FEASIBILITY STUDY FOR
QUARRY AMPHITHEATER RENOVATION
Volume I

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EXECUTIVE SUMMARY

Quarry Amphitheater is an extraordinary setting at the heart of the UC Santa Cruz campus with potent historic, cultural and natural landscape attributes. It holds the opportunity to become a vibrant focus of student and campus life, while also retaining its value as a natural open space. The holistic approach of this Feasibility Study ensures that any recommendations and plans for this remarkable site will not diminish, but strengthen, the inherent qualities of place that make it special. The findings of the Study will inform the subsequent design phases for the project.

The Design Team, led by a Core Advisory Group, brought an in-depth knowledge of many other outdoor performance venues of similar scale; operations and management of a range of performance and event venues; and deep familiarity with campus operations and facilities to help frame the questions and ensuing discussion with the UCSC community that form the basis of this Report. The Team began by asking ‘Big Questions’, listening carefully to the valuable insights, experiences and suggestions of the UCSC community, and then worked with the Core Advisory Group to create a set of ‘Guiding Principles’. The Design Team and the Core Advisory Group met monthly over the Winter and Spring quarters in 2014, and held two evening open forums to get direct input on the future of the venue. An on-line survey received more than 1,700 responses from students, faculty and staff. The Study findings were presented at the Advisory Committee of Campus Planning and Stewardship and at a Student Union Assembly. Input and advice was sought from the Student Fee Advisory Committee, key campus facilities staff members, and other campus leaders and groups.

The ‘Carrying Capacity’ of the site became one gauge by which the impact of change was measured. Gains in revenue generation capabilities were weighed against the importance of openness and availability for student use. Large crowd event-based activities were balanced with a quiet, park-like setting. An assessment and understanding of both the cultural landscape value of the site and its symbolic and emotional value for a diverse range of stakeholders — through careful consideration of ‘Contributing Factors’ — was critical to the development of the Study.

This Study identifies a way to revitalize the amphitheater and adjacent areas in a two phased approach. The plan includes a wide range of campus uses and identifies infrastructure and support facilities to promote and enhance the student experience, create a sustainable and memorable venue for the campus, and maintain the beautiful setting.

**Phase One** of the Plan implementation will provide life safety, building code, accessibility and basic operational upgrades to support performances, events and casual daily use of the amphitheater. Seating capacity will be expanded to 2,000, making ‘The Quarry’ an attractive venue for concert promoters and event planners. Phase One will rely on temporary performance infrastructure, tents, portable restrooms and concession stands to support events.

Phase One Preliminary Budget Forecast: $7.4M

**Phase Two** will provide a fully built-out venue with a technological infrastructure to host a wide range of contemporary performance and event needs. A new Redwood Lobby and Support Building will provide a full kitchen and concessions facilities, restrooms, storage, a green room and flexible meeting space. An elevator and pedestrian / light-service vehicle bridge will provide a critical link between the site and the campus. The bridge will be designed as both gateway and gathering place. It will provide a direct universally accessible link between Quarry Plaza and the Amphitheater and to restrooms and concessions for all patrons during events.

Phase Two Preliminary Budget Forecast: $10.7M

GUIDING PRINCIPLES

**RESPECT THE CAMPUS FRAMEWORK**
Establish a “Center of Student Life” that will inspire visitors, engage daily student experience, and strengthen physical connection with the greater campus; while respecting the natural forest system of which the site is a part.

**PRESERVE SITE CHARACTER**
Expand capacity and infrastructural development for the amphitheater without compromising the intimate, immersive, spiritual and ‘magic’ quality of the landscape experience and the quirky spirit of the historic amphitheater design.

**PROMOTE STEWARDSHIP THROUGH INTEGRATED SUSTAINABLE DESIGN**
Protect the landscape setting, promote environmental awareness and stewardship, and create a comprehensive and innovative approach to sustainable infrastructure.

**ENCOURAGE STUDENT ENGAGEMENT AND PROGRAM DIVERSITY**
Provide for a broad spectrum of use from casual, daily use to performance through site development and infrastructure that is flexible and multi-use in nature.

**SUPPORT FINANCIAL FEASIBILITY**
Respond to campus financial goals and achieve operational sustainability through effective management of resources.

**ESTABLISH SAFETY, SECURITY AND UNIVERSAL ACCESS**
Provide universal access, a positive, safe place to learn, explore, and share; and prioritize broad student use and awareness.
1.0
INTRODUCTION
1.1 Introduction

Used for performances and events since its opening in 1967 until its closure in fall 2006, the Quarry Amphitheater has become a beloved icon of the UCSC campus. The significance of the Quarry Amphitheater to alumni, students, faculty, staff, community members and visitors makes the approach to shaping the future of this place important and challenging. To effectively execute the Quarry Amphitheater Renovation and Expansion project, this Feasibility Study was initiated and a Core Advisory Group was charged to guide the study.

1.2 Feasibility For What?

The Core Advisory Group engaged in a thoughtful dialogue with the Design Team to explore aspirations, develop fundamental planning and design principles, analyze sustainable operational parameters, and facilitate decision making within the campus community. Together, we considered a wide range of ‘Contributing Factors’ in order to answer this fundamental question — Feasibility for What?

The array of possible outcomes for this special place is contingent on an assessment of the Carrying Capacity or Tipping Point of the site - weighing potential gain for revenue generation as a large-scale ticketed performance venue, against the potential for loss of character and daily availability to student use. A series of site immersion workshops and discussions with the Core Advisory Group and students resulted in a set of Guiding Principles and Program Priorities to guide the Study.
1.3 Feasibility Study Process

The Guiding Principles and Program Priorities, together with an assessment of all Contributing Factors and analysis of existing conditions guided the development of a Concept Plan.

Analysis of existing conditions from the perspectives of geotechnical, code, life safety, facilities assessment and accessibility established minimum upgrades that would be needed to reopen the venue.

Discussions with the Core Advisory Group and campus facilities and operations staff revealed key design drivers such as connectivity of the site to the larger campus context, flexibility of use, and event program requirements that would need to be considered.

Facility and operational requirements for compatible revenue generation opportunities were outlined to guide site development considerations.

All of these inputs guided the development of a series of possible design scenarios that tested principles and programming goals. These design scenarios were compared in a ‘Choosing by Advantage’ matrix and discussed at length with the Core Advisory Group. The resulting ‘Redwood Lobby’ scheme was selected to be developed into four additional concept alternative schemes to further refine the concept plan.

The Preliminary Budget Forecast and Phasing Plan are based on the resulting preliminary Concept Plan. This plan will be refined in the design phases of the project.

PROJECT SCHEDULE

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<th>TASK ONE: PROJECT INITIATION</th>
<th>TASK TWO: PROGRAM DEVELOPMENT</th>
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<th>TASK FOUR: FEASIBILITY REPORT</th>
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<td>Project Kick-off</td>
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<td>Student Survey</td>
<td>Design Concept Summary</td>
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Legend:
- Core Advisory Group Work Session
- Student Outreach Season
- Design Advisory Board Review (DAB)
- Student Union Assembly (SUA) Presentation
2.0 CONTRIBUTING FACTORS
2.1 Historic Framework

The history of the site as a former quarry lends the Amphitheater a unique character that is still present today. This intersection of the natural landscape with human intervention, and the inherent drama of their juxtaposition, frames much of the UC Santa Cruz campus experience. The landscape architecture firm of Royston, Hanamoto, Beck and Abey created a design for the amphitheater near the outset of the campus that spoke to this intersection, and drew inspiration from the angular quarry walls, and colors and textures of the natural landscape. The powerful views of the quarry from the amphitheater, and the containing embrace of the dense redwood forest create a powerful experience, even today. This experience, coupled with the memories of significant campus events that took place here, make this site a very special, and deeply loved place on campus.
The UC Santa Cruz Quarry Amphitheater has played a key role in the history of American outdoor theaters. Not only does its asymmetrical design reflect the distinctive formal qualities of one of the country’s foremost modern landscape architects, Robert Royston, but it is also one of the few modern American theaters purposely designed to highlight its landscape setting.

During the early 20th-century theatrical professionals, naturalists and designers initiated a movement to build outdoor theaters that brought audiences close to nature during performances. Many such theaters were built in estate gardens such as Longwood Gardens in Delaware and Dumbarton Oaks in Washington, DC, while others were for public gatherings, including the Forest Theater in Monterey, the Mount Helix Theater east of San Diego and the Hollywood Bowl. But college theaters, including notable ones built at Berkeley and Occidental College, were particularly popular for these “theater and nature” experiences. The 1930s New Deal programs also emphasized the role of nature and the landscape experience in the designs of hundreds of outdoor theaters built by the CCC and WPA. Then, after World War II, priorities in outdoor theater design shifted to comfortable seating, commercial concessions and the lighting and sound technology of interior theaters rather than on the creation of a memorable landscape experience.

