, the view of the landscape between these towers has become the iconic expression of the unique experience of this theater—a neo-Judaic amphitheater built into the Hollywood Hills. In many ways, the towers serve to integrate the auditorium (and the audience) into the landscape by making the theater part of the landscape, rather than a structure sitting apart. At Red Rocks, the towers and walls added to either side of the stage in 1959 go largely unnoticed by contemporary visitors (Figures 58, 52). Most who take a closer look take them to be original design because of their consistency with the style of the theater and colors of the landscape. Clearly part of what makes both of these renovations successful is how respectful they are of the original structure and landscape in terms of style, material and color. But, their success in adding technical improvements without compromising the landscape experience also springs from their vertical form. Imagine the impact of adding a horizontal member—in the same style, material and color-- between either set of towers. Project teams considering this contextual approach should start by consulting with the preservation officers who have jurisdiction because some regulations prohibit improvements that can be mistaken as original.

Many contemporary renovations successfully add needed equipment within visitors' critical views without diminishing the landscape experience by distributing it on multiple simple towers painted to merge with the structure and landscape or fade into the background. The ubiquitous presence of functional vertical elements--telephone poles, streetlights, street signs—prepare contemporary audience members to filter out such towers. Modern technology also makes it possible to minimize the horizontal profile and complexity of lights and speakers, resulting in towers that appear more like candles than stadium lighting stanchions. At the John Anson Ford Theater, the new equipment towers on either side of the seating often go unnoticed until a visitor turns to walk back up through the auditorium after the performance. This design team chose a matte black finish to help the towers fade into the background and disappear in the night sky, which is the context for most events at the venue.

Overhead Horizontal Structures–Lighting Trusses and Stage Covers In contrast to vertical towers, overhead horizontal structures are often the most intrusive element of a renovation project. If the landscape is part of the stage and set or provides the immediate backdrop for performances, it is critical to make all efforts to either avoid or minimize the visual impact of a horizontal structure. If the defining landscape is a longer, broader view, then there is an opening to include a more substantial horizontal structure as long as it is designed to complement the scene. In both cases, the potential negative impact of horizontal structures is amplified if a theater also serves as a daytime location for casual use, gatherings and recreation.

Lighting requirements are most often the driver for adding overhead horizontal bars. Front lighting of the performers for visibility is key to any successful performance, particularly for drama. Front lighting requires a light source from the direction of the audience to insure visibility of the performers and stage sets. The intent is to light the performers and/or the set without casting shadows on the face or other key surfaces that compromises readability from the audience. A common rule of thumb is that front lighting should hit the intended subject at a 45-degree angle both vertically and horizontally.[108] The goal is usually to provide front light for as much of the stage as possible - a challenge that is too often quickly solved with horizontal bars that disrupt key views of the landscape.

Covering the stage has two purposes: 1) to protect musician's instruments and electronic equipment and 2) to predictably hold shows and collect revenue in a wider range of weather. Maximizing operating revenue often makes the case for a permanent structure, which is much cheaper over time than as-needed temporary structures. For historic outdoor theater renovation teams, this sets up a challenging balance—a stage cover will allow more people to see more shows and generate more revenue, but if a theater's character is grounded in the landscape as the stage set or immediate backdrop, a stage cover will also diminish the experience for all those visitors. The theaters profiled in this study and reviewed in the history section all succeed in in balancing these factors to a greater or lesser degree. Many theaters, not cited here, have given up or fundamentally altered visitors' experience of the landscape in exchange for covering their stage.

The renovation teams for the Quarry and John Anson Ford amphitheaters recognized the importance of avoiding or minimizing overhead horizontal structures when the landscape is integrated into the stage and forms the immediate backdrop for performances. At Quarry, the team rejected a permanent overhead structure and instead integrated footings for an as-needed structure into the updated stage. This avoids any horizontal structure except when it is explicitly needed. It also reduces the dimensions of the temporary structure's vertical supports and thus the degree to which they obscure the view (Figure 135). At John Anson Ford, the team used multiple approaches to minimize the intrusion of the horizontal structure. First, they placed as much of the needed equipment as possible on the existing towers carefully located to not be distractions or to be fully hidden from the audience (Figure 38). This enabled them to minimize the dimensions and opacity of the over-stage truss while still delivering the production values desired. Rather than hang the truss between the two existing towers, they held it aloft between two independent poles (Figures 37, 38). The result is that the truss appears to float above the well-lit historic structures—and leaves the view virtually unchanged at night (Figure 40).