As a result, from WWII until the present, few modern outdoor theaters have prioritized the landscape setting in their designs. Nevertheless, some theaters with notable landscape experiences were built on campuses, including the Quarry Amphitheater, the 1964 McIver Theater at Meredith College and the 1942 Scott Amphitheater at Swarthmore College. Although the McIver Theater, surrounded by native trees and overlooking a small lake, has a distinctive layout of complex curves and detailing that clearly place it as a work of modernism, it adheres to the historical convention of a symmetrical auditorium. Similarly, the Scott Theater has a symmetrical auditorium although its randomly spaced tulp poplars interrupt this symmetry to give it a distinctive landscape character. These designs, like the early theaters at Longwood Garden, Occidental College and Mt. Helix, were conceived as symmetrical and then the precision of their symmetry was altered to accommodate topography, rock formations and major trees.

In contrast, Royston’s initial concept for the Quarry Amphitheater began with an asymmetrical response to the distinctive features of its landscape, particularly the quarry wall. This approach places the Quarry Theater’s design in the company of Denver’s celebrated Red Rocks Theater and the Sydney Cushing Theater on Mount Tamalpais where the designers developed asymmetrical concepts that responded to surrounding landscape features. Several recent theaters, including Lawrence Halprin’s Stern Grove Theater in San Francisco, also have asymmetrical configurations determined by their site’s landscape features. These landmarks and the Quarry Amphitheater remain key icons in modern design while also offering memorable landscape experiences.

Interestingly, Tommy Church, who provided early oversight of the campus landscape, first proposed a symmetrical theater scheme for the quarry site. Seating 4000 in conventional rows, Church oriented the theater roughly 180 degrees to its eventual alignment. But after this initial study, he recommended Royston, his former employee, to develop a final scheme. Royston, with Church’s support, reoriented the theater to focus the visitor’s view on the formidable quarry wall and framed this powerful stage backdrop between an existing boulder west of the proposed stage and two towering 48-inch and 18-inch redwoods on a knoll southeast of the quarry wall. Although Royston developed several versions of this scheme, the boulder and redwood trees appeared prominently in each. All the alternatives also kept the diverging angles and variable dimensions between the proposed stepped seat walls. Royston’s earliest schemes located the stepped aisles with a more direct alignment than the asankne alignment of stepped aisles in the final scheme. The current configuration of these aisles does not meet contemporary code and safety standards. Modifications to the aisle alignments, terraces and construction detailing are necessary in order to update the theater to current standards and provide for contemporary use. Fortunately, these updates can be done in a way that respects the essential components of Royston’s vision: an asymmetrical response to the key natural landscape features of the site – its quarry walls, boulder and existing redwood trees.

To achieve his vision of a contemporary theater shaped by its landscape features, Royston visited the site regularly during construction and personally staked the layout to ensure that its orientation highlighted the quarry walls, boulder and existing trees. According to his partner Kaz Abey, Royston saw the “monument” boulder on the edge of the stage as an important “starting point” for laying out the asymmetrical theater. Royston directed some reshaping of the stage boulder to facilitate views, requiring the contractor to maintain a weathered surface on one side and precise vertical cuts following the stone’s natural cleavage on the other. After the first concerts in the theater, some members of the Campus Planning Commission requested cutting down the boulder to open up more views. But, acknowledging that the boulder was an important feature to Royston, they consulted him on the further reshaping of the boulder. Although the boulder still blocked views from a few seats, the boulder has nevertheless remained a defining element in the theater’s landmark design. The asymmetrical design and the landscape experience were well received by both students and the design press at the time and since. But perhaps the greatest compliment came from Royston’s mentor, Tommy Church, who, after visiting the theater, was quoted saying “Every time I see it, I think Bob is a genius.”

Following is a drawing showing the Quarry Amphitheater drawn to the same scale as other significant American theaters. Although they vary in capacity from 400 people in Berkeley’s John Hinkle Theater to 18,000 for the Hollywood Bowl, it is the auditoriums that vary significantly in size. The stages are remarkably similar in size although the Quarry Amphitheater has one of the largest.
same scale comparison of peer outdoor amphitheaters
2.3 Previous Planning Studies

Three UCSC planning documents informed the Feasibility Study:
- Long Range Development Plan, 2005
- Physical Design Framework, 2010
- Student Life Facilities Feasibility Study, 2003

Physical Setting
The principal determinant of UCSC’s campus form has been the surrounding landscape. Its remarkable beauty and rich variety has been acknowledged from the earlier visits of campus planners and architects; understanding it and enhancing it has formed the core of planning efforts ever since.

Student Life Facilities
According to the fundamental campus development pattern established in the LRDP, the Quarry Amphitheater is located within the ‘Central Campus Core’. Within this ‘Core’, which is the academic and service center of campus, specific ‘Areas’ of campus are identified. The ‘Student Life Area’ in which the Quarry Plaza and Amphitheater are located is a primary location for student services and campus-serving commercial enterprises. It is also a major transportation hub, traversed by heavily traveled pedestrian, transit and shuttle, and bicycle routes.

The Student Life Facilities Feasibility Study (SLFS) explores alternatives for improving and expanding student facilities within the ‘Student Life Area’ to address a campus-wide shortage of social places outside the classroom. It recognizes the potential for Quarry Amphitheater to become a sunny hub for student enjoyment on non-event days. Limited rest rooms, dressing rooms, and lack of concessions or support facilities are identified as challenges to be addressed in order to meet this goal.

Additional programmatic requirements for the amphitheater called for in the SLFS include:
- Additional power required to upgrade the sound and lights system
- Storage area
- Accessible pathways and seating areas
- Pathway lighting to provide ‘campus minimum light levels’

Transportation and Circulation
Walking is the primary mode of travel for students within the academic core and within and between colleges. The pedestrian system is made up of a network of paths connecting individual buildings within colleges and interconnecting the colleges.

Design Guidelines
The PDF includes specific design guidelines for the Student Life Area and the Quarry Amphitheater, including recommendations to:
- Integrate approaches, support facilities and entry to the Quarry Amphitheater with development in and around the Quarry Plaza. Design improvements to the Quarry Amphitheater that defer to the scale, character, and form of the historic quarry.
- Explore the potential of adding bridges to create a “triangle” of student serving areas: Quarry Plaza, the OPERS East Field Complex, Hahn Student Services, ARCenter, McHenry Library and the Classroom Unit.
- Design new buildings adjacent to Quarry Plaza to fit the scale and character of the existing complex and the historic character of the site by articulating the separate elements and avoiding massive buildings and a vast open plaza.
- When planning development near the upper edges of the quarry consider the effect of views from the Quarry Amphitheater on its historic character.
2.4 Stakeholder Input Sessions: Site Awareness Walk

The first of a series of Core Advisory Group work sessions with the Design Team was a Site Awareness Walk. The discussion that ensued became the genesis of Guiding Principles and Program Priorities that would guide the process of decision making for the Feasibility Report.

The intent of the walk was to simultaneously look to the past and the future to establish the range of perspectives and aspirations the Core Advisory Group members held about the Amphitheater site. An Awareness Walk guide/sketchbook with a series of questions keyed to 14 specific moments in and around the site, helped focus attention on some of the larger themes/big questions for the project, and to elicit specific feedback from the group.

Site Inventory Workshop
The Design Team met with campus staff to inventory their operational and safety experience and recommendations for site design, operation and management. Their input guided this Report’s recommendations for site facilities layout, security measures, vehicular and pedestrian access and circulation and site infrastructure.

A complete list of Core Advisory Group and Site Inventory Workshop participants is included in the Appendices.

On-line Survey
An on-line survey of 12 questions was posted for two weeks. Targeted to UCSC students, faculty and staff, the survey sought to answer the following questions:

- What percentage of students know of and visit the site?
- What qualities or features of the site do they value?
- How would they like to use the site in the future?
- What features would be needed to support that use?

Overwhelmingly, students appreciated the natural setting, seclusion and quiet character. They were more interested in free and campus sponsored events, such as movies, performances and local bands, than big-name ticketed performances. Their responses helped to frame discussion about Guiding Principles and Program Priorities and guide the Preliminary Concept.

1,604 responses were received, 99% of which were from students. Complete survey results are included in the Appendices.
2.5 Student Outreach Workshops

The primary goal of the Student Outreach Workshops was to listen to and understand students’ perspectives on significant aspects of the site and their priorities for its future use. Students who participated in the workshops were familiar with the site and held strong convictions of its importance and symbolic significance for the campus. Many told compelling stories of discovery— the site was a stunningly beautiful and magical place that they had happened upon or had been lead to by other students. Legends of past performers, partly true, partly mythical seemed to abound.

A number of general themes emerged from our conversations with students:

**Natural Setting:** Future development should not compromise the natural setting and the ‘magical’, ‘spiritual’ qualities of the site.

Temporary and removable stage structures are preferable to permanent ones, so that during non-event use the site retains its natural character.

Site integrity and the natural character of the site should be maintained by limiting audience capacity to 2,000.

Small events targeted to student and inter-college use should be given scheduling preference to large events for the outside community.

**Campus Life:** There is a compelling need for social places to congregate on campus and meet one another. Wifi, cafe or coffee cart and movie nights would create a draw that would encourage students to use the site for informal gathering. Space for free-speech and artistic expression are also considered important.

The existing broad terraces of the amphitheater provide informal and flexible scattered seating rather than denser, fixed seating. Students appreciate that because of these terraces, the amphitheater doesn’t feel like an empty theater during non-event times, but more like a park. The non-symmetric, non-traditional form of the existing Royston design, and its source in the quarry landscape, is generally appreciated. Students encouraged the team to maintain the spirit of the design, while updating the design to contemporary use and improve long-term performance.

**Connectivity:** The centrality of the site to campus, and the opportunity that provides to create a space for gathering and day-to-day cross-departmental student interaction is significant. Improved universal access to the site and Quarry Plaza will promote use and awareness of the Amphitheater, while also addressing campus circulation issues in general.

**Priority for Student Use:** Campus organized events or revenue generation operations should not out-compete student use of the site.

Providing a place and infrastructure for student-organized performances and events is highly desirable.
<table>
<thead>
<tr>
<th>Program Sponsor</th>
<th>Program Element</th>
<th>Existing / Proposed</th>
<th>Target Audience</th>
<th>Annual Attendance</th>
<th>Hrs. of Use</th>
<th>Frequency</th>
<th>Revenue</th>
<th>Ticketed / Concessions</th>
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</thead>
<tbody>
<tr>
<td>1 Campus Performance Programs</td>
<td>Rainbow Theater, AATAT</td>
<td>existing through M49</td>
<td>Campus</td>
<td>1400 per season</td>
<td>36 per production</td>
<td>once a quarter</td>
<td>Measure 49 funding</td>
<td>Free for all UCSC, guest 15 per Person concessions sold</td>
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<td>2 Speaker Blowout</td>
<td>National speakers</td>
<td>Existing</td>
<td>Campus</td>
<td>500</td>
<td>8 including set up</td>
<td>Annual</td>
<td>Student fees</td>
<td>No sales</td>
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<tr>
<td>3 Poetry/SPOken word performances</td>
<td>Speakers</td>
<td>Existing</td>
<td>Campus</td>
<td>2-300 per event</td>
<td>6 including set up</td>
<td>5-6 events per year</td>
<td>Student fees</td>
<td>No sales</td>
</tr>
<tr>
<td>4 Cultural performances</td>
<td>Dance, music</td>
<td>Existing</td>
<td>Campus</td>
<td>4-500 per event</td>
<td>6 including set up</td>
<td>5-6 events per year</td>
<td>Student fees</td>
<td>Refreshment sales</td>
</tr>
<tr>
<td>5 Organization orientations</td>
<td>Speakers</td>
<td>Existing</td>
<td>Campus</td>
<td>2-300 per event</td>
<td>4 including set up</td>
<td>5-6 per year</td>
<td>Student fees</td>
<td>No sales</td>
</tr>
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<td>6 Cultural fairs</td>
<td>Live performances</td>
<td>Existing</td>
<td>Campus</td>
<td>2-300 per event</td>
<td>6 including set up</td>
<td>4-5 per year</td>
<td>Student fees</td>
<td>Refreshment sales</td>
</tr>
<tr>
<td>7 Lip Sync contest</td>
<td>Live performances</td>
<td>Existing</td>
<td>Campus</td>
<td>3-400</td>
<td>6 including set up</td>
<td>Annual</td>
<td>Student fees</td>
<td>No sales</td>
</tr>
<tr>
<td>8 Concerts</td>
<td>Music</td>
<td>Existing</td>
<td>Campus</td>
<td>2-300</td>
<td>6 including set up</td>
<td>1-2 per year</td>
<td>Student fees</td>
<td>No sales</td>
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<tr>
<td>9 Community Events</td>
<td>Professional Theater Productions, Birth of Word</td>
<td>existing through M49</td>
<td>Campus &amp; Community</td>
<td>1000 per production</td>
<td>16 per production</td>
<td>3 times a year</td>
<td>Measure 49 funding</td>
<td>Tickets Free for all UCSC</td>
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<td>10 Multicultural festival</td>
<td>performance and food</td>
<td>Existing</td>
<td>Primarily campus</td>
<td>2,500,000 throughout the day</td>
<td>48 including set up</td>
<td>Annual</td>
<td>Various student fees</td>
<td>Food sold by student concessions sold</td>
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<td>11 Disability Resource Center</td>
<td>Guest Speaker re Activism</td>
<td>proposed</td>
<td>campus</td>
<td>500</td>
<td>4</td>
<td>once a year</td>
<td>various sources</td>
<td>concessions sold</td>
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<td>12 EOP</td>
<td>Fall Orientation</td>
<td>Existing</td>
<td>1300 incoming</td>
<td>1,100</td>
<td>6 Hours</td>
<td>Fall quarter only</td>
<td>SSF</td>
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<td>13 Graduate and Professional School Fair</td>
<td>Career Development Program</td>
<td>Existing</td>
<td>students, academic advisers, professional and graduate school recruiters</td>
<td>600 annually</td>
<td>9 hrs.</td>
<td>annual</td>
<td>self-funded</td>
<td>$300 per table for recruiters</td>
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<td>14 Employer Information Sessions</td>
<td>Career Development Program</td>
<td>Existing - multiple small events</td>
<td>students and recruiters</td>
<td>2000 annually</td>
<td>2 hrs.</td>
<td>several per quarter</td>
<td>self-funded</td>
<td>$100 per employer</td>
</tr>
</tbody>
</table>

**Excerpt from full UCSC Program Summary List**

### 2.6 UCSC Program Summary

Program information was gathered from campus organizations to guide potential uses for the Quarry. A total of 37 potential campus uses were identified. The chart to the left is an excerpt of the full summary.

Organizations that provided input were:

- Career Development Program
- DRC (Disability Resource Center)
- EOP (Education Opportunity Program)
- SOAR (Student Organization Advisory Resources)
- SOMeCA (SOAR, Student Media, Cultural Arts and Diversity)
- STARS (Services for Transfer and Re-entry Students)

Key findings from Program Summary:

- >99% of existing programs can be accommodated with an existing audience capacity of 1,600
- Revenue generating conferences and retreats can be scheduled to avoid conflict with campus and student use
- There is wide-spread campus interest in use of the amphitheater for a broad spectrum of programs including performances, events, ceremonies, festivals and gatherings
- Additional input from campus staff is need to further refine the requirements for these uses

Historic Non-Campus Uses identified include:

- High School Graduations
- Conferences

A complete Program Summary is included in the Appendices.
EXISTING CONDITIONS

3.0
3.1 Ecological context

The (campus) site demands unique attention. Everyone who saw it during the planning stage was awed and impressed by the need to keep it as unspoiled as possible. ‘Any manicuring of this area will produce a commonplace effect,’ said Ansel Adams.

1963 Long Range Development Plan

The UCSC campus was founded on a deep reverence for the natural landscape setting in which it is based, and an appreciation of the challenge of building sensitively and responsibly within it. Today, the deep commitment to sustainable development continues.

Landscape character defines the character and experience of the social and academic places within it. The ‘Forest’ Landscape type predominates the setting of the Upper Quarry Amphitheater. Preserving the ecological integrity of the forest and its experiential, even magical, qualities is of utmost importance.

The entry approach to the Amphitheater through a dense, cool and shaded forest explodes upon the bright sunny opening of the amphitheater and a dramatic view to the sun washed north wall of the quarry. Campus planners and designers have recognized the power of incorporating “the dramatic sense of transition when moving between the shade of the forest and the light of the meadow”; and the importance of sunny places within the heart of campus. A warm and sunny clearing anywhere on campus becomes a strong attractor for student enjoyment.
3.2 Campus Connectivity

The landscape of the central campus, and its full pedestrian circulation system is an organic web of pathways, roads and trails that can be understood as a “warped-grid” system…. The experience of walking through a mix of natural and developed areas gives UC its distinctive character.