The Hollywood Bowl is a classic example of a theater that relies on the view to a larger, broader landscape to create the experience, rather than focusing on what sits immediately behind the stage (Figure 8). This enabled the theater to readily assimilate a more substantial overhead structure designed to complement the surroundings through contrast, without diminishing the visitors' experience of the landscape. In clear view from the seats, the Santa Monica Mountains rise to the Mulholland Scenic Overlook 20 times higher than the Bowls iconic shell. This order of magnitude scale differential is critical to the shell not diminishing the landscape experience.

The long debated overhead structure at Red Rocks can be seen either way—is it a complementary structure that succeeds in a theater defined by a view to a larger, broader landscape? Or is it an intrusive structure that obscures the landscape that defined the theater's stage and provided the immediate backdrop? (Figures 59, 61) Whatever perspective one takes, the long-time debate, and the recently completed arduous process to replace the original structure, demonstrate the care that should be taken before adding a substantial overhead structure to a historic amphitheater. As with other elements, the best starting point is recognizing what creates the landscape experience of the theater and then exploring all alternatives and creative solutions before obscuring the source of the venue's magic.

The Red Rocks Amphitheatre and the Quarry Amphitheater illustrate how it is especially important to minimize horizontal over-stage structures in theaters that attract everyday casual use and host recreational activities and social events. On less than 10% of the days each year, the Quarry Amphitheater is filled by large events for crowds up to 2,600. More than 90% of the year, the theater is home to studying students, outdoor classes, yoga and tai chi groups and a myriad of other events and gatherings. Participants in all these activities are drawn to use a space that is surrounded by nature and appears to welcome them to make it their own (Figure 92). A permanent overhead structure would not only have diminished the landscape experience, it would also make the space feel like an empty theater—a place you could still occupy day-to-day, but not place that appear to welcome everyday use like the current design does.

At Red Rocks, while evening concert goers may have diverse perspectives on the pros and cons of the existing stage cover, the daily casual and recreational users, and visitors who come just to marvel at the natural beauty of the theater, can only see it as an obstruction and mar on the landscape (Figure 45). For these daily and daytime users, the draw is the landscape and the stage cover only serves to diminish one of the key views. The stage cover makes the space feel more like an empty theater waiting for the next performance, rather than a forum to enjoy the landscape as performance. Happily, the star power of this singular environment still shines through.

Lighting the Landscape to Counterbalance Necessary Structure For decades, creative outdoor theater managers have used lighting to accentuate the landscape during evening performances. The stone faces that define Red Rocks were lit since the amphitheater's opening. Contemporary renovation teams have applied this approach to counterbalance necessary lighting, sound and stage structures that may otherwise diminish some visitors' experience of landscape. It is not only the improvements themselves that can detract from visitors' experience, but also the very intensity of the contemporary stage lighting leaves audiences literally less able to see anything that is not artificially lit. When the John Anson Ford team added a cross stage lighting truss and a comprehensive stage lighting system, they also increased the reach and creative flexibility of the lighting of the surrounding landscape. Now over an acre of classic Los Angeles hillside—a mix of native chaparral and volunteer palms, cypress and eucalyptus—shine in whatever color and intensity of light best complement the action on stage (Figure 40).

Figure 134 *At the John Anson Ford Theater, renovators carefully hid the new lighting towers behind histric structures out of view from the seats. 2017.*

Figure 135 *By building foundations into the stage, the Quarry Theater is able to use a lighter weight, less distracting temporary structure. 2017.*

RESTROOMS, CONCESSIONS & AUXILIARY STRUCTURES

Like lighting and sound equipment, structures for ticketing, comfort and concessions are necessary but hold the potential to diminish visitors' experience of the landscape. Happily, unlike lighting and sound equipment, these structures can be located to not visually impact the stage or the seated audience. Successful renovation teams have taken advantage of this difference to minimize or completely avoid negative impacts by locating these functions off-site, out of sight or in carefully placed temporary structures. In the best cases, teams have followed the design lessons of historic outdoor theaters to create new memorable landscape experiences engaging the surrounding environment from perspectives that cannot be seen from the seats.