Long Range Development Plan, 2005

For UCSC students, traversing ravines through the dense forest as they travel from colleges to class and other campus destinations defines their campus experience, and contributes to their deep love and appreciation for the natural landscape of which they are a part.

Each project within the UCSC campus must not only address its own internal circulation, but also strengthen connectivity to the campus beyond. Each new project is an opportunity to build on the system of campus circulation. Planning these connections must embrace not only efficiency and safety but experiential integrity.

Throughout the campus, steep topography and sensitive natural environments have challenged the development of an efficient system of pedestrian circulation. The provision of direct connections from Quarry Amphitheater to Merrill and Crown Colleges to the east and to Upper Classroom Unit and the Science and Engineering campus to the west to the Cowell Health Center to the north and to Hahn Student Services to the south, will provide critical cross campus linkages. This new system of connectivity will place the Amphitheater and Quarry Plaza at the center of a significant crossroads of student serving destinations.
3.3 Zones of Influence

When planning development near the upper edges of the quarry consider the effect of views from the Quarry Amphitheater on its historic character.

Students and many others who know this place consider seclusion and privacy to be special attributes of the Amphitheater. The dense forest and steep topography surrounding the amphitheater frames, protects and provides this sense of privacy. In order to maintain these qualities, the integrity of the forest must be preserved, and views from the amphitheater toward adjacent areas of development must remain well screened. Cowell Health Center and the Upper Classroom Unit have had recent or planned expansion projects that have respected the view shed of the amphitheater. This vigilance to protect the amphitheater experience must continue as future expansion pressures continue to spur development within the campus core.

External sounds and smells impact the visitor’s experience of the amphitheater. Smells from the Quarry Plaza restaurant exhaust permeate the redwood grove and amphitheater. Sound is a significant concern for performance use of the amphitheater, particularly for spoken word events. There are bus routes stops along McLaughlin Drive. Buses have to climb the steep grade of Hagar Drive, contributing a significant amount of noise to the amphitheater. Sound from the amphitheater to adjacent residential colleges should also be considered when scheduling amplified events.
LANDSCAPE FRAMEWORK

3.4 Site Experience

Patrons arriving for a performance or event at the amphitheater, as well as students passing through for casual use, experience a processional sequence — a series of momentary perceptions and transitions that define the experience of the place.

The Design Team closely studied the components and contributing factors of this processional sequence, in order to fully understand:

- what is integral to this place?
- what must be preserved?
- what experiential detractors are present?
- what could be enhanced through redesign?

A typical arrival through Quarry Plaza begins in a sunny, vibrant, and student-filled place, then quickly transitions as one reaches the north end of the Plaza and steps into the Redwood Grove.

The Redwood Grove is cool, shady, quiet and impressive with towering redwood trees that surround and frame the space. It seems quiet and calm in contrast to the vibrancy of Quarry Plaza.

The Arrival Threshold is the Amphitheater entrance at the top of the main entry steps. The transition from forest to clearing is masterfully employed by the original Royston amphitheater design and is still present today. The main entry steps place arrivers on axis with a sweeping view across the bright sunny opening of the amphitheater to the north wall of the quarry — its ledges, fissures and natural outcropping of stone forming a dramatic composition of light and shadow.

The Audience Experience is one of being surrounded on three sides by tall redwood trees that contain and focus attention toward the stage. These trees form a physical and psychological buffer to the outside world, making the place feel remote and serene.

On the Stage with a dramatic backdrop of Quarry Walls and a huge boulder (called ‘The Rock’ by many) that juts through its west edge, performers have an inspiring and unique natural stage set. The stage is basic and austere in form, simply inscribed by a stone wall of roughly stacked quarry stone.
LANDSCAPE FRAMEWORK

Historic Views of Quarry Walls

Quarry Walls
Performer Experience
Audience Experience
Arrival Threshold
Redwood Grove
Entry
Quarry Plaza
SITE INVENTORY

- Dressing Room
- Existing Stage
- Main Entry
- Emergency Vehicle Access
- Trash Receptable for Quarry Plaza
- Accessible Route
- Restrooms:
  - M: 1 Urinal + 1 Toilet
  - F: 2 Toilets
  - No Accessible Stalls
- Restrooms:
  - M: 2 Urinals + 1 Toilet + 1 Accessible Stall
  - F: 2 Toilets + 1 Accessible Stall
- Restrooms:
  - M: 1 Stall
  - F: 1 Stall
- Restrooms:
  - 2 Unisex Accessible Stalls

- Restrooms:
  - 1 Accessible Stall

- Existing Seating
  1636 seats at 21” each

- Restrooms:
  - M: 1 Stall
  - F: 1 Stall

- Restrooms:
  - 2 Unisex Accessible Stalls
### 3.5 Facilities Assessment

- There are currently no concessions facilities for the amphitheater.
- Limited storage facilities are located in the dressing room building east of the stage.
- The existing emergency vehicle access road is functional but should be improved with all-weather surfacing.
- Trash collection vehicles cannot service the existing receptacles for Quarry Plaza. The dumpsters must be rolled out to Steinhart Way for pick up.
- Service and emergency vehicle access through the Plaza during business hours is greatly challenged by heavy pedestrian use and frequent student tabling activity.
- Accessible pathways are functional, but must be regraded and paved to meet code standards.
- To provide a truly ‘equal’ experience for disabled patrons, the accessible routes must more closely conform to the main able-bodied routes.
- Existing lighting consists of widely dispersed pole fixtures.
- Existing stairs are degraded, unsafe and lack handrails.
- Existing wood seat walls at the amphitheater are deteriorated, unstable and unsafe.
- Restroom facilities are limited and widely dispersed.
- Existing basic (remote) line voltage power, is capable of supporting only a modest, portable 'PA' speech grade sound reinforcement system.
ANALYSIS AND DESIGN DRIVERS

4.0
4.1 Guiding Principles

The Design Team and the Core Advisory Group (CAG) began a series of discussions / work sessions by drafting a set of Guiding Principles for the site - drawn from individual experience, values and vision for the Quarry. Out of ensuing discussions with CAG and students, stakeholder input sessions and on-line survey, the Guiding Principles were refined.

Guiding Principles establish the ‘Big Picture’ poetic and pragmatic guidelines for Amphitheater renovations. They became a touchstone during the Feasibility Study process to guide the Preliminary Concept Design approach and will continue to guide the Design Phase of the project.

4.2 Design Drivers

Center of Student Life
To become a ‘Center of Student Life’ a place must be available and amenable to use by students. Students and staff repeatedly said that campus planned events and revenue-generating operations - though crucial to the site’s success - must not outweigh the availability of the place for casual student use. The design must encourage a vibrant, exciting place of gathering for events, as well as a beautiful and serene place for individuals and small groups on a day-to-day basis.

Connectivity
On the UCSC campus, places of gathering are often compressed and concealed within a dense forest setting and physical distances are extended by a psychological sense of separation. Throughout the Quarry site, challenges of connectivity must be approached as opportunities to solve multiple problems, improve overall campus circulation, and by doing so, to promote site awareness and use. The site must be ‘well connected’ both physically and technologically to encourage use.

Flexibility and Multi-use
Increasingly campuses are recognizing the need for their facilities to serve multiple purposes and be readily adaptable to growth and change. The Quarry support building, stage and seating infrastructure must be flexible, adaptable, and able to serve a wide variety of potential uses - from performances, classes and campus events to conferences, retreats, and festivals.

Drawing from the landscape

…an architecture must grow out of the problems, restrictions, and potentialities of the site…color and texture will be as important as form.”

“…the general effect in the main campus areas must be one of sensitive collaboration between the designer and this spectacular environment with the intent that neither should impose unduly upon the other.

Thomas D. Church, Long Range Development Plan, 1963

GUIDING PRINCIPLES

RESPECT THE CAMPUS FRAMEWORK
Establish a “Center of Student Life” that will inspire visitors, engage daily student experience, and strengthen physical connection with the greater campus; while respecting the natural forest system of which the site is a part.

PRESERVE SITE CHARACTER
Expand capacity and infrastructural development for the amphitheater without compromising the intimate, immersive, spiritual and ‘magic’ quality of the landscape experience and the quirky spirit of the historic amphitheater design.

PROMOTE STEWARDSHIP THROUGH INTEGRATED SUSTAINABLE DESIGN
Protect the landscape setting, promote environmental awareness and stewardship, and create a comprehensive and innovative approach to sustainable infrastructure.

ENCOURAGE STUDENT ENGAGEMENT AND PROGRAM DIVERSITY
Provide for a broad spectrum of use from casual, daily use to performance through site development and infrastructure that is flexible and multi-use in nature.