Off Site At the Timberline, All Hallows and Quarry Amphitheaters, renovation teams resisted the temptation to create new permanent structures immediately adjacent to the theater, instead relying on existing facilities in the adjacent lodge, cathedral, and university buildings. Additional temporary structures are brought in as needed for large events, when, interestingly, the crowds often diminish their visual impact. This leaves the landscape experience intact for everyday visitors and smaller events. All three theaters have effective signage and wayfinding for ticketing, comfort stations and concessions, which is key for making off-site facilities acceptable to visitors. At All Hallows, visitors' stroll through the Olmsted Woods to reach the Cathedral restrooms. At Timberline, audience members walk through an evergreen grove to reach the Lodge. When planned well, off site facilities can preserve visitors' experience of a theater and offer them an additional landscape experience (Figures 136, 137).

Out of Sight The Red Rocks and John Anson Ford Amphitheaters and Rhoda Goldman Concert Meadow each illustrate different effective strategies for keeping facilities on-site without diminishing the landscape experience. Red Rocks is a graceful example of placing facilities out of sight behind the top row of seats and alongside a principal entrance. The innovative plan actually places the restrooms, café and concessions below the top of theater arrival plaza, minimizing their impact on how visitors experience the landscape as they enter (Figure 62). However, even if the facilities had been placed above ground in this location, they would not have altered the landscape experience of the audience once in their seats. In many ways, this approach is similar to sports stadiums that place concessions at the back of each level. This approach has the added advantage of enabling audience members to view the performance as they wait for a proper moment to return to their seats. At the Ford, the renovation team added visitor facilities, and offices and production space, in an attached wing to one side of theater, invisible from the seats. Similar to a bonus room added on to a house, this new structure is unnoticeable when entering through the front doors but adds a surprising amount of space and amenities. At Rhoda Goldman, the designers very consciously followed the original subtle placement of bathrooms, which are actually just east of the stage but carefully screened to be virtually unnoticeable (Figure 111). These renovated structures highlight the importance of architecture that defers to the landscape and the historical forms, colors and materials. At all three theaters, highly contextual architecture not only keeps the buildings from being distractions, but also avoids breaking the spell of the experience when visitors have to use the facilities. If only the inside of the bathrooms could be as contextual as the outsides.

Temporary and Out of Sight Relying on temporary structures is a third potentially successful approach to providing amenities without diminishing visitors' experience of the landscape. A majority of the theaters profiled still rely on portable bathrooms and concessions stands for larger events, even after renovations. The most successful projects plan placement and access to the temporary structures as if they were permanent to avoid an entry experience defined by blue plastic porta-potties and pop-up tents. Renovation teams should be cautious about "solving" their amenities buildings challenges with temporary structures, unless they have the scope to plan and design these elements.

Unexpected Opportunities for New Memorable Experiences Akin to the magic of watching a performance outside is the experience of sharing a meal outside. To deliver both experiences, the Red Rocks and John Anson Ford renovation teams turned the challenge of locating concessions into an opportunity to create new outdoor eating terraces with dramatic views to the landscape. In both cases, part of keeping these terraces out of view was facing them the opposite direction of the auditorium, so they actually give visitors a new landscape experience to add to the historical one. At the Ford, rather than facing the hillside, the dinning terrace faces across the valley to the Hollywood Hills and, remarkably, a wonderful view of the Hollywood Bowl. At Red Rocks, the café terrace faces west to Mt. Morrison, rising 2,000' above the theater, whereas the view from the seats is east to the Denver valley below. By following the theater's example of designing around a memorable landscape, these terraces feel consistent and resonant with their historic hosts without impinging on the original experience of the venue.