SUPPORT FINANCIAL FEASIBILITY
Respond to campus financial goals and achieve operational sustainability through effective management of resources.

ESTABLISH SAFETY, SECURITY AND UNIVERSAL ACCESS
Provide universal access, a positive, safe place to learn, explore, and share; and prioritize broad student use and awareness.
The legacy of the UCSC campus is one of co-existence and responsiveness to the natural landscape. The ‘theatrical sublime’ beauty of the raw stone quarry walls and redwood forest sets the stage for a powerful experience. The design must strategically reveal, enhance and protect this compelling natural setting. Selective planting and clearing must be carefully employed to uncover dramatic views, and enhance the sense of enclosure and intimacy of landscape rooms. Materials must be chosen to echo or complement the natural palette of colors and textures. Form and structure must be contemporary yet carefully designed to balance the scale and presence of the site.

**Sustainability**

Longevity, flexibility and resiliency are as much a part of a sustainable site approach as the integration of environmentally responsible site systems. Effective management of resources and design for operational sustainability will be integrated along with stormwater treatment areas, and durable, long-lived materials. Reuse of existing wood and stone materials where possible will be a priority.

**4.3 Program Priorities**

Based on the Results of the on-line Survey, the Student Outreach Workshops, the Core Advisory Group Discussions, and the summary of existing programs, a number of Program Priorities emerged:

- The amphitheater venue can attract revenue-generating concert promoters with an audience capacity of at least 2,000. In order to maintain the quality and character of the existing site, this capacity should be the target for amphitheater seating, not the 3,000 capacity targeted specified in previous planning studies.
- Students want amphitheater availability for non-scheduled, informal, and day-to-day use and their own self-organized events.
- Site infrastructure should accommodate day-to-day student use as well as performance and events.
- Temporary and removable stage structures should be employed, rather than permanent ones, so that during non-event use the site will retain its natural character and the venue will be readily adaptable to change.
- Flexibility and multi-use features should be incorporated in all aspects of the site.
- The best use of limited University funds, is to solve multiple problems for the campus as they are designed and constructed.
4.4 Events and Income Generating Opportunities

After completion of Phase I, private and public events will reactivate the Upper Quarry Amphitheater. Private events would pay fees for the use of the venue, while public events may include ticketed entry.

For private events, user fees could serve as a significant income generator. For public events, which are more common on university campuses, access to events could generate income from ancillary permitted uses. In addition, public events provide an opportunity for vendors to sell wares, with fees or a percentage of gross sales going to support the venue. Both public and private events can generate revenue from equipment rentals and fees.

Events that would be compatible with the Upper Quarry Amphitheater upon completion of Phase One include:

- Charity benefits and parties
- Corporate retreats
- Cultural and Arts festivals
- Film screenings
- Food festivals
- Outside performances and concerts
- Private commencement and graduation ceremonies
- Weddings
- Wellness retreats

Income generating opportunities that would be compatible with the site upon completion of Phase One include:

### Site Fees
- Sponsor signage: Signage and banners offer a source of one-time income for temporary and permanent signs. These amenities assist with way-finding and could provide event specific signage for public events. Apparatus used to hold signage can also be rented-out, and should follow in-house aesthetic standards and specifications.
- Labor costs: Providing University-employee or student labor to assist with set-up or take-down of private events with an appropriate mark-up. Labor rates should include internal costs and benefits load, and administrative mark-up.

### Equipment Rentals
- Audio equipment (speakers, microphones, mixing boards, sound monitors)
- Video equipment (LED screens, recording equipment)
- Cables
- Cam-locks
- Blankets and cushions for lawn or ground based seating
- Rectangular tables (either 4’ by 8’ or 3’ by 6’)
- Barricades and stanchions
- Pop-up canopies
- Tables with umbrellas
- Electric heaters
- Small generators

### Temporary Concessions/Pop-up Retail Stands
- Food and beverage
- Sunblock, hats, fans
- Umbrellas for shade
- Performer or event-specific merchandise
- UCSC apparel and “The Quarry” branded promotional material

### Restoration Fee
All events on-site must include fees to assist with the overall maintenance costs for the Amphitheater.

### Materials and Supplies Fee
- Trash bags
- Restroom maintenance
- Cleaning supplies
Temporary concessions could be leased-out to an outside operator. This structure allows for an income-generating opportunity without the additional capital costs to invest in specific facilities; and will incur minimal labor and capital costs for the campus. A cohesive presentation and design standard will be created for outside vendors to ensure a unified aesthetic and clear identity of the site. These policies will be addressed in a user-friendly Operations Manual.

4.5 Operations

An Operations Manual and a Policies and Procedures Manual will be created for the users, event producers, and managers of the Amphitheater. Since the Amphitheater does not have a regular operator and can be used by a myriad of groups, these manuals must be clear, concise, and easy for the one-time event user or professional producer to understand.

The Operations Manual will describe the requirements and standards pertaining to the Amphitheater, and include the following items:

- Site map
- Power capabilities and locations
- Event contact list
- Labor Rate sheet
- Tents and tenting restrictions and policies
- Signage standards
- Insurance and indemnification requirements
- Stage production
- Temporary structures restrictions
- Load-in/Load-out procedures
- Applicable campus code
- Parking information
- Trash and recycling plan
- Event guidelines

The Policies and Procedures Manual will include the following items:

- Rules and regulations for Amphitheater use
- Rental policies and guidelines
- Personnel requirements and costs
- Vendor rules
- Permitting requirements
- Fire Marshal recommendations
- Alcohol requirements
- Sound policies and permitting
- Trash and recycling rules
- ADA compliance factors
- Patron shuttle services

Site Access

The campus shuttle system may provide service for large events that require parking at remote lots. However, the cost and coordination required for this service may be prohibitive for certain event sponsors. Event planners will be advised to implement a shuttle program for patrons with disabilities with an accessible cart-type vehicle dedicated to Amphitheater service that can provide reliable, localized service to seats distributed through the site. A pool of trained student staff may be employed to drive the cart.

4.6 Site Requirements

New opportunities for power, audio, video, and internet cabling equipment will be readily available at the front of the stage. Key points on the periphery of the Amphitheater will also contain this expanded selection of equipment. WiFi access will be available throughout the amphitheater seating area. The access points surrounding the Amphitheater will run connections to the center stage electrical access cabinet, so microphones, video, and other equipment can be plugged-in from these periphery areas and have the capability to broadcast to the center stage electrical access cabinet.

In the Amphitheater's seating terraces, built-in electrical and USB outlets will be available at determined locations. This will give users the capabilities to recharge computers as well as phones, tablets, and other electronic devices. In addition, new light fixtures may contain electrical outlets. These outlets will enhance the site's usability for students and corporate event users to "plug-in" and extend their stay onsite.

In the planned concessions area at the ‘Upper Terrace’ to the rear of the Amphitheater, additional outlets will be provided to enhance the range of activities and events that can be hosted there.

Furniture and Equipment Lifecycle

While preventative maintenance and adherence to proper event guidelines will help extend the lifecycle of the fixtures, furniture, and equipment on-site, fees from events will be collected and pooled into a Reserve or Lifecycle Fund. This fund will collect event and user fees over an extended period of time to ensure immediate replacement or repair of equipment when necessary. This will guarantee the Amphitheater remains in usable, working condition, limits repair "down-time," and continues to generate revenue when necessary.
4.7 Geotechnical Analysis

A Geotechnical Report was prepared to assist the project team in identifying the site geologic conditions specifically related to potentially unstable slopes, rockfall hazards and soil conditions in the marble rocks found at the site. The report uses previous studies and in-field investigation to observe the rock slope conditions adjacent to the amphitheater and in the surrounding former quarry area. Preliminary mitigation measures and order-of-magnitude construction costs have been provided for mitigation of the unstable slope directly behind the upper row of amphitheater seating in the area noted on the plan and geologic site map.

It is recommended that the terrace deposits along the upper 10 to 15 feet of the slope, which are currently at a near-vertical inclination and subject to sloughing and soil falls, be graded to improve stability and allow for establishment of vegetation ground cover. Any leaning trees along the top of the slope subject to falling should be evaluated by an arborist and be removed if necessary. All surface drainage should be directed away from the top of the slope to prevent water from eroding the terrace deposits and potentially destabilizing the rock slope. The rock portion of the slope should also be scaled to remove any loose blocks. Following scaling of the slope, the existing chain link fence should be replaced with a more robust rockfall barrier. A rockfall barrier will be designed with the quality and aesthetic of the amphitheater setting that meets the structural and functional needs required.