Figure 136 *The new John Anson Ford Theater dining terrace offers a remarkable view to another historic theater, the Hollywood Bowl. 2017.*

Figure 137 *The new Red Rocks dining terrace keeps visitors connected to the iconic stone walls while offering views to a distinct compelling landscape. 2018.*

CONTEMPORARY BUILDING & ACCESSIBILITY CODES

As places for mass gatherings on sloped surfaces, outdoor theaters hold the potential for significant challenges to accessibility and emergency egress. Resolving these challenges without compromising a historic theater's relationship with the landscape can seem daunting. However, the case studies in this guide reveal that many renovation projects have succeed in making a historic theater ADA and fire code compliant without compromising the visitors' landscape experience. Based on these and many other examples, the most significant best practices appear to be:

- Building an early, collaborative relationship with your ADA officer and fire inspectors, who have significant discretion, especially for projects like outdoor theaters, which include elements not covered by specific prescriptions
- Keeping ramps, elevators, and new paths and other accessibility and egress elements out of view from the audience in their seats, or
- Fully integrating these elements into the design of the theater such that they are not distracting or actually enhance visitors' experience,
- And lastly, allocating thought and money to minimizing the impact of necessary smaller additions like riser stripes and handrails

Accessibility and Egress Requirements for Outdoor Theater Determining the accessibility and egress plan for a particular theater requires a close and detailed collaboration between the project team and local regulators. Some requirements are numerically prescriptive—your path either has a less than 5% slope or it doesn't—but others take the form of performance standards to be interpreted and applied locally—such as what does it mean to make "every experience" accessible? While each accessibility and egress plan will be site specific, almost all theater renovation projects will be required to provide:

- An Accessible Path of Travel—from parking to seating. A theater must provide a accessible "path of travel" composed of paths at 5% or less grade (1' rise over 20' of run) and ramps at 8% or less grade (1' rise over 12' of run). Ramps must have handrails, curbs and periodic resting and turning platforms.[109]
- Accessible Front and Back Rows or an Accessible Mid-Section—at minimum either the front and back rows or a mid-section will need to be on the accessible path of travel and provide accessible seating, wheelchair spaces and companion seating.
- Access to All Services and Facilities—all services and facilities will also need to be reachable by an accessible path of travel and the structures and amenities themselves will need to be accessible.
- Ample, Visible, Intuitive Emergency Egress—the emergency egress route must comfortably accommodate a full house and be clear and intuitive enough to be followed when fire, smoke or other emergency limits visibility and stresses visitors.[110]

The design challenge is fulfilling these reasonable requirements without diminishing the landscape experiences that make historic outdoor theaters cherished places.

Building a Foundation of Relationships with Your ADA Officer and Fire Inspector Often the best route to meeting this design challenge begins with building collaborative relationships with your regulators. A successful starting point is to demonstrate your commitment to their missions by meeting with regulators to ask for their priorities, suggestions and favorite precedents *before* any drawings are on the table. At this initial meeting, share your passion for making the landscape experience accessible and safe for everyone. Then bring regulators early drawings and seek their input on devising solutions rather than just approving or rejecting your proposals. The goal is to share the challenge of making the landscape experience fully accessible and safe, without diminishing it. If you can make the ADA Officer and Fire Inspector your design partner, rather than just your reviewer, you are much more likely to end up with creative results that serve your mission and theirs.

The experience of the authors and design teams for the projects detailed in this study suggest the following steps:

- Meet before drawing—bring an existing conditions map and markers, not a renovation plan.
- Before meeting, re-read the relevant accessibility and fire codes and applicable state, local and national preservation regulations. Doing your homework shows respect that will be appreciated.
- Demonstrate commitment to regulators' missions by asking for their input before sharing any proposals—what are their priorities? What is their experience with your venue? What projects would they look to as positive precedents or cautionary examples of what to avoid?
- Establish relationship with a person, not an office—ask colleagues about which regulators are most collaborative; proactively follow up personally after the introductory meeting; ask to work with the same person throughout the project and add time to the schedule, if it's necessary, to wait for your regular reviewer to be available.
- Share challenges, rather than ask for exceptions—when it is hard to resolve an aspect of the design to serve both experience and accessibility or fire safety, bring the regulator several options and engage them in the challenge, rather than bringing them one proposal and asking for a variance.
- Get your regulatory partner out on-site—when a compliance officer looks at drawings or specs on screen or at a counter, they can clearly see what standards are not being met, but they cannot see what might be compromised by meeting the standards. Reviewing plans on site makes the case for a contextual application of the guidelines without you saying a word.

Universal Access Integrated into the Design and the Landscape The process above sets up renovation teams to resolve the challenges that realistically arise when seeking to provide full accessibility and preserve the full landscape experience in a historic amphitheater. Being prepared for challenges, however, should not undermine renovation teams' focus on searching for universally accessible solutions that accentuate visitors' experience of the landscape. The All Hallows and Timberline renovation teams both succeeded in providing universal access by curving paths through pleasant woodlands. The entrances to these paths are simply openings in the woods that encourage everyone to take the same accessible route. The renovation team for the Rhoda Goldman Concert Meadow effectively designed the first rows of the new stone seats around the accessible path of travel that runs through the larger landscape. This provides truly universal access to the Goldman's unique experience—traveling down through a wooded ravine to find the landscape seamlessly morphing into a theater. These examples suggest the value of zooming out from the direct theater site and exploring all options for integrated universal access, before moving on to the challenges of minimizing the impact of less organic solutions.

Keeping Accessibility and Egress Modifications from Diminishing the Landscape Experience When structural accessibility measures—such as switch back ramps and elevator shafts—are unavoidable, their impact on visitors' experience of the landscape can be minimized by keeping them out of view from the amphitheater seats. It is enticing to imagine creative designs that would use accessibility measures to actually enhance the experience of the landscape. However, it is telling that examples of this are exceedingly hard to find. The reliably successful approach is focusing on keeping distracting accessibility and egress structures out of sight from the seats.

Figure 138 *The beautiful universal path through the Olmsted Woods connecting the All Hallows Theater to the National Cathedral. 2019.*

Figure 139 *The iconic view on the universal path between the Timberline Theater and Lodge. 2021.*

At the John Anson Ford, ADA and contemporary fire code compliance were achieved through a series of renovations outside the audience's view from their seats. First in 2000, an interwoven landscape of stairs, ramps and small plazas, replaced the inaccessible path from the street level to the theater entrance (Figure 43) . These renovations made the front row of the auditorium accessible. Then in 2013 an elevator tower was gracefully tucked into the back of the historic structure, making the top row accessible (Figure 42). Neither of these renovations are evident from the auditorium or impact important views to the natural stage in any way.

Similarly, at Red Rocks, renovations in the 1990s made the top and bottom rows fully accessible with almost no changes noticeable from the seats. To create fully accessible parking, without altering how the theater interfaces with the landscape, a shuttle was established that ferries visitors with disabilities from the ADA parking to the beginning of accessible paths to the front and back row accessible seating areas. The front row was gracefully widened (the change is almost imperceptible) to enable patrons in wheelchairs to reach their designated spaces and companion seating by an accessible pathway (Figure 64). At the back of the theater, the renovation of the entry plaza created an accessible terrace including concessions and restrooms. The front lip of this terrace seamlessly forms an accessible "row" just above the final original row of bench seats (Figure 65).

Case studies show that when the context does not allow facilitating top and bottom ADA access outside of view it is considerably more difficult to fulfill accessibility mandates without altering the experience—though, interesting, it is the experience of the auditorium, not the landscape, that often changes. At the Forest Theater in Carmel, California, designers did not have the space to create accessible paths of travel to the top of auditorium. In addition, the original front row was elevated several feet above the nearby entrance, making it challenging to engineer access without an obtrusively located ramp. The design team's solution was to create a concourse across the middle of the auditorium, like those seen in many contemporary movie theaters. At the front edge of this central concourse are 7 wheelchair spaces, 10 accessible seats and 5 companion seats. The original schematic plans called for ramps to the concourse and the first row on the slope facing the main entry. After further consideration and input, the design team moved the accessible path of travel to the far side of the auditorium where it would be much less visible. Removing the ramps from the entry slope was critical to preserving the memorable procession through the forest to the theater.[111]

This central concourse approach could be applicable at many sites where creating an accessible path to the top row or bottom is untenable. The possible downside is that this approach interrupts the single, simple field of rows, or field of people, which defines many amphitheaters. At a theater like Red Rocks, where this single, simple field of seats is an essential aspect of the experience, a central concourse would be a significant negative impact. At many other theaters, it would not alter the experience significantly and might be a better alternative than the disturbance required to make the top and bottom of the venue accessible.