A complete Geotechnical analysis and report is included in the Appendices of this report.
4.8 Code and Life Safety Requirements

- The existing emergency vehicle access route and turnaround at the stage is acceptable as long as the route is paved with all-weather surfacing such as gravel and/or asphalt. An alternate turnaround must be provided for circumstances when stage equipment or structures block vehicle turnaround.

- All site stairs, pathways, and aisles must be upgraded to meet California building code standards, including: handrails at all stairs, and aisles within the amphitheater located no more than 50 linear feet from any seat.

- Accessible pathways must be regraded and repaved to meet federal ADA guidelines.

- Four points of egress have been identified per code requirements. Three egress paths exit to a public way and provide more than adequate path width to handle the entire audience capacity. The fourth NW egress route leads to a safe refuge area within the quarry.

- The slope directly behind the upper west row of seating requires mitigative safety measures per the geotechnical engineer’s recommendations.

- Barrier fencing must be provided to secure the perimeter of an existing sink hole to the west of the amphitheater.

- Pathway lighting must be provided to meet minimum campus standards.

- Additional ways to improve safety and security for patrons and the campus community will be discussed with campus police and security early in the design phase.

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<tr>
<th></th>
<th>Code Minimum Width</th>
<th>Provided Width</th>
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<tbody>
<tr>
<td>Main Exit</td>
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<td>12’-6”</td>
</tr>
<tr>
<td>Additional Exit Ramp</td>
<td>4’-0”</td>
<td>7’-0”</td>
</tr>
<tr>
<td>Additional Stair Path</td>
<td>4’-0”</td>
<td>7’-0”</td>
</tr>
</tbody>
</table>
5.0 PRELIMINARY CONCEPT
Analysis of existing seating reveals that, based on the seating provided by the wood terrace edges alone, the amphitheater has a capacity of 1,665 seats, with 89 seats having a view which is obstructed by ‘The Rock,’ the boulder outcrop at the stage. A newspaper article announcing the amphitheater in 1967, claimed that with the addition of folding chairs along the terraces the capacity could be expanded to 3,500.

Studying ways to increase the permanent capacity of seats that comply with current code and safety standards for outdoor assembly areas, involved an in-depth discussion about ‘Program Priorities’ with the Core Advisory Group and UCSC staff, outlined in section 4.4. It became clear that an effort to expand capacity to 3,000, which had been suggested as a target by previous studies, would require regularized stadium-style seating that would completely eliminate the informal seating areas of the existing amphitheater, and compromise the distinct natural character of the venue.

It was suggested that a minimum capacity target of 2,000 would be needed to provide an attractive venue to concert promoters. The actual means of achieving this capacity will need to be studied closely in the subsequent design phase for this project. However, analysis reveals that through a combination of additional terrace walls, platform-style areas of lawn, stone paving and/or wood decking for ‘picnic blanket-style’ seating, and cafe table seating on the Upper Terrace, the capacity target of 2,000 can be easily achieved within the current plan ‘footprint’. 

5.1 Seating Capacity
5.2 Building Program Scenarios

Support facilities needed for the amphitheater venue include rest rooms, concessions, food prep, storage, dressing rooms, green room, and flexible meeting space. The first of a series of design studies included an analysis of different approaches to locate these facilities and analyze their implications on site circulation and patron experience.

Scenario 4, or the ‘Redwood Lobby’ scheme, was preferred for its minimal impact on the amphitheater experience, its efficiency in both constructibility and serviceability, its ability to promote a stronger place identity at the main entrance, and its establishment of the Redwood Grove as a place for gathering and events — becoming a ‘Lobby’ for the amphitheater.

<table>
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<th>ENVIRONMENT</th>
<th>SCENARIO NAME</th>
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<tbody>
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<td>Impact to existing trees</td>
<td>Distributed</td>
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<td>CULTURE</td>
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<td>Accessibility</td>
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<td>Wheelchair user experience: distance to restrooms</td>
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<td>PROGRAM FLEXIBILITY</td>
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<tr>
<td>Serviceability of concessions</td>
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<td>Daily student use</td>
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Choosing by Advantage Analysis
5.3 Redwood Lobby Scheme Development

The ‘Redwood Lobby’ scheme utilizes a pedestrian bridge and elevator to connect the upper level of the amphitheater with the second floor rest rooms and concessions of the Support Building, and provide direct access for disabled patrons to the Upper Terrace of the amphitheater. This allows all patrons to arrive and enter the Amphitheater via the Quarry Plaza approach.

Further analysis of the Redwood Lobby scheme looked at alternative configurations for the building and bridge and means of engaging or disengaging with the existing buildings of Quarry Plaza.

The preferred scheme preserves the existing redwood trees at the north end of Quarry Plaza, to frame the entry to the Redwood Grove beyond. This physical separation allows the Redwood Lobby experience to be distinct and buffered from the activity of the Plaza. The new pedestrian bridge and flanking redwood trees form a gateway to the Amphitheater and an opportunity for place identification.

Maintaining the location of the main entry steps, and widening them to better engage with the space and circulation of the lobby, preserves the powerful threshold entry experience upon arriving at the Amphitheater. The steps engage with the Redwood Lobby and become an opportunity for small scale performances and informal gathering.
PRELIMINARY CONCEPT

1. Bridge
2. Redwood Lobby
3. Support Building
4. Upper Terrace
5. Amphitheater
6. ‘Smart’ Stage
7. Performance Staging Area
8. Service Area

- Vehicular paving
- Smart Stage - Concrete pavement, see additional document from APF
- Upgraded building and staging area
- Building by Fernau + Hartman, see arch. drawings
- Bridge for pedestrians and light service vehicles, 14’ width
- New steps with handrails, both sides
- Upper terrace vehicular pavement, some fill required
- Amphitheatre paving material
- Plaza vehicular paving
- Lawn
- Concrete walls
- Guardrail fence
- Rockfall barrier (200 LF)
5.4 Bridge

A new pedestrian and light vehicular bridge at the main entrance of the amphitheater serves as gateway to the Quarry Amphitheater, and provides a place for monumental entry signage and event banners that is visible from Quarry Plaza. With an adjacent elevator, the bridge provides accessible entry to the upper level of the Amphitheater, and concessions and rest rooms of the Support Building.

‘The Bridge’ is a great place in itself - with space for concessions as well as integrated seating to perch on and watch the action below.

The bridge will also enhance the east-west campus connection from Crown and Merrill Colleges through Quarry Plaza and the Amphitheater Lobby to the Classroom Unit and Sciences and Engineering campus to the west. This link builds on the ‘Triangle of Student Serving Areas’ called for in the Physical Design Framework Plan. The means to provide a safe and direct crossing for pedestrians at McLaughlin Drive will need to be addressed.
5.5 Redwood Lobby

As entry to the Amphitheater and forecourt to the new Support Building, the Redwood Lobby orients and enhances the visitor experience. It provides a place for pre-performance events and intermission gathering and is an attractive venue for conferences, retreats, meetings, as well as small-scale concerts and performances.

A floor of pavers unifies the space beneath the towering canopy of the existing redwood grove, making it accessible and amenable to a wide array of gathering and event opportunities. A new monumental entry stair, generous low walls and boulder outcroppings provide numerous places to linger in the cool, dappled shade.
5.6 Support Building

The Support Building will be the primary support structure for Quarry Amphitheater productions, a secondary destination for theatergoers, and a place for daily student gatherings, meetings and events. The building is sited against the steep and densely shaded slope east of the main approach from Quarry Plaza. Its compact and efficient building footprint minimizes tree removal – preserving the natural beauty of the existing redwood grove. The slight curvature of the building footprint and an active western façade frame the ‘Redwood Lobby’, transforming what is currently an underused pedestrian path into a vibrant outdoor room.

A series of horizontal bi-fold doors on the first level open the green room, concessions, and kitchen to the Redwood Lobby when in use. The commercial kitchen allows students to cater their own events or can be rented to outside vendors and caterers. The green room with an adjacent private restroom is designed as a flexible use space for meetings, conferences, events. On the second level a partially covered roof terrace provides outdoor event space overlooking the Redwood Lobby. An elevator provides direct access between the two levels, and stairs at either end of the building provide egress as well as a ‘party loop’ – an easy and visible circulation loop for seeing and being seen during events.

Examples of buildings or structures of similar scale, function and ‘trans-formable’, ‘active’ facades are represented here.
The Roof Terrace and Bridge, in concert with the Redwood Lobby, provide viewing/performance areas for more casual, rough theatre.

Durable and low maintenance materials such as weathering steel, board-formed concrete and wood complement the natural character of the grove.