The Conflict between Character Defining Irregularity and Contemporary Codes The character and experience of some significant historic outdoor theaters, for example, Santa Cruz's Quarry Amphitheater and California's Mt. Tamalpais Mountain Theatre, are defined by their irregularity and how their form and paths of travel focus visitors on different aspects of the landscape, rather than direct ingress and egress (Figures 83, 12). This creates challenging conflicts with contemporary fire codes that demand a clear path of emergency egress and building codes that require regular sizing and spacing of steps.

At Santa Cruz, a significant element of the original design were the scattered row-to-row staircases that caused patrons to acknowledge the landscape as they descended to their seats, rather than always looking down at their feet and the stage. By moving the staircases offline with each other, Royston required visitors to look up and to the side for the next nearest steps and then walk parallel to the rows providing a moment to notice and enjoy the landscape (Figure 83). Several of the scattered staircase where also rotated so that the steps were perpendicular to the rows, even more directly pointing visitors to the surrounding landscape. The very wide spacing between rows—5' to 16'—supported this experience by eliminating the need to look down to avoid other patrons' feet and personal items. Unfortunately, the unusual distribution and orientation of staircases in Royston's design also raised a flag for fire marshals who imagined visitors being confused and delayed when trying to exit in an emergency.

The design teams worked closely with regulators to devise a plan that would provide clear emergency egress yet preserve this key landscape experience. The creative result of this collaboration was adding additional staircases, rather than forcing Royston's steps to align with expectations. The stairs placed perpendicular to the seats were replaced with traditional parallel steps, but otherwise Royston's scattered staircases and the circuitous walk they choreographed remained in place. Additional staircases were added just right of center stage to provide a relatively clear route through the center of the theater. Importantly, these new staircases were slightly scattered, so that they would not create a dissonant direct line in the midst of an askance composition (Figure 140). Old timers, historians and purists will note that the nuanced direction of visitors' gaze to the landscape has been somewhat diminished, but most visitors will still have the experience Royston intended—they will look up to the landscape as they cross over to the next set of scattered stairs, notice the redwood forest and rock formations and wonder what they have missed by looking down at their feet all these years.

Figure 140 *The view from the stage shows the irregular pattern of stairways that the renovation team preserved while still meeting contemporary requirements for clear, intuitive egress. Visitors naturally look up between the misaligned stairways and notice the variety of landscape from multiple points in theater. 2021.*

CONCLUSION

Together the history, profiles and analysis in this study suggest a *process* for resolving the dilemma posed in the introduction:

> *visitors, performers and producers cherish these historic outdoor theaters because they intertwine the experience of the landscape and the performance, but at the same time they desire modern comforts, conveniences and technology that can undermine the landscape experience that draws them.*

Responding with a process, rather than specific physical guidelines, is effective for two very different reasons. First, every theater, landscape experience, and performance program is distinct, so the optimal resolution of any dilemma is going to be venue local and specific. Equally important today, the thumbs of commerce and technology are on the scales from the beginning—theaters face increasing pressure to raise revenue and meet rising expectations for production values. These demands now have advocates in almost every outdoor theater organization. In this context, trying to apply specific physical guidelines leads to a game of attrition that slowing chips away what is not applicable to local conditions, not financially viable or not compatible with necessary technology.

Learning from the processes used by the original designers and the renovators of the profiled theaters, we would instead propose applying a process that establishes the visitors' experience of the landscape as a co-equal consideration with production values, convenience, and revenue. Some of the suggested steps may at first seem too formal or more than is necessary, but studying dozens of projects confirms that absent these steps the landscape experience comes to the table in a vulnerable position and is the most likely element to be compromised.

The history, profiles and analysis in this study suggest the following steps to preserve visitors' experience of the landscape while meeting contemporary expectations for production values, comfort, and revenue:

1. Formally recognize preserving the landscape experience as an essential goal of the project. In each project description and each public meeting and design discussion, articulate how preserving visitors' experience of the landscape is equally important as improving visitor comfort and production values or meeting cost and revenue benchmarks. Without this recognition, the landscape experience is often unintentionally compromised by efforts to meet other goals.

2. Include a core client group member with the role of being the voice for visitors' experience of the landscape.. Production values, finances and visitor comfort have natural advocates in theater renovation client groups, but the landscape experience, if recognized, is often absent an advocate and thus becomes the easiest value to compromise.

3. Investigate and document the history of the theater's relationship to the landscape. What features or experiences motivated the site selection? How did the original theater relate to the landscape? How has that relationship evolved over time? Do current users value the landscape experience?

4. Hire a design team with a track record of interconnecting structures and landscapes and sustaining a landscape focused experience, even while providing state-of-the-art facilities. A team's record of successfully integrating indoor and outdoor experiences, landscape and

structure, can be as important as their resume of designing outdoor theaters. Having this type of design team is not a replacement for having a voice for the landscape in the client group. Like other considerations the landscape needs to be represented throughout the project.

5. Recognize *how* the theater creates its relationship with the landscape. History reveals four or five reliable approaches to creating a connection between the audience and the landscape , as detailed in the conclusion of this document's history section. Knowing which one or ones your theater uses makes clear what can and cannot be altered without diminishing visitors' experience.

6. During Pre-Design investigate *if and how* each element of the theater—seats, stage structure, auxiliary buildings, access—contributes to or distracts from the landscape experience (and to or from each goal—visitor comfort, production values, finances). This will highlight what considerations are critical in designing each element.

7. When faced with an apparent trade-off between fulfilling two goals, step back and reconceive the two "things" being put in opposition as two "levels of performance" that must be met. For example, replace the choice between a stage cover and unobstructed views with the challenge of protecting performers and equipment without breaking the connection to the landscape.

8. When compromises appear necessary, formally recognize them, and openly consider their consequences. Rarely can all the goals of an outdoor theater renovation be equally met, so you want the choices to be transparent, intentional, and tenable for all stakeholders.

9. Knowing a key to success will be creatively resolving perceived conflicts between goals, emphasize building collaborative relationships throughout the project team and with *individuals* in each agency with a role in regulating the project. Involve everybody, especially regulators and technical experts, in devising solutions that meet apparently conflicting goals, rather than just in approving or rejecting proposals.

In the end, it comes down to never forgetting, or letting others forget, that these theaters exist to engage audiences in experiencing the arts while in the landscape. The process outlined above is a practical method to keep visitors' experience of the landscape at the center of each design decision from concept to ribbon cutting. It is based in the origins and history of these theaters and careful study of exemplary renovation projects. When successful, this process can transform the discussion from a struggle over trade-offs to a collaborative effort to accentuate the historic outdoor theater experience and make it more enjoyable, comfortable, accessible and economically sustainable.

Figure 141 At the Quarry Amphitheater, the design team met with stakeholders for a "Site Awareness Walk" when participants wrote and drew their observations of the theater and the landscape. 2014.

NOTES & CREDITS

PROJECT CREDITS (based on available information)

John Anson Ford Amphitheater (originally the Pilgrimage Play Theater) , Los Angeles, California
Owner: County of Los Angeles
Operator: Los Angeles Philharmonic Association under agreement with County of Los Angeles
Primary Uses: Music, drama and performance art
Original
Capacity: 1,277
Construction: 1920, 1931
Designers: Bernard Maybeck, original 1920 structure destroyed by 1929 fire. William Woolett in 1931
Recent Renovation
Capacity: 1,200
Construction: 2017
Designers: Levin & Associates, Architects. Studio MLA, Landscape Architects.
Contractors: Pankow Builders (Construction Services); Cumming Construction Management (Project Manager); Structural Focus (Structural Engineers); Mollenhauer Group (CE, Survey); Wiss Janney Elstner Associates (Material Conservation); Horton Lees Brogden (Lighting Design); Leighton (Geotechnical).