Upper and lower level restrooms will easily accommodate a crowd of 3,000. Storage and support facilities on both levels provide space for mechanical, electrical, IT, temporary production equipment storage, and basic equipment for students and faculty to host their own small scale events.
5.7 Upper Terrace

A grove of deciduous canopy trees frames a stunning view of the amphitheater and quarry rock walls upon arrival at the Upper Terrace, and provides shade for cafe-style seating and circulation. The Upper Terrace is an attractive venue for non-performance related events, such as banquets, fairs, and retreats.

Use of the Upper Terrace area is currently challenged by uneven pavement and inadequate space. Expanding the area of the Upper Terrace promotes easier circulation and flexible use for gathering, event concessions and dining. Paving is vehicular-rated concrete allowing for easy service and maintenance access.
The Amphitheater is more than a place for performances and lectures. It has a park-like character and beautiful setting that draws students, faculty, staff and visitors to relax, bask in the sun, read, meet with friends, or have lunch. Replacement of the existing crushed stone and splintering wood of the terraces, paving, with lawn terraces and comfortable lounging decks encourages more of this activity, and enhances the experience for performance-goers. Careful and sensitive integration of infrastructure for wifi, electrical, sound and assistive listening devices provides a state of the art venue for performances, events, conferences, classes, and a host of other possible uses, while maintaining the natural setting that is so beloved.

Reuse of material from the site would add a significant component of history to the renovated Amphitheater, and provide a compelling story of sustainability. The existing redwood bench material that forms the amphitheater terraces may be suitable for reuse. Material Reuse investigation would be required to determine its suitability and a means of re-milling the material on-site.
5.9 ‘Smart’ Stage and Performance Staging Area

The ‘Smart’ Stage provides infrastructure for a wide variety of potential performance and event uses with an invisible plug-and-play infrastructure of state of the art utilities and below-grade structural footings to support a wide range of temporary structures. Infinitely adaptable for events, when not in use the stage appears as natural and unassuming as the existing stage. A concrete stage platform will be carefully detailed with color and finish to match the existing quarry floor.

An existing stockpile of blasted stone directly west of the Amphitheater has been reserved for reuse, on campus and may be suitable for the stage masonry. Material reuse investigation by a skilled mason would be required to determine its suitability for use.

A wide-range of temporary structures can be erected to support sound and lighting or provide shade. The following description of performance infrastructure provides details of the support system for these structures.

The existing dressing room building with an accessible restroom will be retained and upgraded to serve as pre-performance staging and support area during performance.

5.10 Security, Fencing and Ticketing for Events

Installation of permanent fencing around the entire amphitheater perimeter would negatively impact the natural context of the site and views to the surrounding forest, and make the site inaccessible to students for day-to-day use and non-ticketed events. There is campus-wide support for keeping the site open, however some means of securing the venue for ticketed events will be required. Some combination of strategically placed permanent and temporary fencing, together with secure points of access that may be implemented by campus sponsors or outside event promoters, is recommended. Red Rocks and Stern Grove are examples of outdoor performance venues that use manned points of access for perimeter security.

A traditional ‘box office’ has not been included in the site program; though one could be accommodated within the flexible use space of the Support Building. Ticketing is an evolving area technologically, with many venues transitioning from paper tickets to electronic PDA-based tickets. The means of systemizing the ticketing process will need to evolve as the sponsors, frequency, and logistics of ticketed events becomes more refined.

Emergency call boxes, or blue phones, will be provided to enhance site security. Additional ways to improve safety and security for patrons and the campus community, and ways to improve circulation conflicts during large events, will be discussed with campus police, security, campus transportation, event planning and operational personnel early in the design phase. Guidelines for event operational procedures will be outlined to address these concerns.
5.11 Performance Infrastructure

The Upper Quarry Amphitheater is considered a ‘passive’ venue in today’s parlance, meaning that as originally designed, the amphitheater is intended for unticketed daytime events. There is no perimeter fencing or security to maintain specific assigned seating for events that are ticketed. Existing infrastructure for stage use, other than basic (remote) line voltage power, is only capable of supporting a modest, portable ‘PA’ speech grade sound reinforcement system.

It has been recommended that necessary primary upgrades to the stage be included. These improvements would incorporate both permanent and temporary cabling in a robust infrastructure to provide adequate power for evening performance lighting and an appropriate sized sound system for large spoken word events and concerts.

Without a formally defined stage, a concrete slab measuring approximately 40’ deep x 70’ wide, should be provided with a trench duct system around the perimeter. The duct will have removable covers, providing a means of ‘passing’ theatrical lighting and audio cable to a series of access points along the stage perimeter; especially at corner pad lighting and audio tower locations. Duct covers would be waterproof and segmented for flexible use. The stage itself must have an engineered slab capable of supporting significant point loads specific to larger events and potential fork lift use. A temporary stage canopy with square truss column supports at each corner of the stage may be implemented, seasonally. Alternately, a fabric shade system may be supported by these columns.

The nature of structure and the stage surround will be determined in the design phase. Regardless of direction, these 4’ x 4’ corner pads, should be able to support a half ton load at each location.

The upstage area, primarily used for truck access and turnaround, will have a gravel surface, allowing users to erect additional towers. Seismic bracing and tie-down options for guyed cables may be provide by means of spiking through the holes in this surface so that tensioned cables may be landed in these locations. This is preferable to a series of permanent, engineered guy points, as it is quite likely that the use of the stage may continue to evolve over the coming seasons of enhanced utilization.

Power for lighting is anticipated to require an 800 amp 3-phase 120/208 service. Audio must be supported by a 200a 3-phase disconnect. Grounding at all locations is critical. Although it is likely that the best location for this switchgear would be at or around the pad for temporary dressing facilities, feeds from the switches to the stage should terminate in a series of water-proof plugs to allow use of 120v dimmable power anywhere in the duct and up above to lighting positions specific to a given use. All dimming would be located at the perimeter of the stage, as necessary to tap into the 800 amp service. Audio racks and amplifiers would be located similarly, in order to provide power and signal to line arrays which would be hung for events, as required. All infrastructure, beyond wiring, cable duct and electrical service/plugging backbone, should be stage-related only. All superstructure is currently anticipated to be temporary and erected as necessary.

Control of both audio and lighting shall be provided at the rear of the amphitheater or in the house in a permanent ‘house mix/control’ position. Signal from control consoles in this area shall be run over lighting and audio ‘snakes’. These seasonal/temporary control cables shall be run in 9”-12” waterproof conduit or beverage tubing from the mix position to the left or right trench duct, where signal to dimmer or relay power racks as well as amplifiers and speakers may be connected. Performance lighting, limited to medium throw follow spot lights should also be provided at or near this location, as well as convenience power and 3-phase, 20a power for these portable fixtures.
5.12 Accessibility

Providing equal access is an extreme challenge throughout the UCSC campus, including Quarry Amphitheater due to steep topography and lack of space for parking close to buildings and venues. Able patrons will typically park at the Hahn Lot on non-performance days and walk up the steep road across Steinhart Way and through Quarry Plaza to arrive at the Amphitheater. For events, the campus has historically relied on the East Remote Lot for parking and provide special shuttle service to bring patrons to the venue. A number of accessible and medical permit spaces exist at the southern end of Quarry Plaza. For events, up to eight spaces may be reserved for accessible patron use at Quarry Plaza. Shuttle services can be arranged when the need for additional spaces is required.

The new elevator at the Support Building and pedestrian bridge will provide direct access to the upper level of the Amphitheater. Currently the upper level is accessible via the two parking spaces and pathway behind Student Services. Along the Upper Terrace, 11 horizontally distributed accessible seats with companion seating will be designated, for a 2,000 person capacity venue. The lower level of the amphitheater will be accessed from the Redwood Lobby via a new ramp at the east edge of the stage to an area of 11 designated seats. The new Redwood Lobby, Support Building and expanded Upper Terrace will provide a broad range of accessible amenities.

- Non-Accessible Amenities
- Non-Accessible Circulation
- Accessible Amenities
- Accessible Circulation
- Accessible Parking
5.13 Vehicular Circulation

The existing emergency vehicle access route and turnaround at the stage is acceptable for fire truck access as long as the route is paved with all-weather surfacing such as stabilized gravel and/or asphalt. An alternate turnaround must be provided for circumstances when stage equipment or structures block vehicle turnaround. The alternate turnaround proposed must be further studied in the Design Phase.

Service vehicle access through Quarry Plaza is restricted to early morning or evening hours, when pedestrian activity in the Plaza is low. The new Bridge and Upper Terrace paving will be designed to support light vehicle traffic, greatly expanding access for concessions and service.