Red Rocks Amphitheater, Morrison, Colorado
Owner: City and County of Denver
Operator: City and County of Denver
Primary Uses: Concerts, Civic Events, Easter Services, Contemplation
Original Construction and Renovations: 1936-1941, 1965, 1987, 2014, 2021
Original
Capacity: 9,525
Construction: 1936-1941
Designers: Burnham Hoyt
Contractors: Civilian Conservation Corp
[Mulitple additional design and construction firms have contributed to the various renovations since 1941.]
Recent Renovation
Capacity: 9,525
Visitors Center/Agora (2014)
Designers: Sink Combs Dethlefs/Perkins + Will (2014),
Contractors: Shaw Construction (Construction); Martin/Martin (Structural Engineers)
Stage Structure (2021)
Designers: Short Elliott Hendrickson Inc. (Architects); Anderson Hallas Architects (Historic Preservation)
Contractors: GH Phipps (Construction); Martin/Martin (Consulting Engineer)

Timberline Amphitheater, Mount Hood, Oregon
Owner: Timberline Lodge
Operator: Timberline Lodge
Primary Uses: Musical performances, nature talks, yoga classes, picnicking and impromptu gathering
Original
Capacity: 500+
Construction: 1937-1938
Designer: Emmett Blanchfield, Forest Service Landscape Architect: A.D. Taylor, Consultant
Contractors: Work Progress Administration
Renovation
Capacity: 224+ standing
Construction: 2006
Designer: Bramare Architecture (Richard Zita)
Contractors: Cascadian Landscapers

UC Santa Cruz Quarry Amphitheater, Santa Cruz, California
Owner: University of California at Santa Cruz
Operator: University of California at Santa Cruz
Primary Uses: Commencement, Student Welcome, Classes, Concerts, Informal Gatherings
Original
Capacity: 1,665 bench seats; approx. 2,800 with portable seats
Construction: 1966
Designer: Robert Royston (Royston, Hanamoto, Beck & Abey, now RHAA)
Renovation
Capacity: 2,080 bench seats: approx. 2,700 with portable seats
Construction: 2017 (Phase 1)
Renovation Planning and Design Schematic: Office of Cheryl Barton; Fernau + Hartman; Auerbach Pollock Friedlander (Theater Facilities); Freeman & Jewell
Design/Build Team: Dreyfuss+Blackford Architects; Flynt Builders; Siegfried Engineering

Rhoda Goldman Concert Meadow, San Francisco, California
Owner: City and County of San Francisco
Operator: San Francisco Recreation and Parks Department and the Stern Grove Festival Association
Primary Uses: Music, drama, dance and civic events and day-to-day relaxing, picnicking and dog walking
Original
Capacity: 10,000+ (before renovation)
Construction: 1932
Designer: Gardiner Daily, Bernard Maybeck and William Gladstone Merchant
Renovation
Capacity: 13,000, plus overflow in surrounding landscape
Construction: 2005
Designer: Office of Lawrence Halprin (Landscape Arcihtects); Hamilton + Aitken (Architects),
Contractors: QuarryHouse, Inc. (Stonemasons); Vance Brown (General Contractor)

All Hallows Amphitheater, Washington, D.C.
Owner: Washington National Cathedral
Operator: Washington National Cathedral
Primary Uses: Church Services, Civic Events, Graduation Ceremonies
Original
Capacity: 12,600 + standing
Construction:
Designer: Olmsted Brothers; Florence Bratenahl; F. Burrell Hoffman; Clarke, Rapuano & Holleran,
Renovation
Capacity: ~1,200 + portable chairs
Construction: 2005
Designer: Michael Vergason Landscape Architects, Ltd.
Contractors: Pitchford & Assoc. (Consulting Arborist); Miller, Beam & Paganelli (Acoustical Constultants); Cahill Associates (Storm Water Management); Thornton, Tomasetti, Cutts (Engineers)

IMAGE CREDITS

Figure 1 Grassl, Anton. Arthur Hoyt Scott Outdoor Theater, Swarthmore College. 1996

History
Figure 2 Rhoads, Harry Mellon. Foothills. c.1910-1930. Courtesy of the Denver Public Library, Western History Collection, Call Number #RH-2076.
Figure 3 Grassl, Anton. Longwood Gardens. 1996.
Figure 4 Grassl, Anton. Sidney B. Cushing Memorial Theater, Mt. Tamalpais. 1996.
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