Access for emergency vehicles through Quarry Plaza into the Amphitheater during daytime events will be particularly challenging given the large amount of pedestrian activity in the plaza. The existing conflicts between pedestrian and vehicular traffic along campus roadways, and the difficulty this poses for emergency responders are a campus wide problem. These challenges are factors that must be taken into account by event planners, and should be reduced through strategic scheduling whenever possible.

Trash collection vehicles cannot currently service the existing receptacles for Quarry Plaza. Dumpsters located at the end of the plaza must be rolled out to Steinhart Way for pick up. A new trash enclosure area for dumpsters that can be directly serviced by Grounds Services trucks will be provided at the loading area behind the Student Union to serve both Quarry Plaza businesses and the Amphitheater.
5.14 Stormwater Infrastructure

An integrated stormwater management system for the Amphitheater site significantly reduces the need for underground piping and detention infrastructure by minimizing site runoff and utilizing passive treatment measures. Existing watershed-based stormwater management systems, existing and proposed surface conditions, geologic attributes, topography, and existing utility infrastructure all informed the basis for new stormwater infrastructure. The proposed management strategy integrates seamlessly into a tight, environmentally sensitive and geologically complicated site, and minimizes impacts to the underground geologic aquifer.

The following is a summary of the systems proposed for this site.

**Permeable Paving**

The use of permeable surface materials such as sand-set pavers, porous concrete, and gravel paving minimizes site runoff and maximizes retention through stormwater infiltration. This reduces the required treatment and detention area, and the amount of costly underground stormwater infrastructure. The use of impervious paving will be limited, and permeable paving will be used wherever practical. The emergency vehicle access road will be designed to minimize asphalt paving by using porous gravel paving along the edges.

**Stormwater Treatment**

Integrated passive solutions for stormwater treatment, include bioswales, rain gardens, and site-integrated treatment at the Amphitheater terraces. Treatment zones are strategically placed where runoff may be either directed to surface locations that are non-impactful to existing and proposed elements, or integrated below grade within paving systems. Provision of adequate area for these measures is challenged by steep topography. Additional treatment areas may be considered outside of the current project limits of work in the Design Phase.

**Earthen Swales**

Earthen swales will be used for natural overland stormwater conveyance. The location of these swales will depend on final site conditions, but will be integrated along the edges of the built environment, where visual impact is minimal. The swales will be sized to handle larger storm runoff and will address the site specific attributes of duff, plant material and maintenance concerns. There may be crossing points, culverts, trench drains or runnels required where surface flows pass across built elements such as paving and paths. These will be sensitively integrated into the overall design.
VEGETATION MANAGEMENT

5.15 Restoring the ‘Theatrical Sublime’

Some of the drama of the old quarry setting - the carved walls, ledges and outcroppings - is obscured today by undergrowth and volunteer trees. On the left, a photo by Ansel Adams of the Quarry when it was still in operation shows the dramatic natural stone outcropping rising above a terraced ledge and excavated north wall of the quarry. This outcropping became the backdrop to the amphitheater stage. Below left, a photo of the newly completed amphitheater by Robert Brandeis reveals a stunning view of this outcropping and open view of the raw quarry wall as it extends westward. ‘The Rock’, an outcropping that pierces through the stage wall and forms a dramatic and poignant counterpoint to the architectural design of the theater, is a far more powerful statement than the one today - which is almost completely obscured by vegetation.

Selective vegetation removal will be necessary to restore the ‘theatrical sublime’ qualities that inspired Thomas Church, Robert Royston and others to select and develop this site as an amphitheater. Careful clearing of the north quarry wall will reveal the structure and history of the old quarry for a new audience. The redwood tree and understory planting that has sprouted from the stone outcropping at the stage will be removed, greatly improving site lines to the stage, and revealing the former grandeur of ‘The Rock’, a beloved icon of the Amphitheater. Removing this tree and one or two of the firs that have sprouted up near the northwest base of the amphitheater will re-open the dramatic view to the west of the former quarry pit. The Oregon maples planted along the Upper Terrace provide much needed shade, human scale and seasonal beauty. Additional study will be required to assess the health and longevity of these trees, and determine whether preservation or replacement will be recommended.
6.1 Preliminary Budget Forecast

Early Concept Budget forecasting was used throughout the Feasibility Study process to understand potential costs associated with full Amphitheater Renovation, Redwood Lobby, Support Building and all associated campus and performance infrastructural improvements.

A Preliminary Budget Forecast was prepared mid-way through the Study identifying gross construction costs for major components of the preliminary concept plan. This preliminary forecast informed the refinement of the plan components and phasing strategy.

* Costs assume an anticipated construction start for Phase 1 in 2016 and Phase 2 in 2021.

During the Feasibility Study, a few related projects were identified that will require further definition. These include electrical infrastructure improvements, relocated Grounds Services facilities, stairs and other pedestrian connection to McLaughlin Drive, and parking improvements. These projects will be refined in the early design phase of the Amphitheater project.

<table>
<thead>
<tr>
<th>PHASE 1*</th>
<th>Preliminary Budget Forecast</th>
<th></th>
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<tbody>
<tr>
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<tr>
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</table>
6.2 Phasing Analysis

A Phasing Plan was developed to keep initial implementation costs to a minimum, while addressing basic improvements for code, life safety and accessibility requirements. Phase 1 will consist of these minimum site requirements and all associated work. The complete scope of improvements in areas impacted by Phase 1 construction will be installed, to minimize any rework or replacement of new work. Phase 2 may follow directly after Phase 1 completion, depending on funding.

PHASING RECOMMENDATION

- **Phase 1**
  - Existing buildings to remain in Phase 1
  - Note: Tree to be removed
  - Note: Selective vegetation removal on rock outcropping, Phase 1

- **Phase 2**
  - Existing buildings to remain in Phase 1
### 6.3 Phasing Components

Phase 1 will include reconstruction of the entire amphitheater, service roads, site lighting, main steps and paths.

Phase 2 will include the new Support Building, Bridge, Redwood Lobby, and Stage improvements.

<table>
<thead>
<tr>
<th>PHASE 1</th>
<th>PHASE 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>- New Terrace Seat walls: board formed concrete or stone, wood seat cap, realigned stair aisles, handrails</td>
<td>- Support Building + Elevator</td>
</tr>
<tr>
<td>- New main entry stair</td>
<td>- Bridge</td>
</tr>
<tr>
<td>- Vehicular paving: upper terrace grade and repave as required for accessibility and service road</td>
<td>- Main Entry Monument Sign</td>
</tr>
<tr>
<td>- Rock stabilization and rockfall barrier</td>
<td>- Redwood Lobby: Paving, seatwalls</td>
</tr>
<tr>
<td>- Safety guardrails / fence</td>
<td>- 'Smart Stage'</td>
</tr>
<tr>
<td>- Lawn terraces</td>
<td>- Stage Infrastructure and additional power supply</td>
</tr>
<tr>
<td>- Lighting: Amphitheater aisles, upper terrace and egress path</td>
<td>- Accessible Ramp: to lower level seating from stage</td>
</tr>
<tr>
<td>- Site signage: ADA / directional only</td>
<td>- Temporary Building Pad</td>
</tr>
<tr>
<td>- Site cleanup: Remove tree at stage (rock to remain), vegetation removal at quarry rock walls behind stage and seating</td>
<td>- Lawn seating in front of stage</td>
</tr>
<tr>
<td>- Stormwater Management: for Amphitheater area only</td>
<td></td>
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</tbody>
</table>

### 6.4 Additional Recommendations

Additional information required prior to advancement of the project to the Design Phase may include the following:

- Full Site Topographic Survey
- Site Tree Inventory and Assessment
- Detailed Geotechnical Study of area for rockfall barrier
- Structural engineering for rockfall barrier
- Geotechnical Percolation Testing for Stormwater System Design
- Horticultural Soils Testing for Planting
- Material reuse investigations for stone and wood
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John Pearson, Associate

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Faris Ateeq, student representative
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Anana Rojas, student representative

UCSC Staff, Site Inventory Workshop:
Rick Rodewald, Fire Marshall
Saladin Sale, Risk Services Director
Larry Pageler, Director, Transportation and Parking Services (TAPS)
Susan Willats, Assistant Director, TAPS, and ADA Facilities Access Coordinator
Roger Edberg, Senior Superintendent Grounds Services
Nader Oweis, Chief of Police
Josephine Ortega, Senior Architect

Design Team
O|CB has assembled a diverse team of consultants to aid in understanding this complex site including:

Fernau and Hartman
Architecture
Auerbach Pollock Friedlander
Theater Facilities
Linda Jewell
Historic Theater and Outdoor Facility Programming
TBD
Cost Estimation
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